



Carinata Biomaterials Summit



February 18-20, 2018



Bioenergy & Rural Development Projects & Programs USDA



- Overview
- Bioeconomy
- Programs
- Projects

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

Priorities

- Innovation
- Customers Service
- Partnerships
- Infrastructure

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		+	+	+

RD Rural Business Cooperative Service – Energy Programs

- 1. Biorefinery, Renewable Chemical, and Biobased Product Manufacturing Assistance Program (9003)**
- 2. Rural Energy for America Program (REAP 9007)**
- 3. Biorefinery Program Advanced Biofuels (9005)**
- 4. BRDI 9008**
- 5. BCAP 9011**
- 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)**
- 11. DPA Title III**



Applications Include:

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

General application prerequisites:

A. Technical report

- Demonstrating that the technology is commercially available (REAP and B&I)
- Demonstrating performance of the technology (9003)
- Bench – Pilot- Integrated Demonstration- First Commercial- Replication

B. Project-specific feasibility study

C. Engagement of a commercial lender



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

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

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- first of kind-innovative 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



- REG – New Orleans, Geismer
- Velocys
- Ensyn
- Readifuels
- Novus
- Biosynthetic Technology
- Aemetis
- Ryze – Reno, Vegas, Jackson
- American Bio Carbon
- Algenol
- SME
- Viridis
- Red Rock
- Suntory
- * Fulcrum, Cool Planet, ZeaChem, ChemTex, Pacific Ethanol,

FY 2017 Energy Programs Activities

Program	Number of Projects	Number of Obligations and Payments	Obligations
Rural Energy for America Program (REAP) - Loans	1,207	91	\$372,075,740
Rural Energy for America Program (REAP) - Grants		1,115	\$37,496,751
Biorefinery Assistance Program	3	3	\$321,580,000
Repowering Assistance Program	-	-	\$0
Payments to Advanced Biofuel Producers		643	\$13,974,344

FY 2018 Rural Energy for America Program

FY 2018 Proposed Allotments	Program Level	Application Deadline
Guaranteed Rural Energy for America Loans	\$ 566,604,160	On-Going
Renewable Energy Audits and Technical Assistance	\$ 1,868,000	Wednesday, January 31, 2018
REAP Grants - Under \$20,000	\$ 9,350,295	Monday, April 02, 2018
REAP REAP Grants - Unrestricted	\$ 26,309,235	Monday, April 02, 2018

FY 2016

- 5 applications invited into Phase 2
- Current Status:
 - 2 Approved and issued Conditional Commitment

FY 2017

- 12 applications invited into Phase 2
- Current Status:
 - 1 Financial Closing—under constructions
 - 2 Approved and issued Conditional Commitment
 - 1 Completed Phase 2—Conditional Commitment pending
- FY 2018
 - 3 applications invited into Phase 2
 - Five more projects projecting to achieve financial closing in 2018

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

Chris Cassidy

Chris.Cassidy@wdc.usda.gov

202 841 6097