

BIOMASS PROJECT DEVELOPMENT TUTORIAL

April 7 & 8, 2009 * Atlanta GA

Tuesday, April 7th, 2009

9 – 9: 10 **Welcome & Introduction by the Chairman**
R. Thomas Amis, Partner, ALSTON & BIRD, LLP

Session I: Overview of Biomass Economics, Business Models & Risk Factors

9:10 – 9:50 *Presentation:*

Biomass-to-Power Business Models:

Deal Structures, Economics & Overview of Project Financing

Biomass to power is an up-and-coming renewable source for those parts of the country with plentiful forest and agribusiness. This presentation will explore a range of issues that can impact upon the viability of a biomass project's financing, including: general costs and economics, debt vs. equity financing, capitalizing upon governmental incentives and creating a sound legal structure of contracts for your financing. The presentation will also introduce attendees on to how renewable projects work as businesses and produce cash. It will provide sample project pro-formas for biomass projects at the lower and upper end of the scale (~5mw and ~50mw), with the goal of illustrating the key revenues and costs of each type of project. It will also spell out the chief renewable project risk factors and how they can be mitigated.

- Economic life cycle of a biomass project
- Feedstock reliability and price sensitivity
- Harvesting methods
- Transport and storage costs
- Drying, chipping costs
- Sample cash flow models

Evan Hughes, Ph. D., Consultant,
BIOMASS ENERGY & GEOTHERMAL ENERGY

Session II: Risk Assessment and Mitigation in Biomass-to-Power Projects

9:50 – 10:30 *Presentation:*

Overview of Biomass Project Risks

- Project Risk Assessment
 - Development Risk
 - Developer Provided Consideration/Credit Support to Power Off-takers

- Equipment/Development Risk
- Permitting Risk
- Financing/Interest Rate Risk
- Construction Risk
 - Construction Guaranties/General Contractor Wrap
 - Developer Support
- Operating Risk
 - Equipment, Fuel Sourcing, Payment Risk, Performance/Operator Risk (PPA compliance)
- Financial Risk
 - PPA escalation: fixed rate, inflation adjusted
- Pricing Risk: Costs may still increase faster than revenues
- Operational Risk
- Regulatory Risk
- Investor Risk
- Environmental Risk:
 - Site Assessment, Permitting and Environmental Regulations
 - Air quality permit
 - Environmental Impact Assessment
 - Water use
- Large Generation Interconnection Permit & Transmission Agreement

Warren D. Barnes, *Vice President*, FRAZIER BARNES & ASSOCIATES

10:30 – 11 *Tutorial Networking Break*

11 – 11:30 *Presentation:*

Environmental Risk

- Understanding and Mitigating Environmentalist/Sustainability Concerns (same as a typical PR/ Community Relations Talk?)
- EPA
- USDA
- Forest Service
- Understanding the full life cycle context of biofuel production in a given situation

Mark E. Downing, *Environmental Sciences Division*,
OAK RIDGE NATIONAL LABORATORY

11:30 – 12 *Presentation:*

Feedstock Supply Risk

Economics of mass/weight/transport / drying / chipping, etc.

- Reliability of Fuel Supply
- Types of Fuels:
 - Energy Crops
 - Accumulated wood waste

- o Farm waste
- o Animal waste
- Negotiating Long-term Fuel Supply Contracts

Kirk Martin, *Partner*, ASCENDANT PARTNERS

12 – 12:30 *Presentation:*

Technology Risk

- Pre-Engineering Assessment
- FEED Design and EPC Contracting
- New Technology Options
- Operational Efficiency, Reliability, Availability & Safety
- O&M costs

Jim Easterly, *Project Manager*, Biomass Energy, BLACK & VEATCH

12:30 – 2:00 *Tutorial Group Luncheon*

Presentation: **Converting Biomass To Power & Advanced Biofuels**

Mark J. Riedy, *Partner*, ANDREWS KURTH LLP,
General Counsel, AMERICAN COUNCIL ON RENEWABLE ENERGY
(ACORE)

Session III: Structuring Project Economics

2 – 2:45 *Presentation:*

Enhancing Revenue Streams for Renewable Energy Projects

This presentation will address the ways in which renewable energy projects can enhance their revenue streams. Topics to be examined will include federal grants, subsidies and loan guarantees as well as the monetization” of “environmental attributes” such as RECs, RPS, Green Tags and carbon offset credits from RGGI among others; all of them combining to structure a successful strategy for optimizing a project’s income stream.

