



USDA's Bioenergy Initiative

Case Studies:
Biomass Facility Funding



**Biomass Working Group
January 21, 2014**



Agriculture • Defense • Energy • Interior • Treasury

The Federal Government Family of Departments

The Federal Government delivers financial assistance for the development of Biomass facilities through multiple *Departments* which include but are not limited to:

- Department of Agriculture
- Department of Defense
- Department of Energy
- Department of Interior
- Department of Treasury



Federal Financial Assistance Comes In Many Forms

Federal Funding Mechanisms for Biomass Facilities

The Federal Government's Bioenergy initiative delivers financial assistance for the development of Biomass facilities using several funding mechanisms:

- Loans
- Loan Guarantees
- Grants
- Payments
- Tax Credits





USDA = FS • NRCS • FSA • RBCS

The USDA Family of Agencies

USDA delivers financial assistance for the development of Biomass facilities through multiple *Agencies* which include but are not limited to:

- **Forest Service (FS)**
- **Natural Resources Conservation Service (NRCS)**
- **Farm Service Agency (FSA)**
- **Rural Business-Cooperative Service (RBCS)**



USDA Public-Private Partnerships Create Opportunities

USDA's Bioenergy MOU September 11, 2013

USDA supports the development of appropriately scaled Biomass facilities nationwide as a means to address forest fire risk, bolster rural economic development, improve air quality, and meet renewable and energy efficiency goals through partnership agreements like the September 11, 2013 Memorandum of Understanding between USDA and:

- Alliance for Green Heat
- Biomass Power Association
- Biomass Thermal Energy Council
- Pellet Fuels Institute





USDA Public-Private Partnerships Create Opportunities

Successful USDA Biomass Partnerships around the Country

- The Eagle Valley project by Evergreen Clean Energy went online in December 2013 in Gypsum, **Colorado**. It will use woody biomass from 2,500 acres of land ravaged by beetle kill and posing high wildfire risks, to power nearly 8,000 local homes and businesses. A USDA \$8.7 million, 10-year Forest Service Stewardship Contract and a \$40 million Rural Utilities Service loan guarantee made this possible. **[Case Study 5]**
- A USDA collaboration in **New York** with ReEnergy Holdings in the North Country region of New York is helping fund an innovative public/private partnership to invest in energy crops grown on marginal farmland and used as fuel to produce electricity.





USDA Public-Private Partnerships Create Opportunities

Successful USDA Biomass Partnerships around the Country

- The White Mountain Stewardship Project is a partnership between Novo Power LLC in Snowflake, **Arizona**, and the U.S. Forest Service, created largely as a result of the Rodeo-Chediski fire of 2002. The 10-year contract was established to thin approximately 150,000 acres in the Apache-Sitgreaves National Forest. This program provides approximately 155,000 bone-dry tons of ponderosa pine chips annually to the region, enough to power approximately 20,000 homes and businesses.
- Stoltze Land and Lumber in Columbia Falls, **Montana**, generates heat for mill operations and sells 2.5 MW of power to Flathead Electric Cooperative. A USDA partnership helped Stoltze replace a 30-year-old wood boiler.





USDA Public-Private Partnerships Create Opportunities

Successful USDA Biomass Partnerships around the Country

- Oregon Biomass One, a 30-MW wood-fired biomass power plant, is located in the Rogue River Valley in southern **Oregon** that includes federally managed lands such as Siskiyou National Forest, the Umpqua National Forest, the Klamath National Forest and the Medford District of the Bureau of Land Management. This year, an estimated 25 percent of Biomass One's fuel consumption will consist of material processed and recovered as a byproduct from forest operations. U.S. Forest Service and Bureau of Land Management stewardship projects combined yield around 30,000 tons of woody biomass in the region each year.





USDA Renewable Energy Special Projects

USDA Renewable Energy Special Projects

- **USDA Regional Biomass Research Centers**

USDA is developing sustainable supply chain strategies and science-based implementation plans designed to accelerate biofuels feedstock production and reduce transaction costs to feedstock producers and biorefineries. Regionalized biofuels feedstock production and conversion systems can minimize transaction costs and create new rural wealth. USDA is coordinating with Department of Energy to enhance work underway through DOE's Regional Feedstock Partnerships and the Bioenergy Research Centers.

- **Wood-to-Energy Initiative**

USDA's interagency team was established to build opportunities for utilizing wood from hazardous-fuels treatment and small-diameter thinning as feedstock for biofuel and bioenergy. The team's aim is to make better and expand the use of this material helping forest health treatments become economically viable, helping to reduce our dependency on foreign oil, creating green jobs, restoring healthy forests and rangelands, reducing fire risks to the land and communities, and improving water quality.



