

# USDA Rural Development

**USDA**



**Rural  
Development**

Committed to the future of rural communities.

# USDA Rural Development

**Business and  
Cooperative Programs**

**Renewable Energy  
Systems**

**Energy Efficiency  
Improvements**



# Business and Cooperative Programs

- Guaranteed Business & Industry Loans
- Guaranteed Renewable Energy Loans
- Renewable Energy Grants
- Energy Efficiency Grants
- Intermediary Relending Program
- Biomass Research & Development Initiative Grant
- Value Added Producer Grant

# Section 9006 Funding Activity FY 03 thru 05

## Renewable Energy

	No.	Amounts	Leveraged Funds
Biomass	119	\$29,757,021	\$197,116,700
Wind	121	27,809,516	446,418,325
Solar	17	1,442,243	3,559,375
Geothermal	4	380,283	1,140,872
Hybrid	9	2,439,832	185,455,600
Totals	<u>270</u>	<u>\$61,828,895</u>	<u>\$833,690,872</u>

**Energy Efficiency**      165      \$4,927,655      \$15,833,480

*Guaranteed Loans (Biomass): 2 - \$10,100,000    Leveraged Funds \$13,134,000*

# Section 9006: FY 03-05 Awards

	2003	2004	2005
Digesters	\$ 7,446,530	\$ 9,508,946	\$ 5,018,017
Bioenergy	\$ 2,529,005	\$ 3,136,132	\$ 2,118,391
EE Buildings	\$ 262,037	\$ 1,635,799	\$ 783,019
EE Industrial	\$ 1,242,215	\$ 177,175	\$ 827,410
Geothermal	--	\$ 285,353	\$ 94,930
Hybrid	\$ 2,112,977	\$ 126,992	\$ 199,863
Solar	\$ 725,566	\$ 54,822	\$ 661,855
Wind, large	\$ 7,201,769	\$ 7,301,540	\$ 12,432,626
Wind, small	\$ 187,134	\$ 585,290	\$ 101,157
TOTAL	\$ 21,707,233	\$ 22,812,049	\$ 22,237,268

DOE and USDA:

**Research and Development** of biomass based products, bioenergy, biofuels and related processes.

- Promote innovation and development related to biomass, and to support the Biomass Research Development Act of 2000, the Healthy Forest Restoration Act of 03, the Energy Policy Act of 2005, and Federal policy calling for greater use of biomass-based products, feedstock production, and processing and conversion.
- Four research and development topic areas: Feedstock production, overcoming recalcitrance, product diversification, and analysis for the application of biomass technologies.
- A total of 276 pre-applications were submitted.
- The Merit Review Committee anticipates selecting 30 – 40 pre-applications to submit complete applications. Debriefing Letters notifying 9008 applicants of the status of their pre-applications will be sent out in early to mid March 06. Complete applications are due on April 24, 2006. It is anticipated 12 to 20 projects will be funded.
- USDA has \$12M in funding authority for the program. The DOE anticipates having \$2M in funding authority.

# Global

- Demand too high
- Cost double
- Supply decrease
- Reserve fiction
- Katrina
- Rita
- Supply peaking



# U.S. Market



- US Energy market shift = 20m barrel/day petrol products = 25% world oil production, mostly for transportation, 90% fossil fuel
- Ethanol = 80 plants, 150,000 jobs

