



NYSERDA

NY Prize Microgrid Project Finance & Developer Experience Series Kickoff

February 28, 2018

Agenda

Time	Topic	Facilitator
8:30 – 9:00	Refreshments	
9:00 – 9:15	Opening Remarks	Dave Crudele, NYSERDA
9:15 – 11:00	Project Finance 101 Key Commercial Building Blocks <ul style="list-style-type: none"> • Project Participants / PPA • Ownership • EPC / Major Supplier Components • Fuel Supply • Financing; Debt & Equity 	Robert Gurman, Proenergy Consulting LLC
11:00 – 11:15	Break	
11:15 – 11:45	NY Green Bank	Peter Costello, NY Greenbank
11:45 – 12:30	Lunch	
12:30 – 12:45	NY Prize Stage 2 Update	Mike Razanousky, NYSERDA
12:45 – 2:30	Developer Experience <ul style="list-style-type: none"> • Regulatory Considerations • Working with the Utility • Rates and Tariffs • Business Models 	Dave Crudele & Janice Dean, NYSERDA
2:30 – 2:45	Stage 3 Update	Dave Crudele, NYSERDA
2:45 – 3:00	Wrap-Up and Next Steps	Dave Crudele, NYSERDA





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‘Project Finance 101’

NY Prize Stage 2 Microgrid

Project Financing Info Session

Proenergy Consulting LLC, Robert O. Gurman

February 28, 2018

What is Project Finance?

Project finance is the long-term financing of an asset(s) based upon the projected cash flows of the asset, rather than the credit or balance sheet of the sponsor(s).

Project Finance is Highly Structured

Structure Matters

- 1) SPE
- 2) Non-recourse loan
- 3) Specialized equity
- 4) Extensive commercial package
- 5) Reliance on long-term projections

Risk identification, assessment and mitigation are key components of the project finance discipline.