USDA Provides Loans

USDA Funding Mechanisms for Biomass Facilities (*Loans*)

USDA's Bioenergy initiative provides financial assistance for the development of Biomass facilities through the Rural Utility Service to electric utilities to serve customers in rural areas in the form of direct *Loans* and *Loan Guarantees*:

- **Energy Efficiency & Conservation Loan Program [EE&CLP]
[*Case Study 5*]**
- **Renewable Energy Project Financing Program [REPPF]***
 - ***[Refer to Proposed Rule in Federal Register June 05, 2013]**



USDA Provides Loan Guarantees

USDA Funding Mechanisms for Biomass Facilities (*Loan Guarantees*)

USDA's Bioenergy initiative provides financial assistance for the development of Biomass facilities through the Rural Business-Cooperative Service mission areas of Rural Development and the Rural Utility Service in the form of *Loan Guarantees*:

- **Business & Industry Loan Guarantee (B&I) [\$10 million]**
- **Rural Energy for America Program (REAP) [\$25 million]**
- **Biorefinery Assistance Loan Guarantee [\$250 million]**
- **Energy Efficiency & Conservation Loan Program [\$ unlimited]**





USDA Provides Grants

USDA Funding Mechanisms for Biomass Facilities (*Grants*)

USDA's Bioenergy initiative provides financial assistance for the development of Biomass facilities through the Forest Service and the Rural Business-Cooperative Service mission area of Rural Development in the form of *grants*:

- **Woody Biomass Utilization Grant [FS]**
 - **Sierra Institute • Calaveras Healthy Impact Product Solutions**
- **Statewide Wood Energy Team Grant [FS]**
 - **The Watershed Research & Training Center**
- **Rural Energy for America Program (REAP) Grant [RBCS]**
 - **Rough and Ready Lumber (Cave Junction, OR)**



DOE's Office of Indian Energy Provides Grants As Well

DOE Funding Mechanisms for Biomass Facilities (*Grants*)

DOE's Strategic Technical Assistance Response Team (START) Program for renewable energy project development and installation provides technical assistance grants to Native American Tribes:

- **Ho-Chunk Nation (Black River Falls, Wisconsin)**
 - The Ho-Chunk Nation will receive technical assistance with the development of a one to two megawatt biomass waste-to-energy plant. The plant could potentially use municipal solid waste, agriculture waste or other biomass resources to offset tribal facility energy costs. The Tribe has already approved a land use agreement, completed zoning, and commissioned a feasibility study for the project. The Energy Department will provide assistance with project-related tasks such as analyzing the project plan, reviewing the technology and potential off-take agreements, examining preliminary permitting plans and evaluating financing options.

USDA Provides Payments

USDA Funding Mechanisms for Biomass Facilities (*Payments*)



USDA's Bioenergy initiative provides financial assistance for the development of Biomass facilities through the Rural Business-Cooperative Service mission area of Rural Development in the form of *payments*:

- **Advanced Biofuel Payment Program**

- **Mallard Creek, Inc. (Rockland, CA)**
- **Pacific Pellet, LLC (Salem, OR)**
- **Ochoco Lumber Company (Prineville, OR)**
- **Bear Mountain Forest Products, Inc. (Portland, OR)**



USDA Provides Payments

USDA Funding Mechanisms for Biomass Woody Crops (*Payments*)

USDA's Bioenergy initiative provides financial assistance for the development of Biomass woody crops through the Farm Service Agency (FSA) mission area under the Biomass Crop Assistance Program (BCAP) in the form of *payments*.

7,000 acres in Oregon will be used for the growth of hybrid poplar trees. This project is part of a series of measures that comprise USDA's Wood-to-Energy initiative and seeks to build a forest restoration economy by integrating energy feedstock within the larger forest products sector to sustain rural jobs. USDA has allocated funds for contracts that range up to 15 years for producers who volunteer to enroll. Producers who enter into BCAP contracts are eligible for reimbursements of up to 75 percent of the establishment costs of the perennial energy crop and up to five years of annual maintenance payments for herbaceous crops. Reimbursement for woody crops is up to 15 years.



