

New York City
June 9, 2008

Northeast CHP Initiative

Cogeneration Financing



Duane Morris

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Three Golden Rules of Cogeneration Projects

1. No project is built without equity funding and/or debt financing.
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Overview of Primary Financing Alternatives

- Owner “balance sheet” loans (also Smart Loans)
- Black box (Power Purchase Agreements, “PPAs”)
- Equipment leases
- Manufacturer financing
- Project financing
- Municipal Leases
- Performance Engineering Agreements
- Shared Savings Agreements

“Nature of Owner” Drives Financing Structure

Private

1. Industrial
2. Commercial
3. Institutional (Not for Profit)
4. Multi-family (Coop and Condo)

Public

1. Federal
2. Public Housing Authority
3. Municipal
4. School District

Fundamental Financing and Contractual Information

Basic questions in regard to financing and contractual information:

- ❖ What is the identity and nature of the party contracting to procure the cogen units or power/thermal supply?
- ❖ Does this entity own the underlying real property? If not – what is the nature and identity of owner?
- ❖ If not an owner of the underlying real property, is the purchaser a lessee, an affiliate of the owner or a commercial condo owner?

Importance of Underlying Contracts

- Underlying agreements can be key to gaining or not gaining financing.
- Cost effective cogeneration projects require appropriate agreements.
- Standard-form contract may be inappropriate.
- Financiers for project financing will likely be “looking to see” certain key remedial covenants, such as the right to take over a failing project.

Typical Cogeneration Project Term - Key Points

- Cogeneration projects are often long term (10+ years) requiring cooperation among business, engineering, legal and financial participants.
- Agreements must not be one-sided and should reasonably reflect applicable custom and practice.
- Reasonableness is not necessarily a characteristic of financing documents.

Cogeneration Projects – Key Agreement Structures

- Agreements to provide energy:
 - ❖ Power Purchase and Sale Agreement (PPA).
- Agreements to Install Cogeneration:
 - ❖ Contracting Separately for:
 - Design, Procurement, Construction, Operation, Maintenance & Remote Monitoring.
- Single Agreement for:
 - ❖ Design/Build, Turnkey, Installation, Maintenance, Operation and Remote Monitoring.

Cogeneration Projects – Key Project Documents

- Real Estate and Access:
 - ❖ Site Lease and Easements.
- Utility Agreements:
 - ❖ Interconnection agreement and tariff
 - ❖ Curtailment other agreements (with utility or ISO)
- Regulatory and environmental approvals.
- Incentive Agreements:
 - ❖ Governmental NYSERDA or Private Incentive agreements.
- REC and/or Carbon Credit Agreements.

Cogeneration Projects – Key Project Financing Documents

- Types of Special Purpose Entities
 - Corporation - Shareholders' Agreement
 - Limited Liability Company (LLC) - Operating Agreement
 - Partnership - Operating Agreement
 - Joint Venture - Operating Agreement
- Financing Documents
 - Loan Agreement
 - Equipment Lease
 - Municipal Lease
 - Credit Support
 - ❖ Third Party Guarantee v.s. Letter of Credit
 - Manufacturer Financing

Conventional Loan Financing - Private Borrower

- Based upon borrower credit
- Security interest in equipment (UCC-1)
- Typically calculated to be amortized against annual financial benefit to borrower
- Depreciation/tax advantages based upon ownership
- Risk to owner (and lender) that design, tariff, equipment and operation factors reduce expected savings

Equipment Lease Financing

- Amortized payments.
- Lessor owns equipment so lessor, and not owner, has tax depreciation.
- Higher liability (less flexibility for owner) if equipment damaged.
- Buy out provision at end of term (tax considerations.)

Manufacturer Financing - To Cogeneration Providers

- Applies to cogen equipment sales to third parties providing energy to owners.
- Equipment purchase by provider.
- Manufacturer typically paid based upon kWh production.
- Provider assigns security interest in agreement between provider and owner to manufacturer.
- Manufacturer provides maintenance and limited remote control/monitoring.

Municipal Lease and Energy Performance Contracts

- Hybrid between installment purchase and lease.
- Applicable to municipalities, school districts and public housing authorities.
- Advantage = lower interest rate (tax exempt income stream). Requires tax opinion.
- Financing proceeds are paid to an escrow fund.
- Escrow funds disbursed against payment applications.
- NYS Education energy incentives.
- Limits upon amortization.