# Change

- Mitigation at peaking
- Wedge

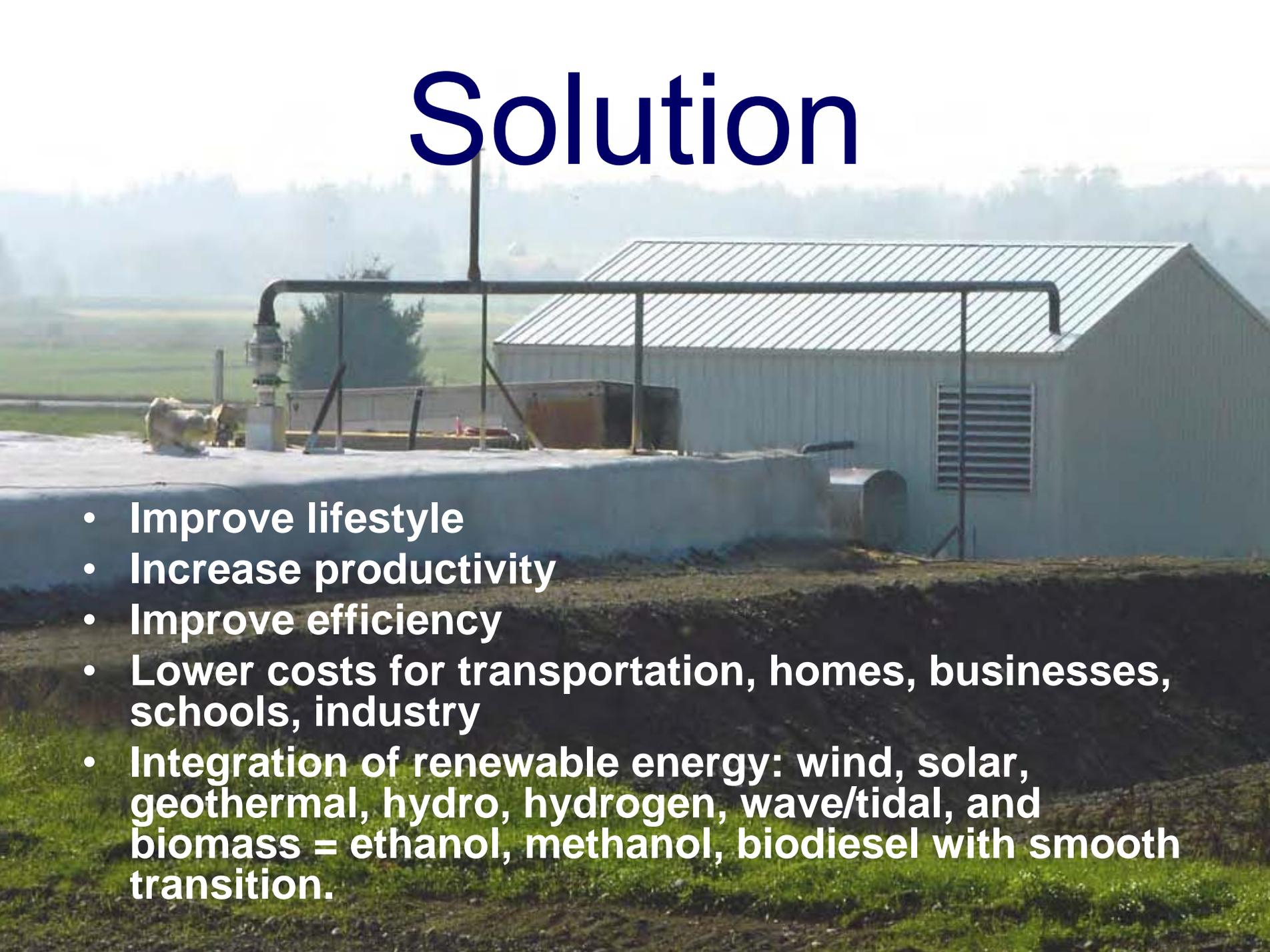


# Solution

A rural landscape featuring a vibrant field of yellow flowers in the foreground. In the middle ground, a red barn with a grey roof is visible. The background consists of a plowed hillside with distinct furrows, suggesting agricultural activity.

- **Stop digging**
- **Conservation**
- **Energy efficiency**
- **Develop Renewable Energy Supply**