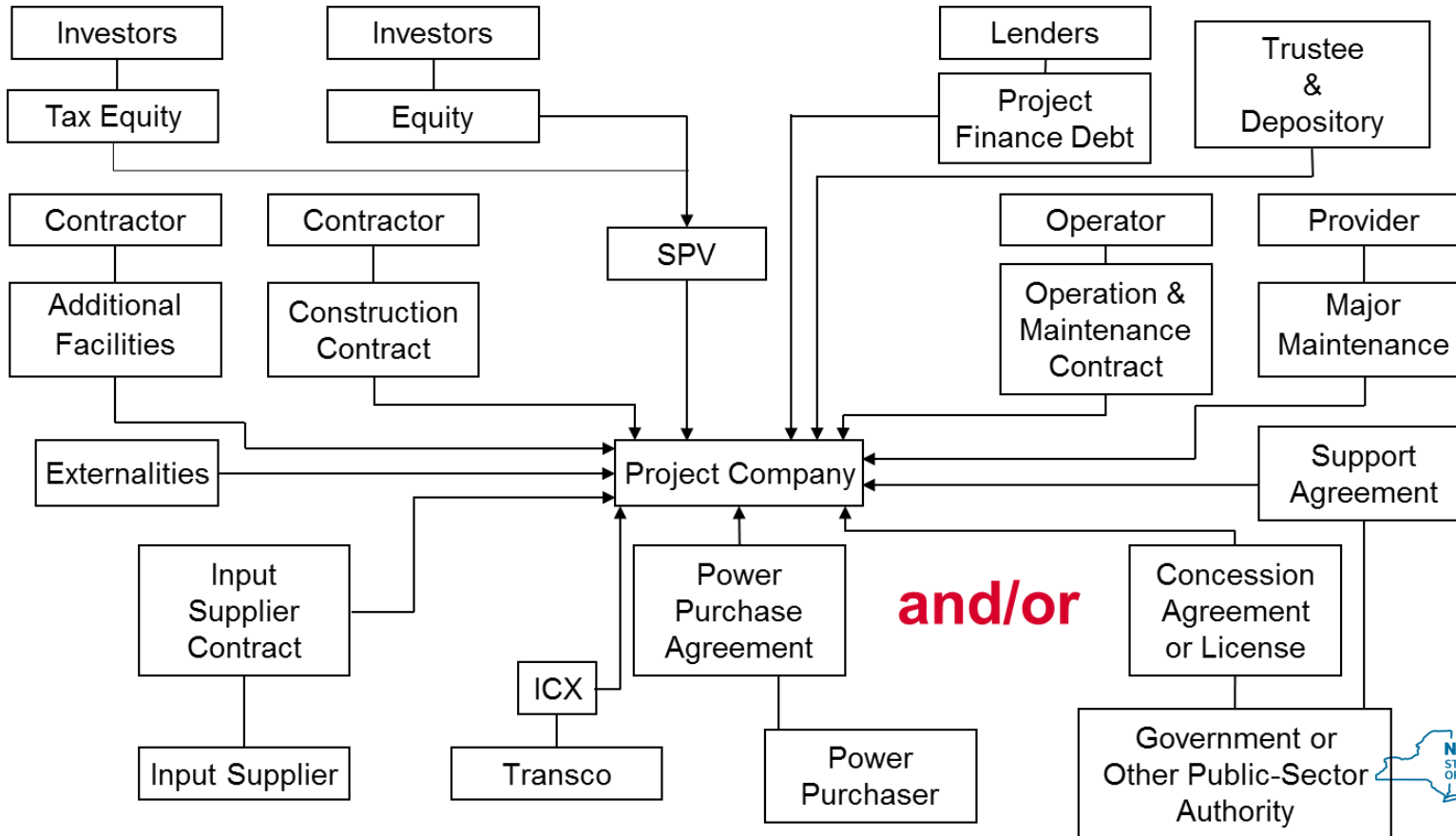
The Basic Commercial Building Blocks

- Development Activities & Costs
- Memorandum of Understanding
- Letter of Intent
- Financing Term Sheet (debt, equity)
- Permits, Approvals & Licenses
- Siting, Right-of-Ways, & Land Acquisition
- Technology & Equipment Selection
- Construction: EPC or Cost-Plus

The Basic Commercial Building Blocks (2)

- Output Purchase Agreement(s)
- Fuel Transportation Agreement(s)
- Interconnection Agreement
 - Fuel inputs and power off-take
- Operations & Maintenance, and Major Maintenance
- Debt
 - Including government sources/guarantees
- Equity
 - Including public/private & JV forms of ownership

Project Finance Organizational Chart



Structure Matters/WYSIWYG

In Project Finance, when a transaction is closed, **ALL** that is involved is represented in some way in the closing documentation, including permits, approvals, etc. **AND**, by inference, if something is **NOT** in the documentation, it is **NOT** in the deal.

- If an arrangement, obligation, authorization or concept, etc. is not documented somewhere, then it basically does not exist.
- Precisely what that obligation or responsibility is, is also spelled out in the documentation: full and absolute guaranty (which means what?) as opposed to a best efforts basis to get something done.

Therefore “**WYSIWYG:**” **WHAT YOU SEE IS WHAT YOU GET!**

STRUCTURE MATTERS!

The 5 C's of Credit

1. Character
2. Capacity
3. Capital
4. Collateral
5. Conditions

Lenders' Primary Concerns

- **Loan Documentation**
 - Credit Agreement; Depositary Agreement
 - Mortgage; Security Agreement
 - Legal Opinions
 - Closing Index
- **Equity's Obligations**
 - Project execution; project management
 - Funding
- **Commercial Feasibility**
 - Extensive reviews by Engineering, Other Technical, Market, Insurance Advisors, etc.
- **Step-in Rights & Consents**
 - Ability to take-over the SPE
 - Commercial Counterparties' agreement to maintain contracts

Essential Financial Snapshots

1. REVENUES

- Fixed (contractual, capacity)
- Variable (merchant, energy)

(FUEL/INPUT COSTS)

(FIXED & OTHER VARIABLE COSTS)

OCF: OPERATING CASH FLOW

(DEBT SERVICE: PRINCIPAL+INTEREST+FINANCING FEES)

DISTRIBUTABLE CASH

 ***Key metric for Equity Investors***

2. OPERATING CASH FLOW

divided by

DEBT SERVICE

= DSCR


(DEBT SERVICE
COVERAGE RATIO)

 ***Key metric for Lenders***

Essential Financial Snapshots (2)


3. CAPITAL COSTS

Property, Plant & Equipment; Inventory
Interest During Construction (IDC)
Fees & Expenses

 Translates from Construction Period to Debt Service, as Part of a Project's ...

4. FIXED COSTS


Debt Service
Fixed O&M (OH, salaries, fees)
Fixed Charges/Insurance

 Costs to be paid incurred irrespective of output of production

... as opposed to

VARIABLE COSTS

Fuel, Chemicals
Maintenance
(tied to actual production)

 Costs related directly to production.

Key Financial Model Data Points

- **Development Budget**
 - Soft Costs
 - Hard Costs
 - Contingency
- **Capital Budget**
 - Construction Budget
 - Fixed/Contracted Costs
 - Uncertain Costs
 - Contingency
 - Financing Budget
 - Transaction Exp. & Fees
 - Capitalized Interest
 - Reserve Funds
- **Operating Budget**
 - Revenues – contracted
 - Capacity
 - Energy
 - Revenues – merchant
 - Fuel Costs
 - GROSS Margin
 - Fixed Costs
 - Variable Costs
 - OPERATING Margin or Operating Cash flow

Key Financial Model Data Points (2)

- Debt

- Interest (& credit spread)
- Tenor
- Amortization
 - Full
 - Bullet
- Hedge (swap, cap, etc.)
- Cash Sweep
- Credit Support/Letters of Credit
- Guarantees (corporate, State, State-owned enterprises)
- Fees – Transaction
- Fees – Ongoing
- Reserve Funds