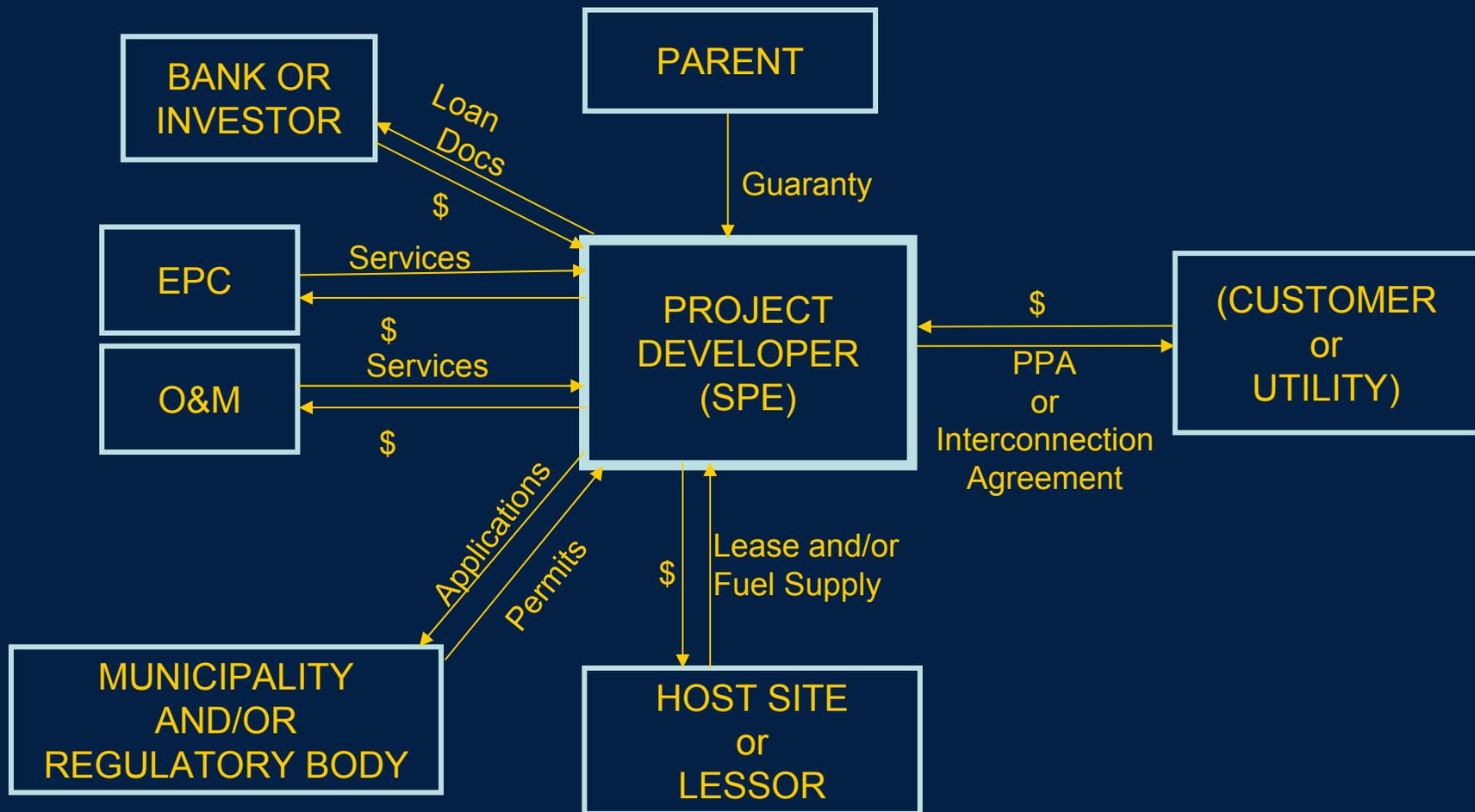
Public Housing Authority Financing

- Frozen baseline = principal basis for financing.
- Subject to HUD rules and regulations.
- Contract must be based upon HUD standard form (typically combined with performance engineering agreement.)

Performance Engineering Agreements

- Guaranteed savings or shared savings.
- Calculation of baseline and savings.
- ESCO provides financing.
- Difference between public and private.

ANATOMY OF A TYPICAL COGENERATION POWER PROJECT STRUCTURE



Power Purchase Agreement (PPA) - Between Buyer and Seller

A Power Purchase Agreement is...

- The critical document to Lender
- The document that contains the fundamental business and financial terms.
- Should have a term sufficient to amortize loan facility for the equipment investment.
- Should appropriately reflect the relationship between the parties through the allocation of risk written into the agreement. Allocation of undue risk to Seller raises barriers to financing.

Host Facility Sites – Power Purchase Agreements

- Seller, finances – at its expense, installs cogeneration system on property of Buyer.
- Seller sells thermal energy, electric energy and capacity to Buyer.
- Seller owns, operates and maintains system.
- Buyer may have “during and end of term” purchase options.
- Seller may form special purpose entity (SPE).

