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Good morning, Chairwoman Stabenow, Ranking Member Roberts, and members of the Committee. I want to thank you for this opportunity to share my views on the Rural Energy for America Program (REAP) and its urgent role in the new Farm Bill. But first, thanks to Sen. Cochran for his past support of this program that has greatly benefitted the poultry and catfish production sectors in MS and across the nation.

**REAP's Role in "Energy and Economic Development for Rural America"**

Rural Energy for America (REAP, Section 9007 in 2008 Farm Bill Energy Title) has application in every state across the country in just about every agricultural production or small business enterprise imaginable. My experience is in working across the Southeastern States so references I use today are from actual REAP grantees, most of which I have worked with over the last 2 program years. Like the following **Energy Efficiency** projects:

- **Tara Adams, a single-mom poultry producer in Haleyville, AL**- \$20,000 grant to energy efficiency retrofits in 3 broiler houses; projected to reduce energy use by 31% with a 3-year payback period. Her energy cost of \$14.13 per 1000 pounds broilers before project was consuming 30 cents of every dollar she was getting for her birds.
- **David Craig, poultry producer in Blackville, SC** - \$8,700 grant to install more efficient gas brooders in his 6 broiler houses; projected to reduce energy use by 21% with payback period of 2.5 years.
- **Billy Whiteley, a Native-American poultry producer in Berryville, AR** - \$50,000 grant to install energy efficiency retrofits in his 6 broiler houses; projected to reduce energy use by 39% with a payback period of 11 years.
- **Pakou Her and Kao Xiong, poultry producers in Ottawa County, OK**- \$20,000 grants for each to retrofit broiler houses; projected to reduce annual energy consumption by 21% with payback period of 6 years.

Then in Mississippi, where we have assisted more than 200 poultry producers in securing REAP grants. A survey of 40 of those grant recipients recently conducted shows that:

- They are averaging a 6% reduction in electricity use and a 41% reduction in propane consumption each year.
- The value of this annual energy savings is \$12,000 per grantee producer. But most important, that's \$12,000 per year saved, \$12,000 more income for an ag enterprise that typically shows a net bottom line on Sch. F of \$20 -\$30 K.
- Combined those 40 farms are saving 28.7 billion BTUs per year. That's equal to 314,000 gallons of propane being saved each year since completing their REAP projects. That's enough to heat 2,000 homes each year.
- They are seeing improved bird performance allowing, these producers to compete better under their contract for increase pay.
- Better financial stability. Jobs saved.

Then, we've worked on successful REAP projects in **other agricultural sectors**, like the following:

- **Spring Hill Farm, a pork producer in Halifax County, VA** - \$3,300 grant to install more efficient fans and water heaters in his farrowing houses; projected to reduce annual energy consumption by 9% with a payback period of 2.7 years.
- **Gulf American Shrimp in Port St. Joe, FL**- \$9,700 grant to install solar-powered oxygen monitoring systems with computer controllers for his pond aeration systems; projected to reduce energy consumption by 36% with a payback period of 5.6 years. The farm produces 200 tons of Pacific White Shrimp each year on 300 acres of inland, freshwater ponds and employs 3.
- **White Rock Fish Farm, a striped bass producer in Craven County, NC** - \$6,700 to install oxygen monitoring system with computer controllers for pond aerators; projected to reduce energy consumption by 36% with payback period of 6.5 years. Farm employs 2.
- **Jubilee Farms, a catfish producer in Sunflower County, MS** - \$43,500 grant to install a 1600-ft. deep well to extract 82-degree water to eliminate the need to heat 60 million gallons of water used annually by the farm's catfish hatchery; projected to reduce energy consumption by 75% with a payback period of 10 years. The farm employs up to 35 workers annually.

## Summary of REAP Project Savings to 21 Catfish Producers in MS, LA and AL, 2010-2012

<u>Producer</u>	<u>Energy Cost per 1000 pounds live catfish BEFORE</u>	<u>Energy Cost per 1000 pounds live catfish AFTER</u>	<u>Annual KWH savings</u>	<u>baseline annual energy cost</u>	<u>pounds fish produced</u>
	\$	\$			
TOTAL (21)	1,223.44	780.31	3,061,813	\$1,290,292.94	22,554,519
<b>AVERAGE</b>	<b>\$58.26*</b>	<b>\$37.16</b>	<b>145,800 kwh</b>	<b>\$61,443</b>	<b>1,074,025</b>

\* This energy cost of \$58/1000 pounds live fish represents 6% of total value. At \$950/1000# received for live catfish, 6% of income goes to pay energy costs.

