

Rural Development's Rural Energy for America Program (REAP)

Grants and Loans Guarantees



Purpose

Program is designed to promote energy efficiency and renewable energy development for agricultural producers and rural small businesses.



Rural Development's Role

- Grant Assistance
 - 25% of the project's eligible costs
 - \$250,000 Maximum for Energy Efficiency Projects.
 - \$500,000 Maximum for Renewable Energy Projects.
- Loan guarantees
 - 85% loan guarantee for loans under \$600,000
 - \$25,000,000 maximum loan amount



Priority Projects

- Smaller projects compete for special set aside funding geared towards smaller projects.
 - Project costs under \$80,000 and grant requests under \$20,000
- Providing funds to entities to conduct **energy audits** for energy efficiency improvements for farmers and rural businesses.
- Providing funds to entities to conduct **feasibility studies** for renewable energy projects for farmers and rural businesses.



Expected Available Funding Fiscal Year 2009

- 2008 Farm Bill provided for increased funding over previous years.
 - Fiscal year 2008 funding levels were \$16 Million for grants and \$208 Million for Loan Guarantees.
 - Fiscal year 2009 funding levels:
 - \$31 Million for Grants
 - \$303 Million for Loan Guarantees
 - \$2.2 Million for Energy Audits
 - \$5.2 Feasibility Studies
 - Nationally competitive program.



Types of projects eligible for USDA Assistance

- Renewable Energy
- Energy Efficiency



Biomass and Bioenergy Projects

- Biodiesel, Ethanol
- Wood pellet manufacturing
- Boilers fueled by wood



Anaerobic Digester Projects



*Phase 3 Renewables
4 Projects in Michigan*



Wind, small and large



50 kW



10 kW



1.5MW



Solar Small and Large Projects - Electric and Thermal Projects



Thermal



Thermal & Electric



Electric



Thermal



Thermal & Electric

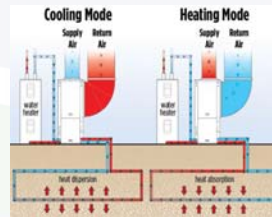


Electric



Geothermal

- Aquaculture
- Greenhouses
- Spas and resorts
- Industrial and agricultural processes
- Space heating and hot water
- Refrigeration



Energy Efficiency Improvements Grain Dryer Replacements

Old

New



Other Eligible Projects

- Energy Efficiency Improvements
 - Freezers & Coolers
 - Lighting Improvements, Window & Plumbing Upgrades, Insulation
 - Replacement Grain Dryers & Irrigation Units
 - Greenhouse heating, lighting, and cooling improvements
 - High efficiency motors, pumps, fans, blowers, compressors
 - Documented efficiency improvements per energy audit
- Hydrogen production from renewables
- Hydroelectric (New to Program in FY2009)



Applicant Eligibility

Applicant:

- must be an agricultural producer (Greater than 50% of income from farming operation).
- rural small business as defined by the SBA.
- must be citizens of the U.S.
- must not have federal judgments or delinquent federal taxes



Project Eligibility

Project:

- Must be for the purchase of a *renewable energy system*
- Must be to purchase *energy efficiency improvements*.
- Must be for commercially available and replicable technology
- Must have technical merit
- Must be located in a rural area. To check, go to:
<http://eligibility.sc.egov.usda.gov/eligibility/welcomeAction.do>
- **Cannot be used for residential improvements.**
- **Cannot be used for ag. tillage equipment, used equipment, & vehicles.**



Eligible Project Costs

- Post-application purchase and installation of equipment,
- Post-application construction or project improvements,
- Permit Fees
- Retrofitting (Post- Application)
- Professional Service Fees, except application preparation
- Feasibility Studies (required prior to application submission)
- Business Plans (required prior to application submission)
- Energy Audits (required prior to application submission)

- **Program cannot be used for projects already installed.**



Grant Amounts

- Renewable Energy Systems (RE System)
 - Maximum Request \$500,000
 - Minimum Request \$2,500
- Energy Efficiency Improvements (EE System)
 - Maximum Request \$250,000
 - Minimum Request \$1,500
- Grant assistance is taxable. A 1099 will be sent to the grant recipient.



Guaranteed Loans

- Provides a federal loan guarantee to banks on loans made to customers intending to finance energy related projects.
 - 85% Loan guarantee for loans less than \$600,000
 - 80% Loan guarantee for loans between \$600,000 and \$5,000,000
 - 70% Loan guarantee for loans between \$5,000,000 and \$10,000,000
 - 60% Loan guarantee for loans between \$10,000,000 and \$25,000,000



Lender Benefits

- Risk mitigation
- Increased Profits
- Increased Confidence of Banking Regulators

Customer Benefits

- Longer Term Loan
- Better Interest Rate
- Improved Cash Flow
- Helps to ensure a successful project.



Guaranteed Loans

- **Guaranteed Loan Considerations:**
 - Guaranteed loan cannot exceed 75% of total eligible project costs.
 - Minimum loan request is \$5,000
 - Maximum loan request is \$25,000,000
 - Minimum cash equity injection into the project will range from 15% up to 25% of eligible project costs.
 - Grant Award can be used as cash injection
 - May consider market value of real estate as a substitute for cash equity



Combined Grants and Guaranteed Loans

- The amount of the Combined Loan and Grant cannot exceed 75% of the total Eligible Project Costs.
- Minimum combined funding request is \$5,000.
- Eligible Costs are the same as the individual loan and grant requirements.
- Combined Grant and Guaranteed Loan Packages receive **Priority Consideration** over Grant only requests.