Utility Renewable Power Purchase and Sale Agreements

- Driven by Renewable Portfolio Standards or other state requirements.
- Assignment of “green” attributes (Tags & RECs).
- Utility power purchase and sale agreements typically place a heavy burden on Sellers performance (liquidated damages).
- Scheduling power deliveries and ISO considerations.

Selected Elements of Risk to PPA Parties

- Costs relating to fuel availability, transportation and commodity prices.
- Contract/vendor performance failure.
- Excessive cost of equipment, installation or operation.
- Tariff risks – Possible standby utility service classification (if risk allocated to Seller).
- Failure to obtain necessary permits or approvals.

Selected Elements of Risk to PPA Parties

- Seller's non or inadequate performance (including power quality problems) for PPA.
- Being subject to a take or pay quantity that exceeds Buyer's requirements. Buyer not paying Seller for delivered energy.
- Force Majeure.

Primary PPA - Elements of Lender's Risk

- Seller/Borrower not meeting its debt payments.
- Having inadequate recourse under the lease/loan and project documents, in the event of Borrower's default.
- Having to take over project.
- Failure of Seller to obtain necessary permits and approvals.

PPA “Take or Pay” Covenant

- Seller agrees to supply and the Buyer agrees to purchase or pay for not less than set amounts of electric power (and, if applicable, thermal energy).
- Buyer has to reasonably project demand.
- Prices can be fixed, fixed plus fuel adjustment cause, formulary, indexed or as otherwise agreed.

PPA “Take or Pay” Covenant

- Seller must have available capacity in order to claim a “pay” in the event Buyer does not take energy.
- Payment stream must be sufficient to cover: Seller’s debt service, O&M, supply and transportation of fuel and other costs, such as utility, legal compliance, overhead and contingencies.

PPA Reliability and Performance Standards

- The PPA may cover total permitted scheduled outage times and specifying when these shall occur.
- A specified quantity of unscheduled outage time may be permitted during the first year(s) of operation.
- Reliability and performance standards must be such that Seller may operate within reasonable margins of the equipment, expected availability and typical outage times.

Metering, Measurement and Verification Standards are Important to Financings

- M&V standards, as applicable, must be reasonable and clearly set forth in the PPA or availability guarantee.
- Provision must show how plant availability is to be determined.
- Metering of electric (and thermal) relative to T/P or availability guarantee provisions.
- Metering types and locations should be mutually agreed upon – consider third party reading.

Financial Incentives and Tax Benefits

- Utility PPAs may require that all provided incentives be to the utility.
- Parties should agree on allocation of incentives.
- Uncertainty as how incentives will be handled is a negative to a lender.
- “Regulatory-out” provisions for utility if rate treatment reduced or terminated (for Utility PPAs is significant to financiers.)

PPA Financial Incentives and Tax Benefits

- Owner of the cogeneration system, should be entitled to retain tax benefits relating to ownership and operation.
- “Buy-Out” price should take into account any tax benefits and credits.
- Owner of the cogeneration plant typically retains any “green” attributes.
- Utility, when buyer, will demand a covenant assignment all green attributes.

Financial Distress or Bankruptcy

- What happens when a Seller or Buyer cannot meet obligations or files for bankruptcy?
- Lenders will desire reasonable cure provisions.
- Lender must have option to “step into the shoes” of the Seller (to manage or provide a substitute Seller for PPAs).

PPA - Sale or Discontinued Operations of Host and Buyout

- PPA will have a covenant requiring Buyer to keep its facility operational during the term of the PPA – subject to the following.
- If Buyer sells the host facility, Buyer must assign the PPA to a purchaser reasonably acceptable to Seller and Lender.
- If Buyer discontinues operations at its facility, Buyer must purchase the cogeneration plant.

PPA – Sale or Discontinued Operations of Host and Buyout

- Lenders typically not concerned with provision enabling the Buyer to purchase a plant at the end of the term – since it follows amortization.
- Any earlier buy-out provision must provide that Seller's (and Lender's) interests are protected.

PPA - Financing Considerations

- PPA must provide that the Buyer will cooperate with the Seller by:
 - Signing UCC financing forms, assist with permitting, if required, permit recordation of SLA and permit assignment of contract documents to Lender.
 - Providing other documents that are reasonably required by the Seller in connection with financing.
 - Utility may require audited financials and other financial information relating to SEC and FASB requirements if PPA selling power to utility.

PPA - Financing Considerations (Contd.)

- The PPA and SLA must each provide for financing as a “condition” (i.e. each agreement will not be effective until the Seller has received financing to perform the Project).
- Lender would ideally like a PPA with a “hell or high water” payment stream to the Seller from the Buyer.
- Buyer payment obligations are generally contractually unrelated to Seller’s loan payments but Lender must be satisfied by financials of Buyer.