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These are all Energy Efficiency projects, just one component of REAP. Then there are **Renewable Energy** projects (the other component of REAP) across the country. There is a huge potential for working with poultry and other confined animal production sectors (swine, dairy) on Renewable Energy Systems, specifically wood heating system, methane digesters, and solar PV and solar thermal systems.

Like these **Solar PV Systems** installed through REAP:

- Solar PV System to power drip irrigation system for a **GA pecan orchard**.
- **MS poultry producer (Spencer Pope, Leake County)** installed a solar PV system on one broiler house in 2009 using a REAP grant of \$20,000. System is producing 1000 kWh monthly, replacing more than 50% of the electricity demand of the target broiler house. Projected payback period is 6.4 years. The average poultry house has adequate southern-exposure roof space to install 500 solar PV modules.

As for **Biomass Energy Systems** potential, MS, GA and NC were identified in the top 5 states in a recent Forbes report on the potential for alternative energy production from biomass. REAP examples are:

- **Beasley Forest Products in GA, a hardwood sawmill or Browder Veneer in AL** – Each needed to expand its dry kiln facilities, but high fossil fuel costs were preventing that. It came a REAP-funded biomass drying system burning the mill's wood residue; reduced waste, increased income, saved jobs. The two mills employ more than 200.

- **Dan Peachy, poultry producer in Maysville, AR** - \$8,300 grant to install a Renewable Energy System (wood-burning heater) in his 2 broiler houses; projected to reduce his propane consumption by 90% with a payback period of 3.3 years.

### **What is the Future Potential for REAP?**

We have only scratched the surface on the potential for the **poultry industry** in the US and the Southeast to benefit from REAP. Mississippi, which ranks 5<sup>th</sup> in nation in poultry production, has 2,000 poultry farms; only 10% have participated in REAP. Poultry producer participation in REAP has been even lower in the top 4 poultry producing states of states of GA, AR, AL and NC. Same holds true in the rest of the top 10 poultry states of TX, KY, DE, MD and VA.

The potential within the **aquaculture industry** for participation in REAP is significant, especially with catfish producers. Centered primarily in the Delta of MS, AR and LA, the industry has been hit hard in recent years by foreign imports increased feed and energy costs. Then many received heavy losses and are just now rebounding from the flood of 2011. REAP can make a difference for many by reducing energy consumption and thereby reducing production costs.

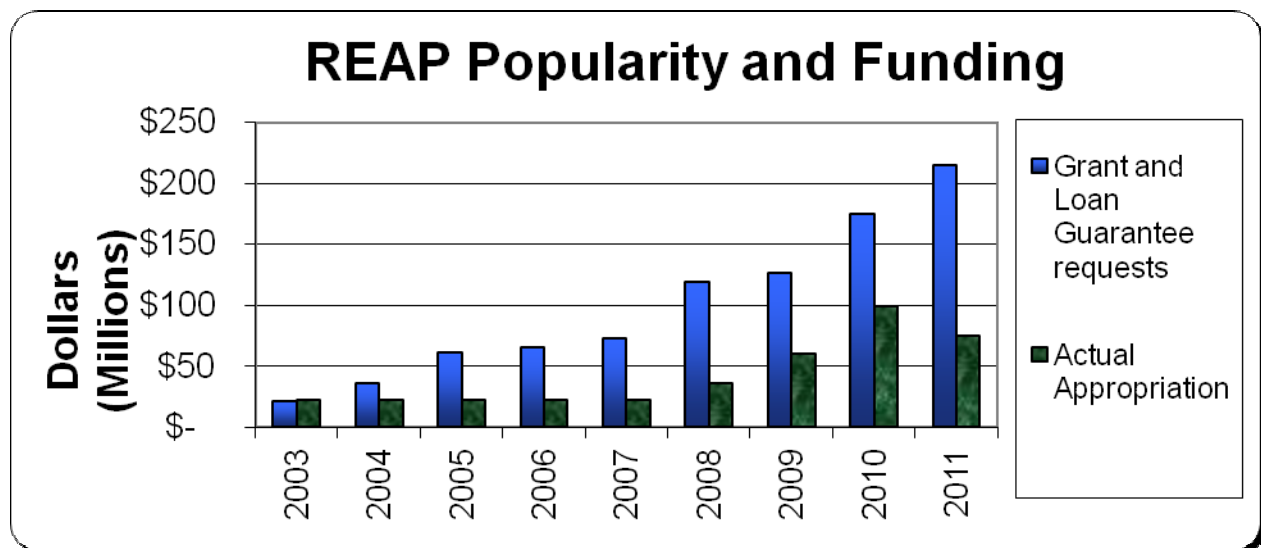
There is a huge potential for greater participation by **Rural Small Businesses** in REAP. There are thousands of small businesses across the US in population areas of less than 50,000, however to date the large majority of REAP participants have been agricultural producers. This program has gone mostly unnoticed by small businesses, like the following that I assisted:

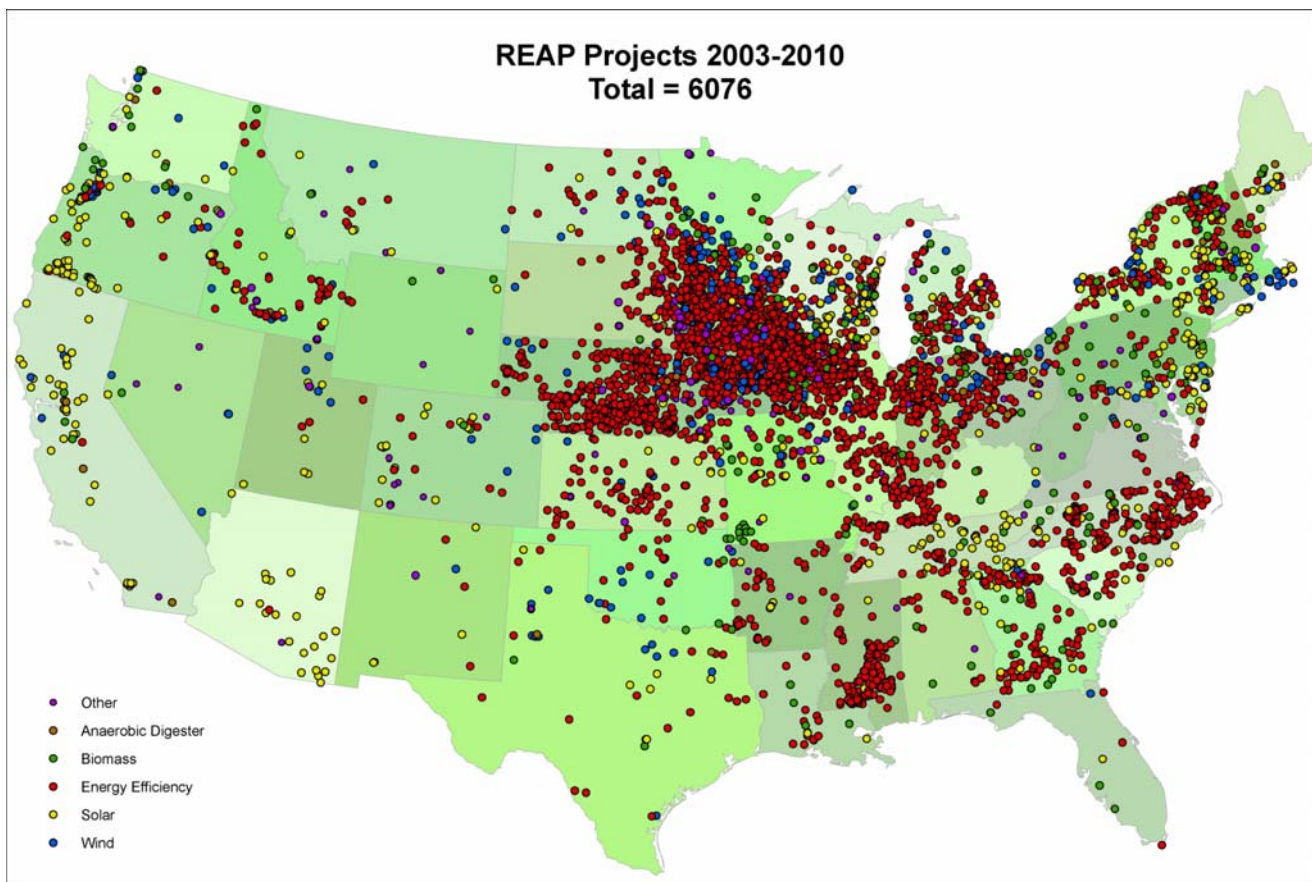
- **J&L Family Laundromat**, a small minority and woman-owned business in rural Bassfield, MS; received a \$5,800 REAP grant in 2009 to upgrade clothes dryers and water heater.
- **South Alabama Grocers, Ozark, AL**, a small, independent, family-owned grocery employing 28; received REAP grant to replace old inefficient refrigerated display cases; projected to save \$53,000 in annual energy cost with payback period of 6.4 years.
- **Mike's Supermarket in Rio Hondo, TX**- identical project to replace 30-year-old freezer and display cases; projected to reduce energy use by 10% with an 11-year payback period. That family-owned rural grocery employs 20.
- These REAP projects are reducing energy costs and therefore operating costs, increasing sales, saving jobs!