Application Contents

- Project description
- Application forms
 - Grant or guaranteed loan forms (Or both)
- Grant recipient Certifications
- Financial Information
 - Quantity of financial information is dependent on the size of the grant request.



Application Contents

- **Project Technical Requirements-** All projects will be required to address the following ten items within the projects technical report.

1. Qualifications of key project service providers
2. Agreements, permits, and certifications
3. Resource assessment
4. Design and engineering
5. Project development schedule
6. Project economic assessment
7. Equipment procurement
8. Equipment installation
9. Operations and maintenance
10. Dismantling and disposal of project components

Start to complete this information NOW!!



Example

Replacement lighting for a Manufacturing Company. Energy Audit Produced the following:

	Present Lights	Input Watts	Total	Hours	kWh/ year	New Lights	Input Watts	Total	Hours		
Office	24	144	3456	3900	13478	24	95	2280	3900	8892	
MFG	100	237	23700	3900	92430	100	160	16000	3900	62400	
Warehouse	100	458	45800	3900	178620	100	234	23400	3900	91260	
			72956		284528			41680		162552	
										Savings kWh	121976
										percentage	43%
										Cost per hour	\$0.08
										Annual Savings	\$9,758



Energy Efficiency Improvements Example Grain Dryer Improvements - **Dollar Savings**

Existing Dryer

Electric: 6,480 kwh * \$0.075 /kw = \$486
 Propane: 9,200 Gallons * \$2.35/ Gallon = \$21,620

New Dryer

Electric: 3,432 kwh * \$0.075/ kw = \$257
 Propane: 5,840 Gallons * \$2.35/ gallon = \$13,724

Improvement

Electric:	Old Dryer	\$486
	New Dryer	\$257
	Cost Savings	\$228.60
Propane:	Old Dryer	\$ 21,620
	New Dryer	\$ 13,724
	Cost Savings	\$ 7,896

Total Cost Savings \$229 + \$7,896 = **\$8,125**



Energy Efficiency Improvements Example Grain Dryer Improvements

Eligible Project Costs

Grain Dryer	\$97,300	
Wet Auger and motors	7,673	
Construction costs		8,000
Total Eligible costs	\$112,973	
Project Repayment = Project Cost (\$112,973) / Projected Savings (\$8,124) = 14 years		
With USDA Grant = (\$112,973 – \$28,243) \$84,730/\$8,124 = 10.4 years		

Financing

USDA Energy Efficiency Improvement Grant	\$28,243	(25%)
USDA Energy Efficiency Improvement Loan Guarantee	\$56,000	(49.6%)
Customer Equity injection	\$28,730	
(25.4%)		
Total Funding	\$112,973	(100.0%)



Renewable Energy System Wind Turbine Installation for Existing Greenhouse.

Company's goal is to reduce reliance on electricity from the grid and become increasingly dependent on energy generated on location. Plan to install a 50kW wind turbine to provide power to the greenhouse.

Existing greenhouse electricity consumption year	308,600 kWh/
Proposed electricity production year	81,600 kWh/
Energy Production as a percentage	26%
Expected cost savings	\$7,344 /yr.
Return on Investment	

Project Costs of \$199,500/ Expected Savings \$7,344 = 27 years
 With USDA Grant = \$199,500-\$49,875 = \$149,625/\$7,344 = 20 years



Grant Applications

Simplified Application

- Projects with Eligible Costs \$200,000 or less
- More streamlined technical report required.
- Examples can be provided.

Full Application

- Projects with Eligible Costs over \$200,000
- Requires additional documentation for the technical report
- Additional Financial Documentation required.



Loan Guarantee Applications

- Requires Completion of the Loan Guarantee Application and the Completion of the Technical Report.
- Rural Development will work with the lender and the applicant in the completion of this application.



2007 & 2008 Michigan Projects

<u>Grant Amount</u>	<u>Loan Guarantee Amount</u>	<u>Project</u>
\$ 4,000		Wood Stove for Beef Cattle
Outbuildings		
\$ 500,000		Anaerobic Digester – Hog Operation
\$ 12,250		Grain Dryer Replacement
\$ 50,000		Greenhouse Energy Curtains
\$ 500,000		Anaerobic Digester – Dairy Farm
\$ 500,000	\$ 700,750	Biomass Gasification System – Turkey
Litter		
\$ 4,000		Replace Furnace & A/C
\$ 89,780		Greenhouse Boiler Replacement
\$ 16,122		Small Wind & Solar System
\$ 22,875		Grain Dryer Replacement
\$ 15,310		Biomass Boiler for Farm Market
\$ 1,575		Replacement Lighting & Fixtures
\$ 37,400		Greenhouse Energy & Shade
Curtain		
\$ 32,215	\$ 32,215	Grain Dryer Replacement
\$ 40,318	\$ 40,318	Grain Dryer Replacement
\$ 49,651		Replacement of Greenhouse
Building		
\$ 18,125		Replace Natural Gas Boiler
\$ 11,488		Grain Dryer Replacement
\$1,905,109	\$ 773,283	TOTAL



Application Time Line

- Expect application window to open in the next 7 -30 days.
 - Notice of Funding Availability as published in the Federal Register will determine starting date of the program.
- Applications can not be accepted until NOFA is published. There will likely be some changes from last years application requirements.
- Applicant should begin working on the Technical Requirements – NOW!!



Business Programs
 Business and Industry Guaranteed Loans
 Rural Energy for America Program Grants & Loans
 Rural Business Enterprise Grants
 Value Added Producer Grants
 Renewable Energy Program Loans & Grants
 Intermediary Re-lending Program Loans
 Rural Economic Development Loans and Grants
 Cooperative Development Assistance

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 Committed to the future of rural communities.