Essential PPA Provisions – Removal Provisions

- If the Seller defaults, and default not cured or an acceptable Seller substitute is not provided, Seller must dismantle the plant and restore the site at no risk or cost to the Buyer.
- If the Buyer defaults, Seller must have an array of remedies – including removal without restoration.

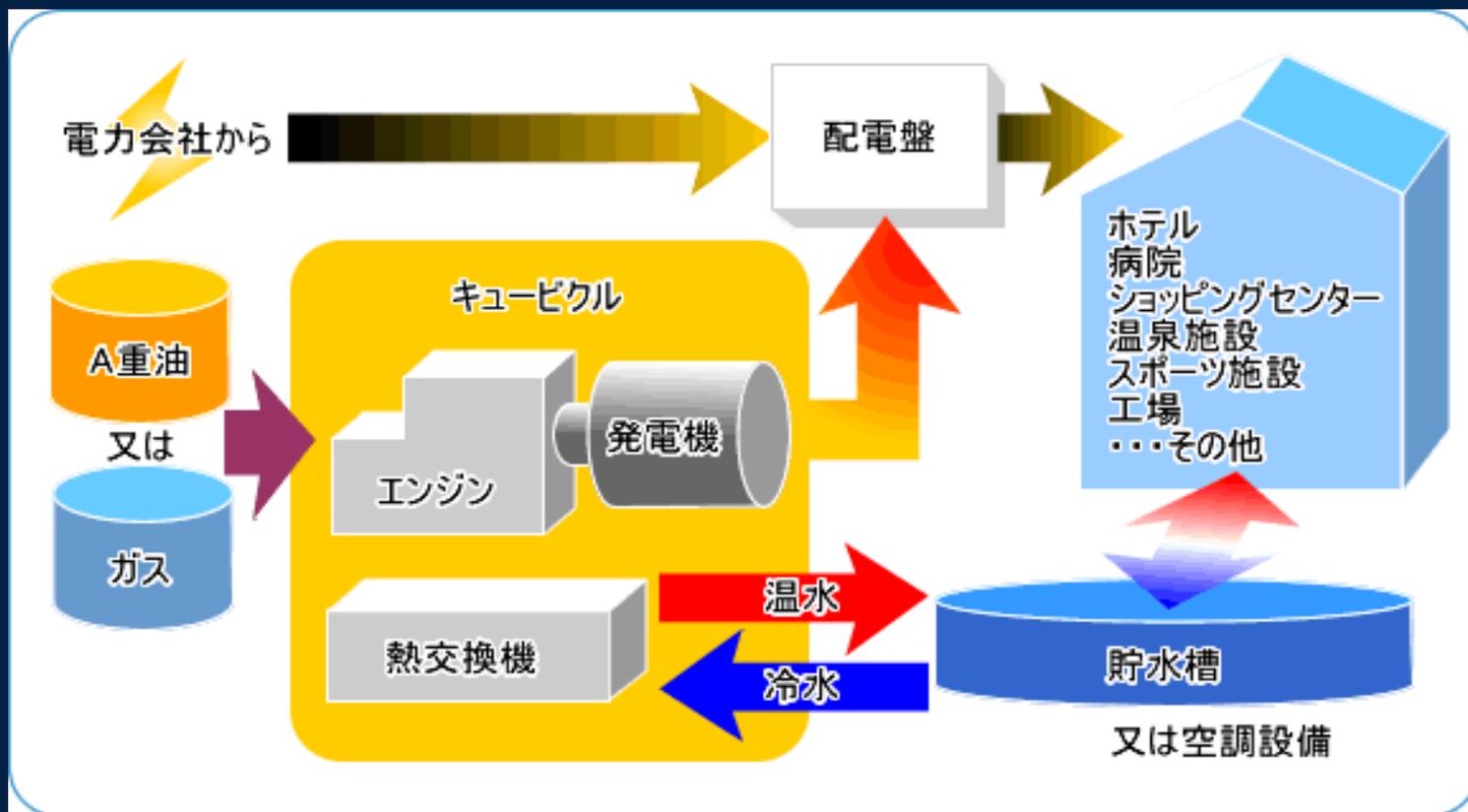
Turnkey Procurement, Installation, Maintenance, Remote Monitoring Agreement between SPE and Equipment Provider

- Turnkey Procurement, Installation, Maintenance, Remote Monitoring Agreement [Can also provide for design if Design Build.]
- Advantages of a single agreement for entire term.
- Should be dovetailed with provisions of other agreements.

Operations and/or Maintenance Agreement

- Important agreement to Lenders
- Scope of services of provider and obligations of Buyer.
- Third party or same entity as construction contractor?
- Warranties

Cogeneration is Global



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