# Solution



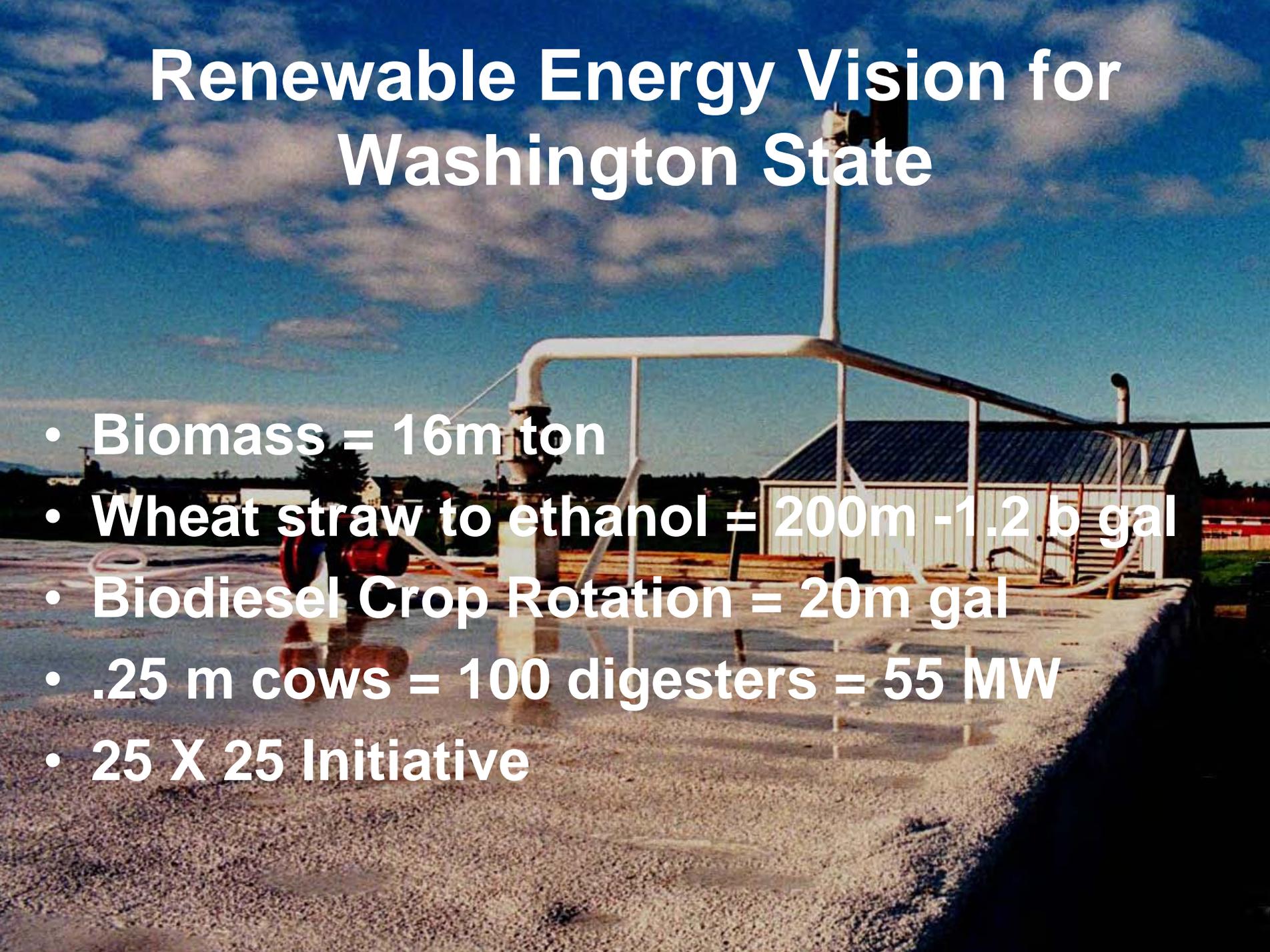
- **Improve lifestyle**
- **Increase productivity**
- **Improve efficiency**
- **Lower costs for transportation, homes, businesses, schools, industry**
- **Integration of renewable energy: wind, solar, geothermal, hydro, hydrogen, wave/tidal, and biomass = ethanol, methanol, biodiesel with smooth transition.**

# Renewable Opportunity

- All inclusive
- National Security
- Rural Economic Development: Jobs, technological advancement, business retention & expansion, local \$ retention, multiplier effect
- Alleviate Poverty
- Agriculture Coup
- Lower energy costs
- Hedge against fossil fuel price increases
- Protect the environment
- Enhance recreation



# Renewable Energy Vision for Washington State



- Biomass = 16m ton
- Wheat straw to ethanol = 200m -1.2 b gal
- Biodiesel Crop Rotation = 20m gal
- .25 m cows = 100 digesters = 55 MW
- 25 X 25 Initiative

