Financing Strategies for Advanced Biorefineries

U.S. Department of Energy
Biomass 2012
July 10 - 11, 2012
Washington, D.C.

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SternBrothers&Co.

INTRODUCTION

- **Stern Brothers, founded in 1917 and headquartered in St. Louis, is an investment banking firm that is focused on project financing (taxable and tax-exempt) for alternative energy, real estate, higher education and healthcare.**

- **Stern's Alternative Energy Finance Group structures and places tax-exempt and taxable debt, as well as provides financial advisory services for alternative energy projects in the U.S.**
    - **Waste-to-energy, second generation biofuels, biochemicals, biomass, solar, wind, landfill gas-to-energy, cogen, CHP, hydro, geothermal**

- **Pipeline currently includes waste-to-energy, advanced biofuels, biochemicals, biomass, LFGTE, wind, solar, cogen / CHP.**

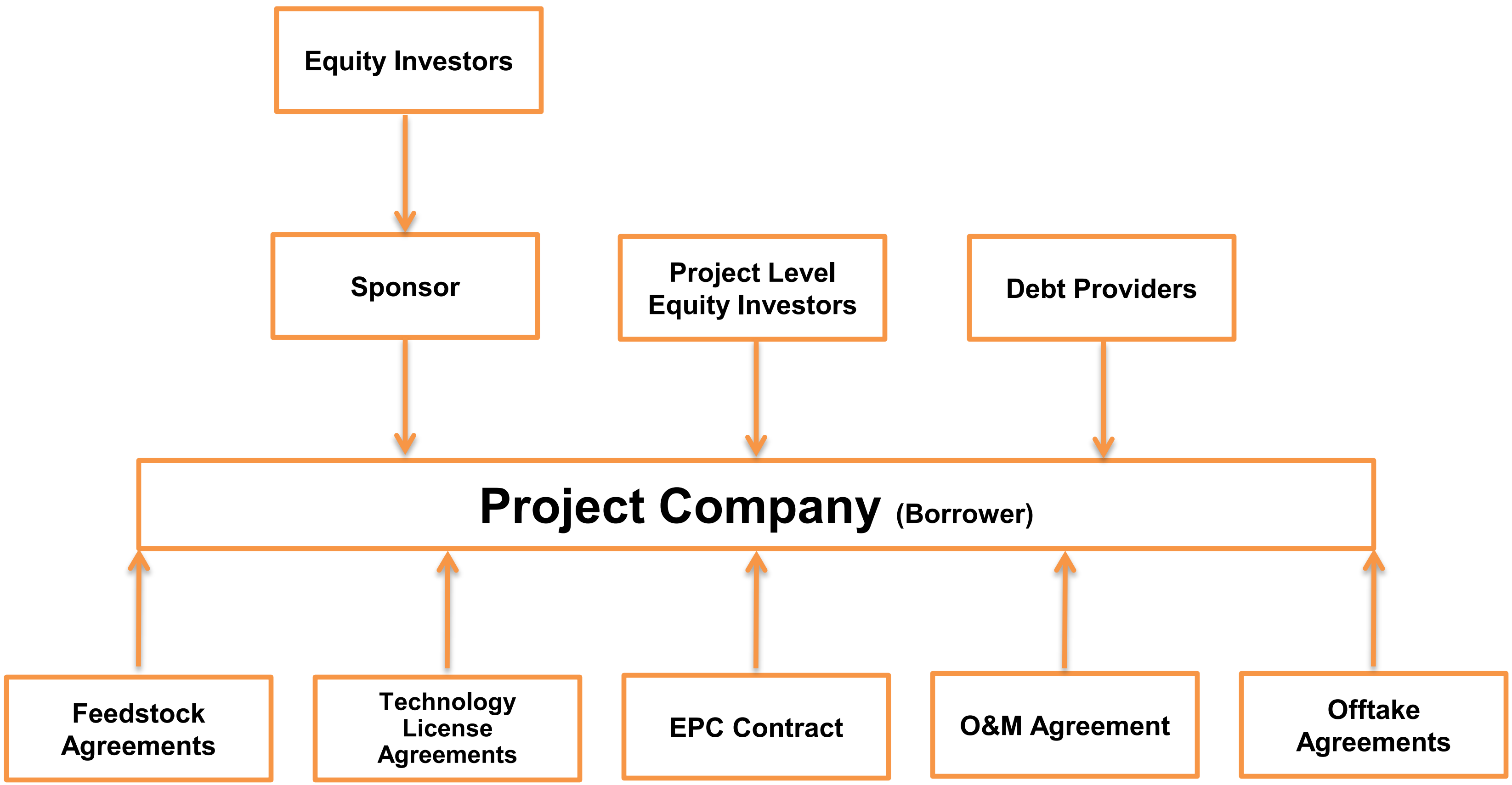
ALTERNATE CAPITAL SOURCE: PROJECT FINANCE

- **Many alternative energy companies are looking for alternate financing options that can maximize returns and not tie-up liquidity.**

