

USDA BIOECONOMY SUPPLY CHAIN

Feedstock Development



Feedstock Production



Feedstock Logistics



Conversion

FEEDSTOCK PRODUCTION AND DEVELOPMENT



Conversion Process Scale-up/Integration



Product Testing/Approval
Performance | Environment Assessment

INTEGRATION – SCALE UP COMMERCIAL PRODUCTION



Enable Production



End User Markets

ENABLE PRODUCTION – END MARKETS

DATA – POLICY ANALYSES & EVALUATION – OUTREACH

USDA BIOECONOMY SUPPLY CHAIN COMPONENTS				
	Production and Development	Integration & Scale up	Enable Production & End Markets	Data, Policy, & Outreach
USDA Agencies & Offices				
Agricultural Marketing Service			+	+
Agricultural Research Service	+	+	+	+
Animal Plant Health and Inspection Service		+		+
Climate Change Program Office		+		+
Departmental Management			+	+
Economic Research Service				+
Farm Service Agency	+	+	+	+
Forest Service	+			+
Foreign Agricultural Service			+	+
National Agriculture Statistics Service				+
National Institute of Food and Agriculture	+	+	+	+
Natural Resources Conservation Service	+	+		+
Office of Energy Policy and New Uses				+
Rural Development		+	+	+

Rural Utility Service – Community Programs

Rural Business Cooperative Service – Energy Programs

- 1. BRDI 9008**
- 2. BCAP 9011**
- 3. Biorefinery, Renewable Chemical, and Biobased Product Manufacturing Assistance Program (9003)**
- 4. Rural Energy for America Program (REAP 9007)**
- 5. Biorefinery Program Advanced Biofuels (9005)**
- 6. Business and Industry Guaranteed Loan Program (B&I)**
- 7. Rural Economic Development Loan and Grant Program (REDLG)**
- 8. Intermediary Relending Program (IRP)**
- 9. Rural Business Development Grant (RBDG)**
- 10. Value-Added Producer Grant Program (VAPG)**



Applications Include:















- Executive Project Summary
- Feasibility Study
- Business Plan
- Technical Report
- Environmental Report

9003 Biorefineries

Eligible projects are the development, construction, or Retrofitting of a Commercial-Scale Biorefineries using Eligible Technology.

- Must produce an advanced biofuel
- May produce biobased products and renewable chemicals

Rural Energy for America Program (REAP)

Energy Efficiency		Renewable Energy	
	Lighting		Solar
	Heat & Power		Wind
	Refrigeration		Small Hydro
	HVAC		Anaerobic Digesters
	Equipment and Processes		Biomass and Biofuels
	Automated Controls		Geothermal
	Buildings Updates		Wave/Ocean Power

The technology must be commercially available. Research and development projects do not qualify.



B&I Program Eligible Borrowers

- Cooperative, Corporation, Partnership, or other legal entity
- Indian Tribe
- Individual
- Borrowers must be engaged in a business, provide employment, and improve the economic or environmental climate

B&I Program Loan Terms

- Maximum Loan amount: \$25 Million (\$40 Million for Cooperatives)
- Interest rate negotiated by Lender and Borrower
 - Fixed
 - Variable
 - Combination of Fixed and Variable
- Maximum Loan Terms
 - Real Estate: 30 Years
 - Machinery and Equipment: 15 Years
 - Working Capital: 7 Years

Determining Program Best-fit for your project

1. Stage of development of the technology:
 - REAP and B&I: Commercially available technology
 - 9003: Includes commercializing new technology
2. Amount of financing needed:
 - REAP and B&I maximum loan amount: \$25 million (May combine REAP and B&I in the same project.)
 - 9003 maximum loan amount: \$250 million



Determining Program Best-fit for your project

3. Products Produced:

- REAP must be a renewable energy system and may include value-added processes of by-products to support financial viability
- 9003 Biorefinery:
 - Must produce Advanced Biofuel (primary product, co-product, or by-product) and may include
 - Renewable Chemical, or
 - Biobased product
- 9003 Biobased Product Manufacturing: Biobased end-user product
- B&I: No products requirements

Determining Program Best-fit for your project

4. Project Location

- B&I: Project must be located in a rural area
- REAP:
 - Agricultural Producer-owned projects do not have a rural area location requirement
 - Small Business-owned projects must be located in a rural area
- 9003: projects do not have a rural area location requirement

Determining Program Best-fit for your project

5. Size of business

- REAP:
 - Agricultural Producer-owned projects do not have a rural area location requirement
 - Small Business-owned projects must SBA small business size standards
- B&I: projects do not have a size standard
- 9003: projects do not have a size standard

General application prerequisites:

A. Technical report

- Demonstrating that the technology is commercially available (REAP and B&I)
- Demonstrating performance of the technology (9003)

B. Project-specific feasibility study

C. Engagement of a commercial lender



USDA Rural Development Resources:

<http://www.rd.usda.gov/browse-state> (Rural Development State Offices)

<http://www.usda.gov/energy/matrix/FindPrograms>

<http://www.rd.usda.gov>

http://www.rd.usda.gov/files/RBS_StateEnergyCoordinators.pdf

Thank You

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