**Biomass Facility Funding Case Study 1:
Rough and Ready Lumber (Cave Junction, OR)**



Case Study 1

Loan Guarantee + Grant + Tax Credit

Facility: 1.5MW Biomass Project

Location: Cave Junction, OR

Borrower: Rough and Ready Lumber

Lender: Northwest Farm Credit Services

Total Project Costs: \$5,743,550



❖ **Finance Structure:**

- \$2,350,000 Rural Energy for America Program Loan Guarantee
- \$ 500,000 Rural Energy for America Program Grant
- \$1,350,000 Business Energy Tax Credit (State of Oregon)
- \$1,543,550 Borrower Contribution (26.8%)
- ❖ \$5,743,550 Total Project Costs



**Biomass Facility Funding Case Study 2:
Anderson Plant, LLC (Anderson, CA)**

Case Study 2

Loan Guarantee + Grant + Grant

Facility: 6MW Biomass Project (CHP)

Location: Anderson, CA

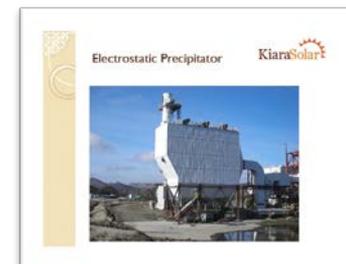
Borrower: Anderson Plant, LLC

Lender: New Resource Bank

Total Project Costs: \$13,500,000

❖ **Finance Structure:**

- \$ 6,000,000 Business & Industry Loan Guarantee
- \$ 3,500,000 1603 Treasury Grant
- \$ 250,000 Woody Biomass Utilization Grant
- \$ 3,750,000 Borrower Contribution (27.7%)
- ❖ \$13,500,000 Total Project Costs



**Biomass Facility Funding Case Study 3:
SEGA Biofuels, LLC (Nahunta, GA)**

Case Study 3

Loan Guarantee + Loan Guarantee

Facility: Pellets Biomass Project

Location: Nahunta, GA

Borrower: SEGA Biofuels, LLC

Lender: The Heritage Bank

Total Project Costs: \$14,273,000



❖ **Finance Structure:**

- \$ 8,370,610 Rural Energy for America Program Loan Guarantee
- \$ 1,304,390 Business & Industry Loan Guarantee
- \$ 4,598, 000 Borrower Contribution (32.2%)
- ❖ \$14,273,000 Total Project Costs



**Biomass Facility Funding Case Study 4:
Appling County Pellets, LLC (Baxley, GA)**

Case Study 4

Triple Loan Guarantees

Facility: Pellets Biomass Project

Location: Baxley, GA

Borrower: Appling County Pellets, LLC

Lender: AgSouth Farm Credit, ACA

Total Project Costs: \$24,500,000

❖ **Finance Structure:**

- \$10,000,000 Rural Energy for America Program Loan Guarantee
- \$ 7,000,000 Business & Industry Loan Guarantee
- \$ 1,000,000 Business & Industry Loan Guarantee
- \$ 6,500,000 Borrower Contribution (26.5%)
- ❖ \$24,500,000 Total Project Costs



**Biomass Facility Funding Case Study 5:
Eagle Valley Clean Energy, LLC (Gypsum, CO)**

Case Study 5

RUS Loan Guarantee

Facility: 11.5MW Biomass Project

Location: Gypsum, CO

Borrower: Eagle Valley Clean Energy, LLC

Utility: Holy Cross Electric Association, Inc.