- **Project finance can provide an alternate capital source for public or private companies looking for construction financing.**
    - **Debt provided for project development solely based on projects' perceived risks and expected future cash flows**
    - **Debt providers either have no recourse or only limited recourse to parent company that develops or "sponsors" project**
    - **For equity investors, equity returns maximized, significant liabilities moved off balance sheet, key assets protected and opportunities for tax financing monetization**

ALTERNATE CAPITAL SOURCE: PROJECT FINANCE

Typical Project Finance Schematic



BONDS AND PROJECT FINANCE

- **Along with equity, traditional sources of capital for project finance include bank debt and tax equity.**

- **The much-discussed problems in the bank market and the smaller appetite of tax equity buyers have led alternative energy developers to seek new sources of capital for project finance.**

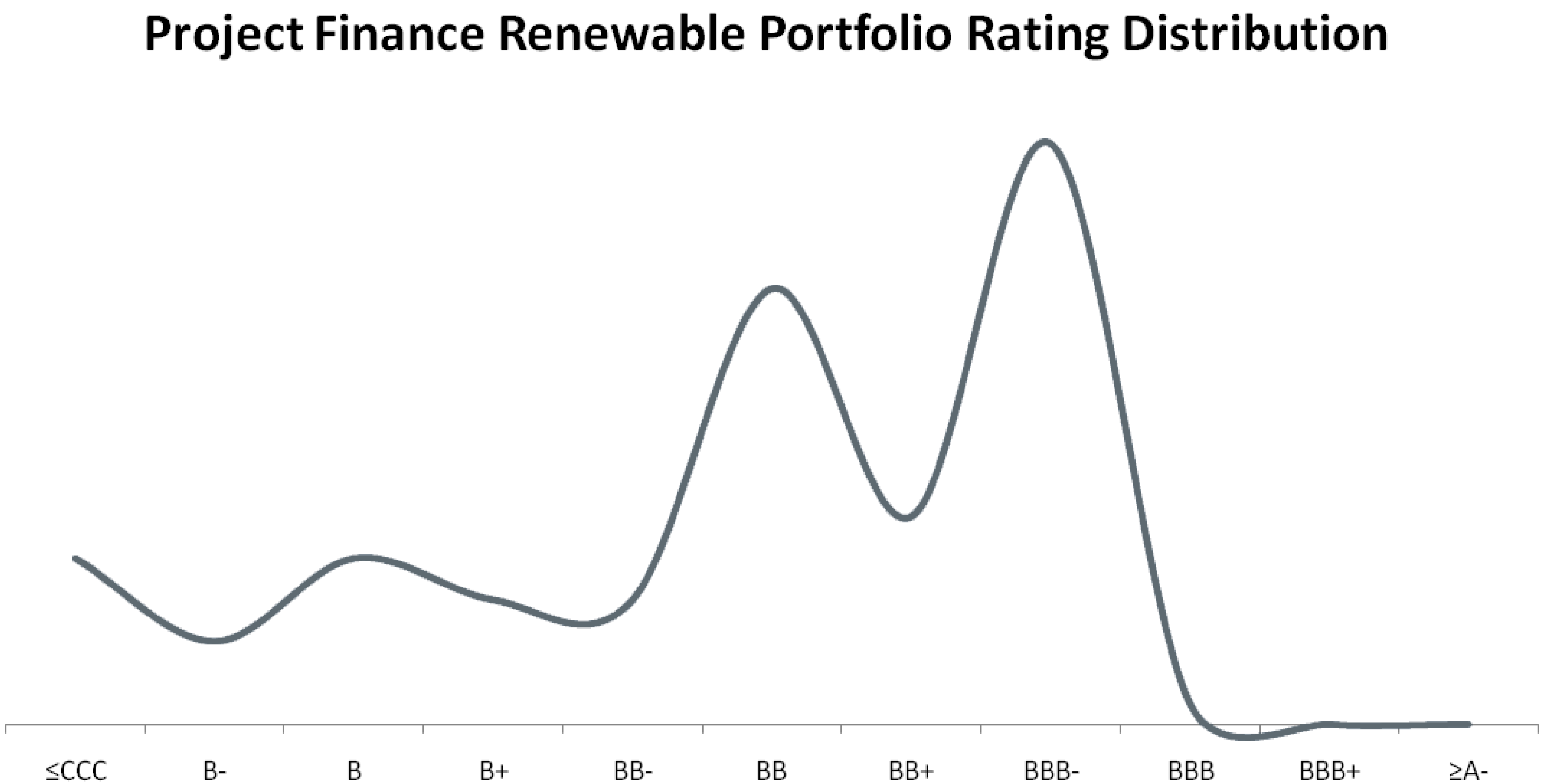
- **Stern Brothers pioneered the use of bonds to finance the development of alternative energy projects in 2003.**

- **Bonds can be sole source of debt or a complement to bank debt and offer structural advantages such as longer tenor, lower interest rate and flexible amortization that improve equity returns.**

