

Biomass Project Development Tutorial 2009



Renewable Energy - Food - Agribusiness



Financing Strategies for Biomass Projects

April 6-8, 2009

Summary of Current Capital Markets

- Tough Economic Times Effect Everything
- Credit Crunch and Lack of Debt Financing
- Institutional Equity on Sidelines until Lending Loosens Up
- New Government Programs Being Announced on a Continuing Basis without All the Details Announced
 - Stimulus package allocated billions to renewable energy
 - Rules not promulgated in many cases
 - Uncertainty as to U.S. energy policy focus – biofuels, wind, solar, biomass, fuel cells, batteries, etc.?
 - RPS Standard - will we move to a federal standard?
- Project Finance is Challenging – Even in Strong Economic Times...

Project Development Continuum of Capital

Project Development Continuum of Capital

Type of Capital	Pre-Development	Stage of Project Development	Construction	Permanent Financing/ Operations
Equity	<ul style="list-style-type: none"> ➤ Friends & Family ➤ Angels ➤ Grants – Fed & State 	<ul style="list-style-type: none"> ➤ Friends & Family ➤ Angels ➤ Grants – Fed & State ➤ Strategic Partners 	<ul style="list-style-type: none"> ➤ Grants ➤ Private Equity ➤ Strategic Partners 	<ul style="list-style-type: none"> ➤ Grants ➤ Tax Equity ➤ Private Equity ➤ Strategic Partners
Debt			<ul style="list-style-type: none"> ➤ Construction Loan ➤ Traditional Bank Loan ➤ Bank Loan Guaranteed by USDA/DOE ➤ Equipment Leasing 	<ul style="list-style-type: none"> ➤ Permanent Mortgage ➤ Traditional Bank Loan ➤ Guaranteed Bank Loan ➤ Bonds ➤ Line of Credit
Other			<ul style="list-style-type: none"> ➤ State Incentives – Matching Funds for Infrastructure 	<ul style="list-style-type: none"> ➤ State Incentives – Workforce Training
Risk	High		Low	
Availability of Capital	Low		High	

Equity Sourcing & Financing Strategies

- Pre-Development Capital
- Tax Equity
- Bonds (CREBS)
- Bonus Depreciation
- Grants
- Guaranteed Loans
- Other Government Programs
- New Market Tax Credits
- Conclusions

Pre-Development Equity

- Local/Friends and Family
- Angels
 - Angel Networks
- Strategic Investors
 - Off-Take Partners
 - Suppliers
 - Producer Groups
 - Coops
- Renewable Energy Equity Funds & Venture Capital
- Grant Programs

Tax Equity

- Many Renewable Energy Projects are Tax Driven
- Bonus Depreciation
- Accelerated Depreciation
- Investment Tax Credits (ITCs)
- Production Tax Credits (PTCs)
- Tax Equity Typically Invests upon Completion
- Tax Equity Investors Harder to Come By
 - Grants in lieu of ITCs
- Need Construction Lender, Construction Equity and Permanent Lender for Take-Out

Monitor Grant Programs

- Federal
 - Section 9008 grants (joint USDA and DOE) for advanced biofuels research and development and demonstration plants
 - http://www1.eere.energy.gov/financing/solicitations_detail.html?sol_id=194
 - <http://www.rurdev.usda.gov>
 - Other DOE & USDA Grants
 - Biomass R&D, Value-Added Producer Grants
 - Monitor funding announcements - www.grants.gov
- State
 - Monitor state programs as well - <http://www.dsireusa.org>

Government Guaranteed Loan Programs

- U.S. Government Provides Underlying Guarantee but Loans are Made by Private Commercial Lenders
- Lenders Set Terms but Must Work within Program Parameters
- Ensure Working with Qualified and Experienced Lenders
- Process can be Tedious and Time-Consuming
 - **USDA Business & Industry Guaranteed Loans (B&I Loans)**
http://www.rurdev.usda.gov/rbs/busp/b&i_gar.htm
 - **USDA Renewable Energy for America Program Guaranteed Loans**
<http://www.rurdev.usda.gov/rbs/busp/9006loan.htm>
 - **Biorefinery Assistance Program**
<http://www.rurdev.usda.gov/rbs/busp/baplq9003.htm>
 - **DOE Innovative Technology Loan Guarantee Program**
<http://www.lgprogram.energy.gov/features.html>

B&I Loans and REAP Loans (Section 9007)

- Farmer/Producer Owned or Rural Small Businesses
- Renewable Energy a Focus for REAP Loans
- Provides Guarantees on Loans up to \$25 million
 - Covers 60% to 85% of loan value
- Need a Bank to Underwrite and Sponsor
- Programs can be Combined to Maximize Coverage and Streamline Approvals
- REAP Program Includes Grants up to \$500,000 as well
- Tedious Process
 - Consider contracting with experienced packagers to oversee the process
- B&I Funded and Available Now and REAP Funding Announcements Expected at Any Time