Lender: USDA Rural Utility Service

Total Project Costs: \$57,422,000



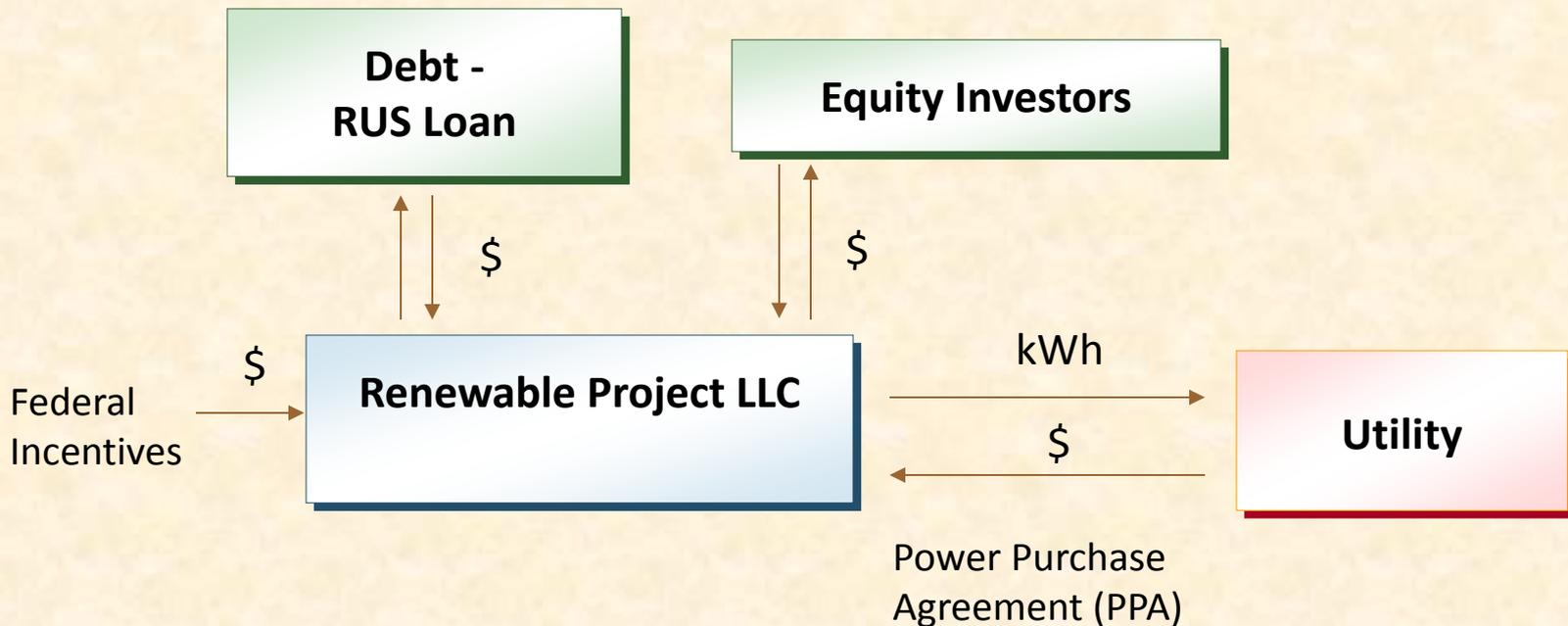
❖ **Finance Structure:**

- \$40,000,000 Energy Efficiency & Conservation Loan Program
- \$17,422,000 Borrower Contribution (30.3%)
- ❖ \$57,422,000 Total Project Costs



USDA Rural Utility Service Loans and Loan Guarantees

Sample Project Finance Structure



USDA Rural Utility Service Loans and Loan Guarantees*

Threshold Eligibility Criteria:

- ✓ **Electricity to serve persons in rural areas where rural is defined as census places where the population is $\leq 20,000$**
- ✓ **Commercially proven technologies**
- ✓ **National Environmental Protection Act (NEPA) review completed *prior to the start of construction***
- ✓ **Credit support provided in Power Purchase Agreement (PPA) language or corporate guarantee**

***Projects need to meet the “3-Rs”: **R**ural beneficiaries; **R**enewable generation; and **R**eady to be financed and built.**

USDA Rural Utility Service Loans and Loan Guarantees

Other Relevant Considerations:

- ✓ **Interest rate: Treasury + 1/8**
- ✓ **Term: shorter of PPA term or useful life of asset**
- ✓ **Equity: Minimum 25% total project cost**
- ✓ **Loan amount: No loan size limit; max = rural ratio* x total eligible project cost**
- ✓ **Reserves: 1 year debt service and overhaul and maintenance**
- ✓ **Term lending only: RUS does not provide construction loans for renewable projects**
- ✓ *** Rural ratio: % of oftaker load that is rural**

California's Electric Cooperatives – the funding sweet spot!



- 1 - Golden State Power Co-op
- 2 - Anza Electric Co-op
- 3 - Clean Power Co-op
- 4 - Cooperative Community Energy
- 5 - Plumas-Sierra Rural Electric Co-op
- 6 - San Francisco Community Power Co-op
- 7 - Surprise Valley Electrification Corp.



Your Touchstone Energy® Cooperatives

How can USDA assist with your Biomass project?

Additional Resource Links

- Catalog of Federal Domestic Assistance ([CFDA](#))
- Database of State Incentives for Renewables & Efficiency ([DSIRE](#))
- USDA Energy [Website](#)
- USDA Rural Development [Energy Programs](#)
- USDA Rural Utilities Service [Electric Programs](#)
- USDA Rural Development [Loan Programs](#)
- USDA Rural Development [Grant Programs](#)
- USDA Forest Service Woody Biomass Utilization [Grant](#)
- USDA Farm Service Agency Biomass Crop Assistance [Program](#)
- DOE Strategic Technical Assistance Response Team [Grant](#)
- Golden State Power Corporation – [California's Electric Cooperatives](#)





United States Department of Agriculture

Reminder: the NOFA for the REAP is expected any day!

Presenter Contact Information

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USDA Non-Discrimination Statement

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United States Department of Agriculture

I look forward to collaborating with you on your next Biomass project. Thank you!

Questions

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