BANK VS. BOND MARKET

Issue	Banks	Bonds
Large Transactions	Syndication Risk	Access to incremental pool of investor capital
Complex Transactions	Prefer “cookie cutter” deals	Good for “story” credits in emerging markets
Timing	Slow (9-12 months)	Fast (4-6 months)
Cost	Expensive	Cheaper
Technology Risk	Less likely to accept	Ability to mitigate some technology risk and accept residual
Construction Risk	Will assume with proper controls (IE)	Will assume with “bank like” controls
Capitalized Interest	None	Raised at financial close
Drawdowns	Timed to construction schedule	Disbursed at closing (negative carry in steep curve environment)
Tenor	Shorter (5-7 years)	Longer (15-20 years)
Interest Rate	Higher, Floating	Lower, Fixed Rate
Covenants	More restrictive	Less restrictive
Amortization	Usually straight line or mortgage style	Flexible—can be sculpted to match cash flow & meet ratios
Cash Sweeps	Customary	Not customary
Prepayments	Customary	Make whole provisions (call premium)

AVERAGE PROJECT RATINGS



Source: Fitch Renewable Energy Forum 6/23/11
Note: Includes Public, Private Ratings and Credit Assessments

BOND CREDIT ENHANCEMENT MECHANISMS

- **Currently, many alternative energy projects reviewed by the rating agencies find themselves well below the investment grade threshold due to factors such as technology risk, construction or scale-up risk or feedstock risk.**

- **There are various credit enhancement mechanisms that can be employed to help mitigate these risks and allow the bonds to be priced at a more reasonable interest rate level.**

- **<u>Third Party Insurance</u>**
    - **Third party insurers with both the technical expertise and balance sheets bond investors consider investment grade have begun offering highly tailored technology warranties that may support a bond funded project financing**

BOND CREDIT ENHANCEMENT MECHANISMS

- **State and Local Government Credit Enhancement**
  - **State and local governments have a history of supporting alternative energy projects**
  - **Support can range from accelerated permitting to substantial support in the form of guaranteeing the debt through a "Moral Obligation"**

- **The United States Department of Agriculture**
  - **9003 Program - Support the commercialization of innovative biorefining technologies that produce fuels and other products**
  - **9006 Program - The B&I Guaranteed Loan Program's goal is to improve, develop, or finance business, industry, and employment and improve the economic and environmental climate in rural communities**
  - **9007 Program - The REAP Guaranteed Loan Program encourages the commercial financing of renewable energy (bioenergy, geothermal, hydrogen, solar, wind and hydro power) and energy efficiency projects**

USDA B&I Program Case Study

- **Project**: Production of crystallized industrial grade succinic acid from biomass and low cost sugar feedstock
- **Feedstock**: Agreement with suppliers for the purchase of 95 Dextrose and grain sorghum grits
- **Off-take**: Off-take contracts for all of the Project's nameplate capacity
- **Debt Funding**: USDA B&I Bonds $25.0 Million
- **Highlights**: The project is the first-of-its-kind commercial bio-succinic acid plant. Stern used a USDA B&I loan guaranty to credit enhance the project finance bonds, a first-time application of a B&I guaranty to bonds, and privately placed the bonds with institutional investors. The credit enhancement from the USDA allowed the Project to achieve a competitive blended interest rate

BOND CREDIT ENHANCEMENT MECHANISMS

- **Export Finance Agency Loan Guarantees**
  - **Most OECD member countries have an export finance agency whose goal is to support the export sales of goods and services from their country**
  - **The majority have project finance programs that can guarantee loans and many have a policy of supporting alternative energy and sustainability**
  - **The amount of the loan guarantee from an export finance agency is based on percentage of domestic content (either goods or services) to be exported to a foreign buyer**
  - **That loan guarantee becomes a 100% unconditional repayment obligation of the export finance agency whose credit rating is equivalent to its national government's credit rating**
  - **Export finance agency financing require goods and service to move across borders**

NEW MARKET TAX CREDITS (NMTC) – ANOTHER SOURCE OF PROJECT CAPITAL

- Improves capital structure by introducing capital with de minimis claim on project cash flow
- NMTC capital subsidy equal to approximately 20% of the NMTC Allocation
- Challenges related to the principal repayment schedule and reduced rights and remedies associated with the NMTC Leveraged Loan structure:
    - Leveraged Loan is interest only for 7 years
    - Leveraged Lender receives an indirect security interest in the physical assets of project
    - Leveraged Lender agrees to forebear during 7 year compliance period to avoid recapture of tax credits
    - Proceeds from project level loan foreclosure would likely be reinvested in a new qualified project and not returned to the Leveraged Lender during first 6 years of Leveraged Loan

NEW MARKET TAX CREDITS (NMTC) – ANOTHER SOURCE OF PROJECT CAPITAL

- **Leveraged Lenders require a higher interest rate to compensate for the increased risk from delayed principal repayment and their reduced rights and remedies during the 7 year NMTC compliance period, often eroding the benefits of the NMTC capital subsidy.**

- **Stern Brothers advocates investing Sponsor Equity as "Leveraged Loan" into NMTC structure to avoid issues associated with third party debt while still generating low-cost non-dilutive capital.**

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