Biomass to Energy Projects: Key Issues to Consider in Power Purchase and Feedstock Agreements

Jennifer H. Martin
Stoel Rives LLP
900 SW Fifth Avenue, Suite 2600
Portland, OR 97204
503-294-9852
jhmartin@stoel.com

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STOEL RIVES LLP
ATTORNEYS AT LAW

Overview

- Defining the Market
- Supply Risk
- Development Risk
- Performance Risk
- Other Key Issues

Renewable Portfolio Standards

- Renewable Portfolio Standards (RPSs) generally require a utility to procure a certain percentage of its electricity from renewable sources
- The requirements differ from state to state
  - Does the generation source have to be located within the state/region?
  - Does the electricity need to be delivered to the state/region to meet the state standard?
  - Does the state allow compliance with RPS through purchase of Renewable Energy Certificates (RECs)?

Summary of RPS Requirements (examples)

	RPS Requirement	Out of State?	Unbundled RECs Allowed?	Biomass
Minnesota	25% by 2025 (Xcel: 30% by 2025)	Yes (in M-RETS)	Yes	Yes
Ohio	25% by 2025	50% - No; 50% - in state delivery	Yes	Yes
California	20% by 2010 (Exec. Order: 33% by 2020)?	Yes*	Up to 25%*	Yes

Renewable Energy Credits (RECs)

- Renewable energy consists of two distinct commodities, which may be sold together, or separately
  - Electricity
  - Renewable or Environmental Attributes
    - Emissions benefits
    - Renewable fuel source
- Renewable Energy Certificates
  - Generally speaking, a REC represents the environmental attributes from one (1) megawatt hour (MWh) of electricity from a renewable energy source
    - BUT BIOMASS which co-fires with fossil fuels may not create a REC for every MWh of generation from the plant

Greenhouse Gas (GHG) Laws

- Some states have passed GHG reduction laws
- These laws require significant reduction in the emission rates of GHGs
- These laws will, and already are, changing the emphasis and focus of renewable energy programs towards carbon friendly energy production
- Generally biomass energy projects have a lower carbon impact than the direct emissions would suggest -- much of the direct carbon emissions would have been emitted anyway
- At least one state, California, recognizes this, and requires that Biomass be given some carbon emission reduction recognition

GHG Reduction Credits

- A carbon credit (or other types of credits such as methane reduction credit) may be recognized associated with the diversion of fuel from alternate disposition and used in the biomass facility
- Carve-out this credit in the fuel supply agreement – it's a potential future revenue stream
- The PPA definition of an "environmental attribute" (or REC) may purport to convey these attributes
  - Need to coordinate definitions between fuel supplier, developer and PPA offtaker

PPA Considerations Affecting Fuel Supply Agreement

- Number One Issue (in addition to price) for the Power Purchaser: Does the developer have assurance of Fuel Supply?
  - Transportation issues
  - Competition
  - Diesel costs
  - Back-up supply
  - Quality of the fuel
- An all-in fixed price may not take these concerns into consideration, but there are other options …

Pricing Considerations and Options

- Pass-through of the Delivered Price of Fuel
- Price tied to inflationary adjustment or index
- Share the risk
- Tolling arrangements

Pricing Issue: Tax Credits

- Expiration Dates for PTCs/ITCs/Cash Grants
  - Biomass differences
  - PTC/ITC differences
- What happens if all or part of project isn't "placed in service" by the expiration date or construction does not "start" in 2010?
- Options
  - Price adjustment (straight or partial pass through)
  - Developer's right to terminate
  - Developer's right to terminate, subject to offtaker option to buy at adjusted price

Fuel Supply Agreements – Quantity

- Supplier needs to undertake studies of inventory (quantity and type)
- Generally, the value of biomass to the power purchaser is its baseload nature, so a steady supply will be required
- Will the steady supply be stated as:
  - Minimum amount?/Maximum amount?
  - Requirements contract
  - Developer may insist on right to purchase fuel supply from an alternative source, where most cost effective – include formulas for payments to supplier and notice requirements

Fuel Supply Agreements – Quantity *(cont.)*

- Quantity (*cont.*)
  - But, the power purchaser may have dispatch/curtailments rights
    - Impact on fuel supply arrangement:
      - If rights are too broad, could limit amount of fuel purchased by developer
      - Minimum take requirements (take or pay?)
      - Pass-through any tipping fee or storage costs where feasible
  - And, transmission issues may affect operation of the plant

Fuel Supply Agreements – Fuel Specifications

- Fuel Specifications:
  - Will generally be defined to meet the state RPS requirements (PPA will require it)
    - In effect as of the Effective Date?
  - Other specifications (examples):
    - Moisture Content – no greater than a certain percentage
    - Size dimensions may be specified
    - Free from metal; screened for other contaminants
    - BTU content – no less than a stated BTU per dry pound

Fuel Supply Agreements – Testing of Biomass Fuel

- Fuel supply will be periodically tested
  - Failure to meet specifications may result in:
    - Price adjustment
    - Rejection of deliveries
    - Requirement to deliver additional fuel (*i.e.* if BTU requirements are not met)
    - Pass-through of LDs under the PPA

Development Risk – Project Construction

- Tension Between Buyer and Seller: “Must Build” vs. “Put”
- Buyer wants:
  - Development and Construction Milestones; delay damages
  - A Guaranteed Commercial Operation Date (“COD”)
- Seller wants:
  - Conditions precedent and Force Majeure outs
  - No damages if a milestone is missed but COD is still timely achieved
  - Caps on Delay Damages (the lower, the better)
- Buyer may agree to many of Seller’s points, but may ask for “right of first refusal” or “right of first offer”
- How do delays roll back through to the FSA? What about termination rights? What if Buyer takes over the project?

Performance Risk

- Seller prefers to deliver an “as available” product with no liquidated damages for shortfalls in performance; Buyer’s often insist on Performance Guarantee
- Output Guarantee
  - Seller commits to a minimum “Guaranteed Output”
  - If there is a shortfall in output:
    - Seller liable for Purchaser’s damages (usually replacement damages, but sometimes fixed amount per MWh)
    - Shortfall may even be deemed an Event of Default
- Impact on FSA? –
  - requirements for certainty of supply; flow-through of damages; tying together “excuses” for non-performance

Other Issues in Fuel Supply Agreement

- Termination rights – the PPA will have a number of termination rights – the fuel supply agreement should line up with those rights
- Representations and Warranties – watch for ongoing obligation to meet statutory/rule definitions that can change after the Effective Date
- Require the facility to get certified as an eligible biomass conversion facility (and maintain status) (if economics depend on it)

To order any of these books or our new *Law of Biomass*, please contact:

Jennifer H. Martin * 503.294.9852 * jhmartin@stoel.com * www.stoel.com