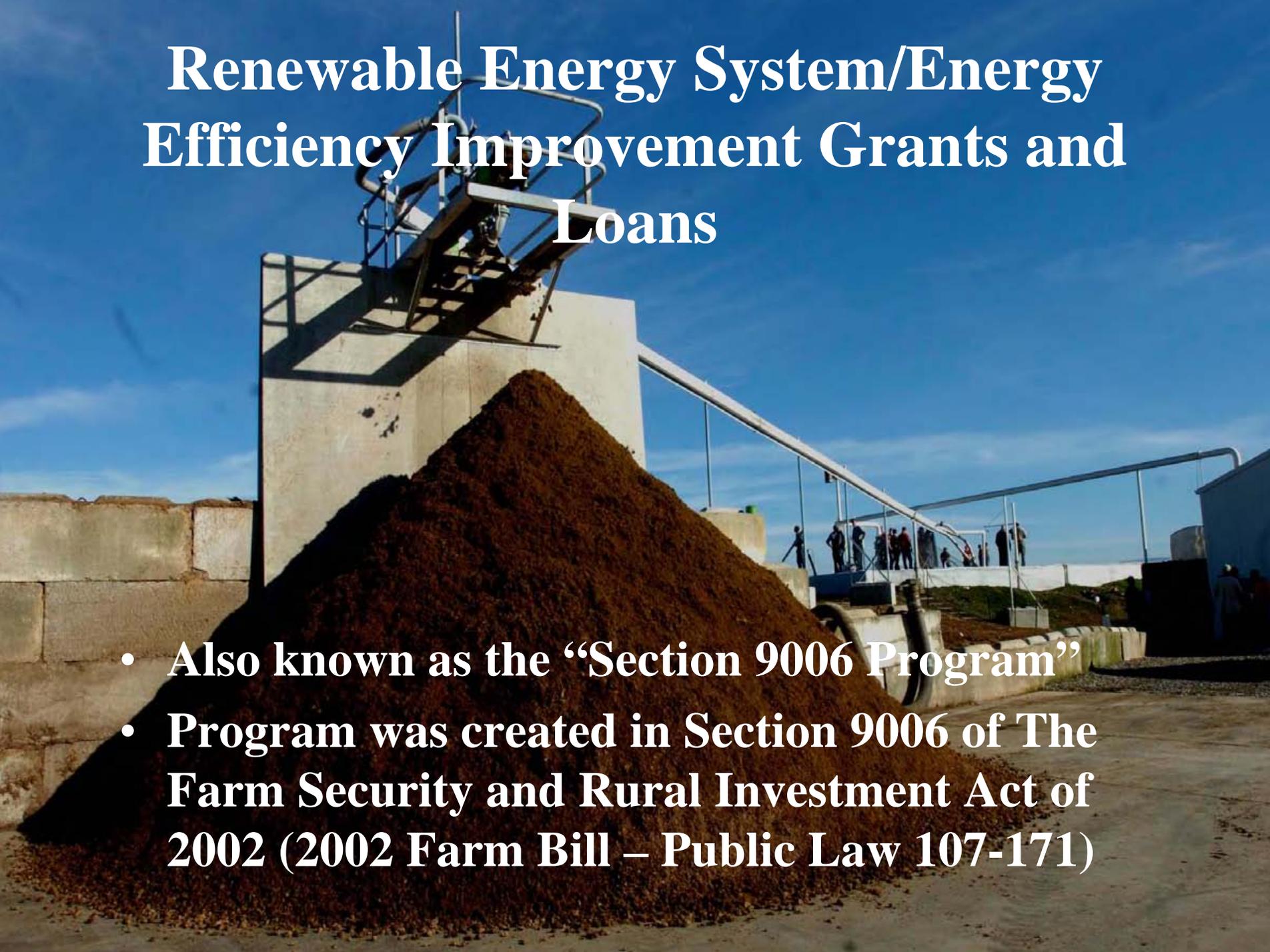
# Infrastructure Examples

- **Hydrogen Fuel Cells**
- **Washington State: Central WA Univ., King County, McCord AFB, Geiger Field Spokane**
- **Wastewater treatment plants, government hotels & installations, business centers, telecommunication & data centers, hospitals, universities, smart grid support, manufacturing, commercial, industrial**
- **2000 project in 25 countries**

A small, three-bladed wind turbine with yellow blades is mounted on a tall, slender metal tower. The tower is situated on a mountain peak covered in snow. In the foreground, there are several snow-laden evergreen trees. The background shows a vast, snow-covered landscape under a bright blue sky with scattered white clouds. The text is overlaid on the right side of the image.