## What is the current trend in interest if participation in REAP?

State	REAP Applications Received			\$ Request for Grants	\$ REAP Funds Available
	2009	2010	2011	2011	2011
Alabama		17	37	not provided	not provided
Arkansas	6	49	75	4,300,000	862,408
Mississippi		34	62	3,000,000	707,318
Missouri		60	80	2,200,000	656,000
North Carolina	70	120	179	5,800,000	600,000
Oklahoma		14	21	not provided	not provided
Virginia		20	47	2,000,000	641,901
<b>TOTAL</b>		<b>314</b>	<b>501</b>	<b>\$17.3 million</b>	<b>\$3.5 million</b>

REAP is popular and far over-subscribed and underfunded:





### Rural Energy for America Program (REAP):

- REAP is a diverse, national program that has supported projects in every ag sector in every state. (map above)
- REAP supports the full range of renewable energy options for agriculture.
- Cuts in 2012 to REAP are far out of proportion to other farm programs (approx. 80% cut)
- Cutting REAP reduces private investment share, reducing overall rural development.
- Cutting REAP results in higher farm production costs, fewer jobs saved, less renewable energy development.

### REAP:

- Improves producer margins by cutting energy consumption – and *bills* – with modern energy efficiency and renewable energy technologies.
- Helps agricultural producers diversify and increase farm income with energy sales.
- Improves local economies through new jobs for system development, installation, operation and maintenance.
- Increases America's energy independence with homegrown energy.
- Benefits the public with improved environmental quality by reducing or eliminating water, air and land pollution.
- Provides the financial leveraging power to help rural small businesses and agricultural producers afford these commercially-proven technologies.

**REAP stimulates private investment. REAP mandates that at least \$3 in private funds are provided for every \$1 in REAP grant funds.** (Most other federal grant and cost-share program require only \$1 private match for each \$3 in federal funds provided.) But this 25% incentive is enough to encourage participants to install new technologies and provide real-world examples to inspire others to follow suit.

**REAP creates jobs.** According to a study conducted by the Environmental Law and Policy Center, with report issued in 2009, there are 18.45 jobs created from each \$1 million invested in Energy Efficiency Improvements by small businesses and agricultural producers. (These estimates are based on Political Economic Research Institute green jobs creation rates derived from U. S. Dept. of Commerce industrial economic output data.)

That's \$54,000 federal grant funds per job. Then add another 55 jobs created or saved by the \$3 million in private funds spent for each \$1 million in REAP grants!

Specifically, for REAP participants, the projects improve their balance sheets by cutting energy bills and/or developing new income streams.

With the limited funding the program has had over the past 9 years, REAP has only begun to serve the agricultural community and small rural businesses. But the word is out about the program and the interest and participation is very high!

"REAP is important and helps rural, small businesses and ag producers jump-start solar energy projects that serve as excellent sources for long term electrical power sources in rural areas. Using REAP grants to help drought-proof orchards and croplands is becoming vital to farmers. Not only does solar driven irrigation work well, it increases property value. Solar panels lower operating costs and improve farmers' bottom line. That translates right into our kitchens."