Biorefinery Assistance Program Loan Guarantees - USDA

- Also Known as Section 9003 of the 2008 Farm Bill
- Funding:
 - \$75 million FY 2009
 - \$245 million FY 2010
 - Discretionary funding of \$150 million for 2009-2012
- Guarantees Qualifying Loans Up to \$250 million
 - Not to exceed 80% of project costs
- Funds Must be Used to Build or Retrofit Commercial-Scale Biorefinery to Produce Advanced Biofuels (non-corn starch)
 - Technology must be established or demonstrated as a viable commercial technology
- Offered in Two Funding Cycles per Year
 - Current deadline for second half of 2009 is April 30, 2009
 - Look for next funding announcement for 2010 in fourth quarter

Definition of Advanced Biofuels

Fuel Derived from Renewable Biomass, Other than Corn Kernel Starch to Include:

- 1) Biofuel derived from cellulose, hemicellulose, or lignin
- 2) Biofuel derived from sugar and starch (other than ethanol derived from corn kernel starch)
- 3) Biofuel derived from waste material, including crop residue, other vegetative waste material, animal waste, food waste, and yard waste
- 4) Diesel-equivalent fuel derived from renewable biomass, including vegetable oil and animal fat

Definition of Advanced Biofuels

Fuel Derived from Renewable Biomass, Other than Corn Kernel Starch to Include:

- 5) Biogas (including landfill gas and sewage waste treatment gas) produced through the conversion of organic matter from renewable biomass
- 6) Butanol or other alcohols produced through the conversion of organic matter from renewable biomass
- 7) Other fuel derived from cellulosic biomass

DOE Innovative Technology Loan Guarantees

- **\$6 billion** for the Innovative Technology Loan Guarantee Program Authorized by Section 1705 of the Energy Policy Act of 2005--Recently Expanded under the ARRA
- Government wants Rapid Deployment
- Look for Funding Announcements in July 2009
- The Loan Program will Provide Loan Guarantees for Renewable Technologies and Transmission Technologies
- The \$6 Billion in Appropriated Funds is Expected to Support more than \$60 Billion in Loans for These Projects

DOE Innovative Technology Loan Guarantees

- Goal is to Encourage Early Commercial Use of Innovative Technologies in Energy Projects and to Achieve Substantial Environmental Benefits – Reduce Greenhouse Gas Emissions
- Can Guarantee up to 100% of Loan as Long as Loan does not Exceed 80% of Project Costs, but DOE Prefers Lower Guarantee Amounts
- Renewable Energy Systems that Generate Electricity Appear to Qualify

Other 2008 Farm Bill Provisions

- Section 9004 - Repowering Assistance - To Encourage Existing Biorefineries to Replace Fossil Fuel used During Production
 - Funding for 2009: \$35MM with \$15MM discretionary annual funding through 2012
- Section 9005 – Bioenergy Program for Advanced Biofuels
 - Provides Payments to Ag Producers to Support and Ensure Expanding Production of Advanced Biofuels
 - Funding for 2009/2010 of \$55MM, \$85MM in 2011 and 105MM in 2012 with \$25MM discretionary through 2012

http://www.usda.gov/documents/FB08_Pub_Mtg_Renew_Energy_Factsheet.pdf

Other 2008 Farm Bill Provisions

- Section 9009 – Rural Self-Sufficiency Initiative – provides funding to enable rural communities to increase energy self-sufficiency (uncertain program timing/funding)
- Section 9011 – Biomass Crop Assistance Program – provides support to establish and produce crops for conversion to bioenergy and to help with collection, harvest, storage, etc. (uncertain program timing/funding)
- Section 9012 - Forest Biomass for Energy – to support R&D to facilitate use of forest biomass for energy-related applications (uncertain program timing/funding)

http://www.usda.gov/documents/FB08_Pub_Mtg_Renew_Energy_Factsheet.pdf

New Market Tax Credits

- Must be in Qualifying Census Tract
 - Rural is a focus
 - Census tract must be low income or with high net migration of population
- Economic Development and Job Creation Needed to Qualify
- Investor Invests 20-25% of Project Cost and gets Tax Credits Against Federal Taxes (39%) over 7 Years vs. getting Capital Returned from Project
- Capital is Treated as Subordinated Debt or Equity

New Market Tax Credits (cont.)

- Interest Rate/Fees on New Market Capital is 2-4% with No Amortization
- Structure is Complicated and Difficult to Find Lender
- Does not Work Well with USDA Guaranteed Loans
- Project Size Works Best in \$10-\$40 Million Total Cost Range

http://www.cdfifund.gov/what_we_do/programs_id.asp?programID=5

Critical Success Factors

- Sufficient Seed Capital and Development Capital as Projects Always Take Longer than Expected
- Local and Regional Support
- “Proven” Technology but not Leading Edge
- Construction Contract with Process, Completion and Price Guarantees
- Feedstock Secured
- Off-Take Agreements in Place
- Credible Management Team
- Board of Directors with Outside Advisors a Plus

Conclusions

- Scarce Private Capital Beyond Developer's Own Seed Capital
- Government Grants and Loan Programs Exist but There are Many Requirements and Procedures to Navigate and can Take a Long Time
- Loans and Grants are Worth the Effort if Your Project Qualifies
- The Right Business Plan, the Right Partners and a Realistic Capital Structure Improve Odds for Success