

# 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
<b>Equity</b>	<ul style="list-style-type: none"> <li>➤ Friends &amp; Family</li> <li>➤ Angels</li> <li>➤ Grants – Fed &amp; State</li> </ul>	<ul style="list-style-type: none"> <li>➤ Friends &amp; Family</li> <li>➤ Angels</li> <li>➤ Grants – Fed &amp; State</li> <li>➤ Strategic Partners</li> </ul>	<ul style="list-style-type: none"> <li>➤ Grants</li> <li>➤ Private Equity</li> <li>➤ Strategic Partners</li> </ul>	<ul style="list-style-type: none"> <li>➤ Grants</li> <li>➤ Tax Equity</li> <li>➤ Private Equity</li> <li>➤ Strategic Partners</li> </ul>
<b>Debt</b>			<ul style="list-style-type: none"> <li>➤ Construction Loan</li> <li>➤ Traditional Bank Loan</li> <li>➤ Bank Loan Guaranteed by USDA/DOE</li> <li>➤ Equipment Leasing</li> </ul>	<ul style="list-style-type: none"> <li>➤ Permanent Mortgage</li> <li>➤ Traditional Bank Loan</li> <li>➤ Guaranteed Bank Loan</li> <li>➤ Bonds</li> <li>➤ Line of Credit</li> </ul>
<b>Other</b>			<ul style="list-style-type: none"> <li>➤ State Incentives – Matching Funds for Infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>➤ State Incentives – Workforce Training</li> </ul>
<b>Risk</b>	High		Low	
<b>Availability of Capital</b>	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://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](http://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](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](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](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](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

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- 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