John G. Ravis, *Vice President*, Project Finance, TD BANK N.A.

2:45 – 3:30 *Presentation:*

How to Build Tax Subsidies into Renewable Energy Projects

The federal government can pay as much as 65 % of the capital cost of renewable energy projects through tax subsidies. However, it can be difficult for a project to efficiently utilize them. This presentation will include a menu of potential subsidies; a description of the latest “monetization strategies;” and possible further evolution in structures, and other recurring tax issues for biomass deals.

Keith Martin, *Partner*, CHADBOURNE & PARKE LLP

3:30 – 4 *Tutorial Networking Break*

4:00 – 4:30 *Presentation:*

Finding Power Off-Takers and Negotiating Offtake Agreements

The Renewable Performance Standard and other issues that drive utility decisions with regard to renewable projects

- Defining a “utility scale” renewable project
- Optimal size and/or location of a renewable project from the perspective of the utility

What types of economic relationships/contractual structures are utilities seeking with renewable energy developers?

- Transaction components that lead to a winning relationship with a utility
- Characteristics common to well-structured deals
- Terms and conditions utilities seek in a PPA with a renewable energy developer

RFP Response or unsolicited offers – is there an optimal path for an individual renewable developer?

- How the RFP is structured and how a respondent can maximize the probability of success
- Are the various renewable technologies evaluated differently from each other in the RFP process?
- The expected timeline for issuance of the RFP to final regulatory approval

David Hicks, *Development Director, Renewable Energy, NV ENERGY*

4:30 – 5:00 *Presentation:*

Special Issues in Renewable Project Non-Financial Contracts

This presentation will explore the similarities and difference from a conventional project financing, illustrating the special concerns with structuring a biomass to power project.

- Construction and warranty issues – getting the project built, operating and guaranteed
- Technology advances – issues in scale up and technology advances
- Operation – where have the problems been?
- Transmission interconnection issues for renewable projects.

R. Thomas Amis, *Partner, ALSTON & BIRD LLP*

Wednesday, April 8th, 2009

9 – 9: 05

Welcome & Introduction by the Chairman

R. Thomas Amis, *Partner, ALSTON & BIRD, LLP*

Session IV: Investment and Finance of Biomass-to-Power Projects

9:05 – 9:45 *Dual Presentation:*

Equity Sourcing and Financing Strategies In a Credit-Starved Environment

This presentation will provide dual perspectives on the optimum strategies to employ for identifying and securing equity in the current financial environment. Key areas to be explored will be:

- Allocations in the ARRA Stimulus package:
 - Extension of the biomass Production Tax Credit to 2013
 - Substitution of the PTC with an ITC
 - \$800 million in DOE grants for biomass projects
- Pre-Development equity sources
- International funding sources

Part I: **Todd Alexander**, *Partner*, CHADBOURNE & PARKE, LLP

Part II: **Kirk Martin**, *Partner*, ASCENDANT PARTNERS

9:45 – 10:45 *Panel Discussion:*

Biomass Equity Investors

This panel, comprised of a variety of biomass investment experts, will share their perspectives on the current and coming market and define the parameters they look for in order to effectively pursue deals.

Moderator: **Todd Alexander**, *Partner*, CHADBOURNE & PARKE, LLP

Panelists:

Robert D. Courtney, *Senior Vice President*, LUMINATE, LLC

Jeremy Dockter, *Managing Director*, THE KINETIC GROUP

Guy Piazza, *Managing Director*, PARIO CAPITAL

Ken Taratus, *Managing Director*, MORGAN KEEGAN

10:45 – 11:00 *Networking Break*

Session IV: Lessons from the Real World

11:00 – 11:30 **Case Study 1: Farm Waste to Energy**

Nearly a decade ago, the Haubenschild Farms installed a plug-flow anaerobic digester on their dairy farm. Since then their farm has evolved into a renewable energy generation plant, a research facility and a template for the future of agriculture. This will provide an update on the Haubenschild Farm, as well as discuss the recent installation of an anaerobic digester on the Jennissen farm, a mid-size dairy located in central Minnesota.

Ryan Stockwell, Ph.D., *Clean Energy Program Manager*,

THE MINNESOTA PROJECT

11:30 – 12:00 Case Study 2:

Forest Waste to Energy

Marvin Burchfield, *Executive Vice President*,
DECKER ENERGY INTERNATIONAL, INC.

12:00 *The Tutorial Adjourns*