~Robert E. Green, CEO; Greenavations Power, LLC, Georgia, [rgreen@greenavations.com](mailto:rgreen@greenavations.com)

### **Where are REAP Projects located?**

REAP projects are located in every state and include:

- Irrigation systems
- Poultry house retrofits
- Grain dryers
- Dairy and swine energy efficiency retrofits
- Aquaculture aeration controls for reduced energy use
- Wide array and technology of Renewable Energy Systems
- Rural Small Business EE and RE projects

**Consider the potential impact of REAP on just the Confined Animal Ag Operations (poultry, pork, dairy, aquaculture, etc.) sector of this nation. They are huge energy users than can benefit greatly from an adequately funded REAP.**

These confined animal operations in the US contribute:

- 1,818,843 Jobs; almost 113,000 more jobs than 10 years ago
- \$41 Billion Impact on Household Incomes
- \$6 Billion in Property Taxes Paid
- \$10 Billion in Income Taxes Paid
- More Than 5% of the Gross State Product for 13 States (AL, AR, ID, IA, KS, MS, NE, NM, ND, OK, SD, WI and WY)

Source: Animal Agriculture Economic Analysis: 1999-2009, Promar International

In summary, **REAP** (Rural Energy for America Program):

- Supports a wide array of ag and forestry-based energy efficiency and renewable energy projects, including wind, solar, geothermal, anaerobic digesters, biomass energy, biofuels, marine energy, and small hydroelectric.
- Allows farmers, through grants and loan guarantees, to save on energy bills and even become energy producers.
- Promotes real-world examples, inspiring others to follow suit.
- Creates jobs in manufacturing, installing, and maintaining renewable energy and energy efficiency systems.



While my testimony today generally focused on the attributes of the Rural Energy for America Program, this program is just one of several that is designed to help America attain multiple economic, ecological, societal and security goals. In short, Farm Bill Energy programs:

- *Create jobs* – According to a recent analysis conducted by the University of Tennessee, achieving the goal of providing just 25% of our nation's energy from farms, forests, and ranches has the potential create 4.7 million new jobs and generate \$646 billion in new economic activity by 2025.
- *Strengthen our national security* – Energy Title programs support home-grown energy, reducing our reliance on energy sources from abroad.
- *Diversify our rural economy* – These programs provide agriculture with new and different sources of income for agricultural communities that provide returns for decades.
- *Unlock hundreds of millions of dollars in private investment* – Many of these programs match private investment, often less than dollar for dollar.
- *Create new, self-sustaining industries* - Unlike other programs, strong investment in the Energy Title will enable the young industries they support to eventually stand on their own.
- *Positively impact every state* – Energy Title programs have awarded funding for every state across the nation.
- *Improve our environment* – Programs supporting the development and deployment of renewable energy improve the quality of our air, water, and habitat.
- *Present a low-cost, high yield investment* – Despite all of benefits mentioned above, the Energy Title accounts for less than one percent of the total Farm Bill, making it a bargain.

**In the coming months, as you work to develop the new Farm Bill, I hope you will continue to support the core Energy Title programs in a way that demonstrates an honest commitment by Congress to achieving these crucial goals.**

### **Why is a strong Energy Title for the new Farm Bill so important?**

- Maintaining agricultural productivity in America is indispensable to our economic security. Reducing operating costs through energy efficiency and renewable energy measures increase net income so critical to maintaining productivity.
- Abundant, affordable, clean energy and a healthy economy that can once again create new jobs are also essential national priorities.
- Advancing renewable fuels and energy efficiency can help farmers, foresters and others in rural America make a sizeable contribution to the nation's energy and economic security.
- America's agricultural producers want and need energy programs that create new markets for their products and new jobs.
- Commercializing innovative technologies cannot always be left to market forces. Supportive federal policies are needed to accelerate job creation.
- REAP projects now underway in every state are creating thousands of jobs across rural America, while contributing to U.S. energy security and improved environmental quality.
- Farm energy programs, such as those authorized in the Energy Title of the Farm Bill, help farmers put Renewable Energy and Energy Efficiency technologies into place. Renewable Energy technologies can be a critical tool in turning liabilities, like animal waste use and disposal, into high-value assets.

**I want to again thank the Committee for their time and consideration of my remarks in testimony and of this expanded document.**

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