***Renewable  
Energy  
System/Energy  
Efficiency  
Improvement  
Grants and  
Loans***

# Renewable Energy System/Energy Efficiency Improvement Grants and Loans



- Also known as the “Section 9006 Program”
- Program was created in Section 9006 of The Farm Security and Rural Investment Act of 2002 (2002 Farm Bill – Public Law 107-171)

# Renewable Energy System/Energy Efficiency Improvement Grants and Loans

- Establishes a grant and loan guarantee program to assist eligible agriculture producers and rural small businesses in purchasing renewable energy systems and for making energy efficiency improvements



# Renewable Energy System/Energy Efficiency Improvement Grants and Loans

- Grants may be used to provide up to 25 percent of eligible costs for renewable energy systems or to make energy efficiency improvements
- Guaranteed loans may be used to provide up to 50 percent of eligible costs for renewable energy systems or to make energy efficiency improvements



# Renewable Energy System/Energy Efficiency Improvement Grants and Loans



- **Establishes a grant and loan guarantee program to assist eligible agriculture producers and rural small businesses in purchasing renewable energy systems and for making energy efficiency improvements**

# Renewable Energy System/Energy Efficiency Improvement Grants and Loans Specific Technology Categories

- **Biomass, bioenergy**
- **Biomass, digesters**
- **Geothermal, electric**
- **Geothermal, direct use**
- **Hydrogen**
- **Solar, small**
- **Solar, large**
- **Wind, small**
- **Wind, large**
- **Energy Efficiency Improvements**



***Value Added  
Producer Grant  
Program***

# Value Added Producer Grant Program



- The primary objective is to help agricultural producers take advantage of value-added processing of the commodities they produce on the farm
  - *Enter emerging markets*
  - *Increase the returns to the producer*
  - *Moving down the value chain to the consumer*

# Value Added Producer Grant Program



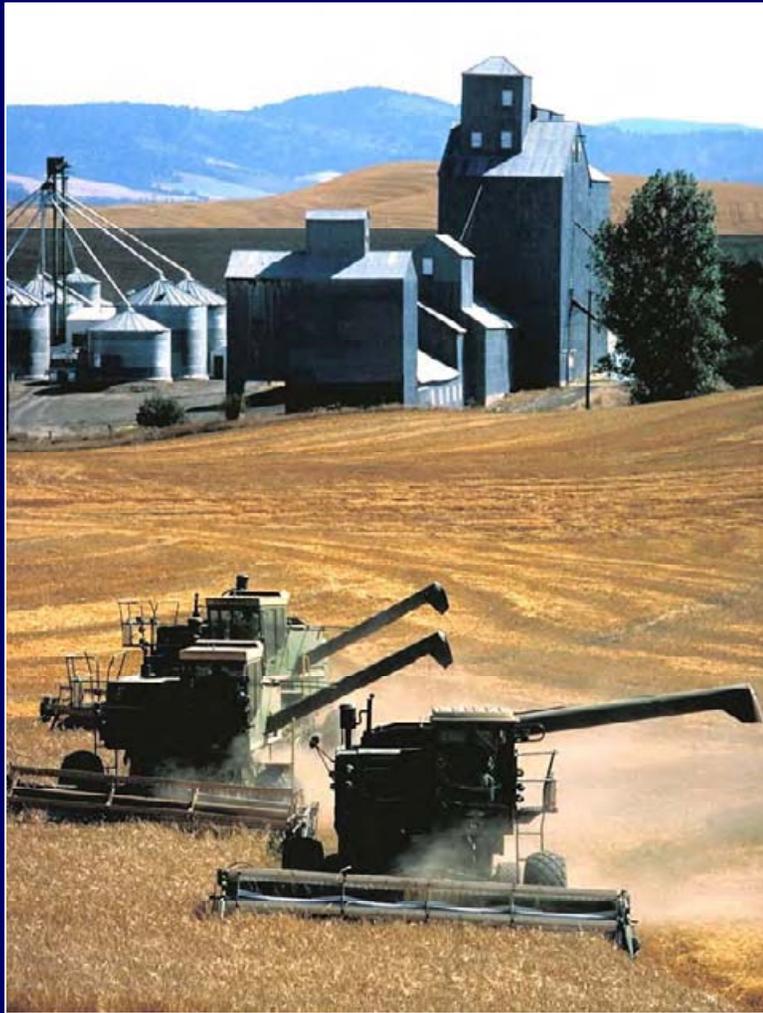
- **Eligible Applicants**
  - Independent Producers
  - Farmer or Rancher Cooperative
  - Agriculture Producer Group
  - Majority Controlled Producer based Business Venture
- **Applicants must provide matching funds of at least 50 percent of the proposed project**

# Value Added Producer Grant Program



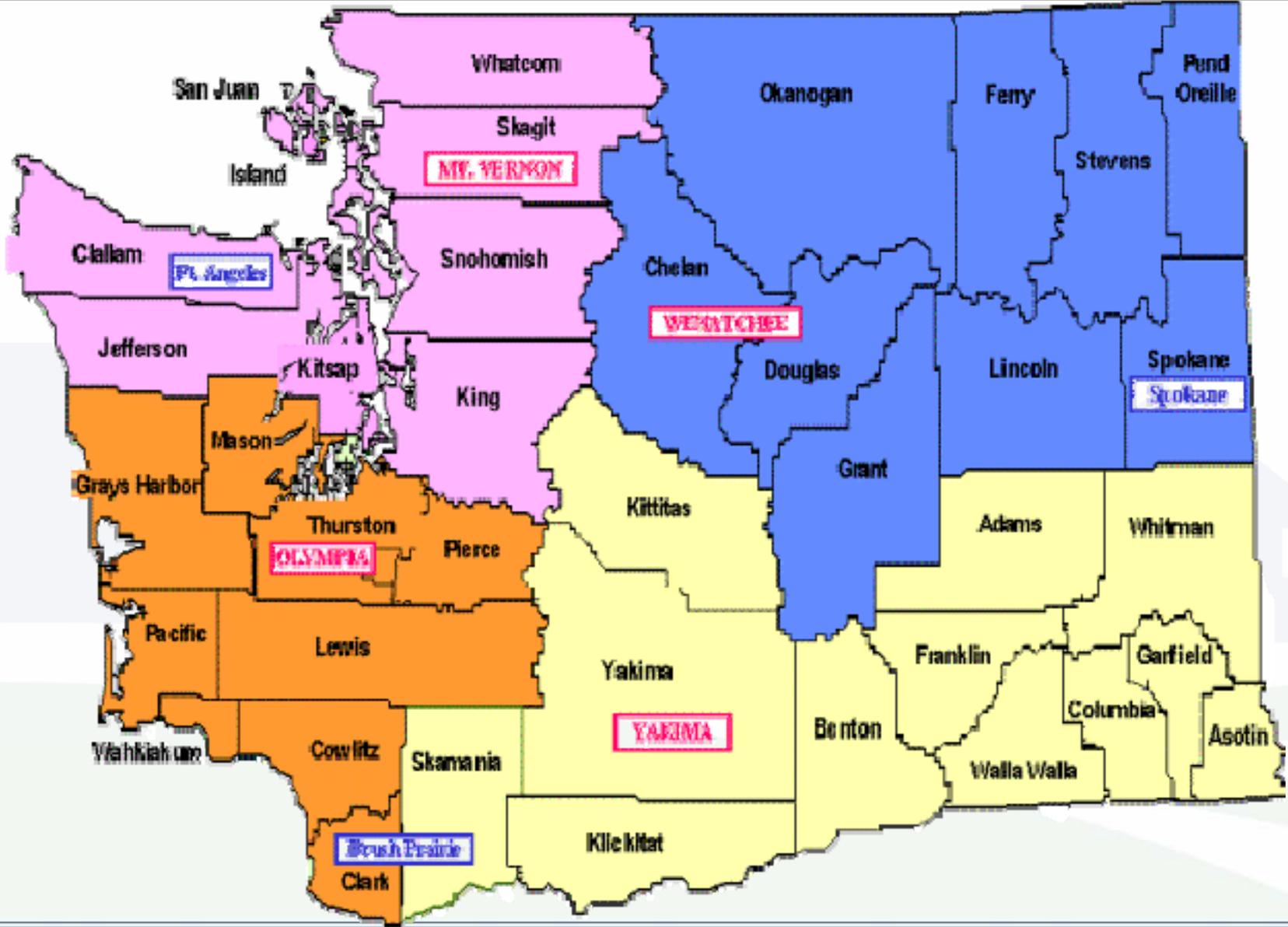
- **These activities must:**
  - Expand customer base for the product or commodity, and
  - Result in a greater portion of the revenues derived from the value-added activity that is available to the producer

# Value Added Producer Grant Program



- **Examples**

- Process oil seed into biodiesel
- Process switch grass into ethanol and forest slash into methanol
- Collecting and converting methane from animal waste to generate energy
- Marketing of bioproducts
- Use of an Ag Commodity to produce renewable energy, including wind and solar



Committed to the future of rural communities.

USDA - RURAL DEVELOPMENT



**Visit our Website at**  
***<http://www.rurdev.usda.gov/wa>***

A close-up photograph of a honeybee on a yellow flower, with the text "USDA Rural Development" overlaid in white. The background is a soft-focus field of similar yellow flowers.

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