- Equity

- Investment & Support
 - Cash
 - Tax
 - Timing
 - Letter of Credit
- Terminal Value
- NPV and Discounted Cash flow
- Equity Waterfall
- Equity IRR/Project IRR
- Contingent Equity
- Carried Interest

Coverage Ratios and Key Metrics

- DEBT SERVICE COVERAGE RATIO (DSCR)
 - LOAN LIFE COVERAGE RATIO (LLCR)
 - PROJECT LIFE RATIO
 - DISCOUNT-to-BREAKEVEN PERCENTAGE
 - PROJECT IRR
 - EQUITY IRR
 - CASH-ON-CASH RETURN
 - NPV
 - TERMINAL VALUE
- PURPOSE of each metric needs to be fully understood
 - Time-frames utilized are critical (forward looking, backward looking, etc.)
 - Averages vs. Minimum thresholds can have significantly different implications (as well as “out-year” values, which may skew values to misleading results)
 - Periodicity
 - Discount Rate needs to be relevant

Thank You

Proenergy Consulting LLC

Robert O. Gurman

917-565-2167

rgurman@gmail.com

For follow up questions regarding the presentation material, please email:

nyprize@nyserda.ny.gov



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NY Green Bank

NY Prize Information Session

February 28, 2018

New York, NY

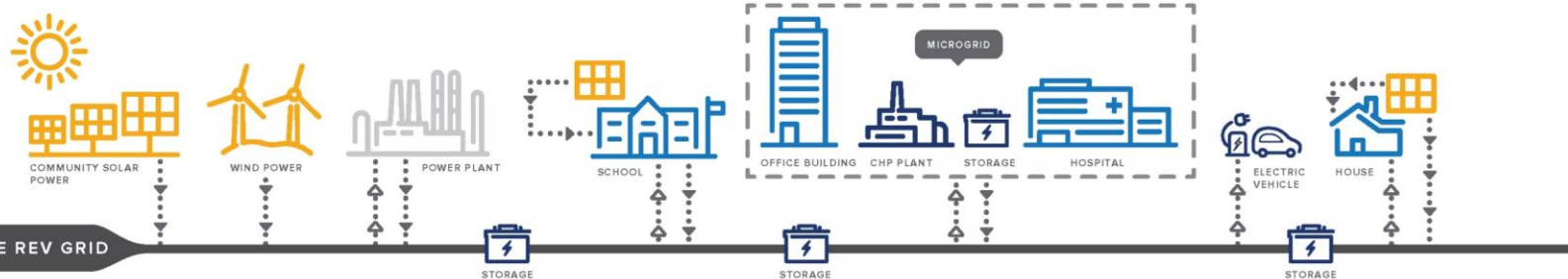
NY Green Bank Advances New York's Clean Energy Investments

Mission:

To accelerate clean energy deployment in New York by working in collaboration with the private sector to transform financing markets

- **What:** A \$1 billion State-sponsored investment fund
- **How:** By mobilizing greater private sector activity to increase the availability of capital for clean energy projects
- **Why:** To alleviate financing gaps in New York's clean energy markets and create a cleaner, more resilient and affordable energy system

New York's Solution: Reforming the Energy Vision (REV)



Reforming the Energy Vision (REV):

Governor Andrew M. Cuomo's strategy to build a clean, resilient and affordable energy system for all New Yorkers

New York Pursuing a Strategy to Enable Resilient Infrastructure and Address Financing Gaps

Sustainable infrastructure solutions such as microgrids need...

- ✓ Project developers
- ✓ Economically and technically feasible projects
- ✗ Readily available sources of capital

... but market barriers make it difficult for capital providers to easily finance sustainable infrastructure

- Unfamiliar structures
- Multiple risk exposures
- New counterparty credits
- Small transaction sizes
- Minimal standardization
- Uncertainty as to scale
- Lack of industry and product coverage clarity
- Lack of sponsorship
- Tenor issues

Microgrid Projects Have Many of “Barriers” that Can Cause Financing Gaps for Economically Viable Projects

On March 23, 2017, Governor Cuomo announced that NY Prize projects will have access to financing from NY Green Bank:

- Winners advancing to Stage 3 of the competition will have access to financing for microgrid construction through NY Green Bank
- NY Green Bank is prepared to facilitate up to \$50 million in financing assistance per project to Stage 3 winners subject to its investment criteria, due diligence and financial analysis

Investment Criteria

Transactions must meet the following criteria:

- Demonstrate potential for energy savings and/or GHG reductions in support of New York's clean energy policies;
- Demonstrate how the transaction contributes to market transformation; and
- Be economically and technically feasible and provide financial returns to NY Green Bank.

Examples of NY Green Bank Roles

NY Green Bank seeks to be flexible and creative in its approach to overcoming financing barriers for economically viable projects, with most solutions being within one of these categories:

- Warehousing / aggregation credit facilities, where NY Green Bank provides shorter-term capital to finance the aggregation of projects / assets with similar characteristics with the expectation of being refinanced at a later date when a aggregated portfolio is in place
- Asset loans and investments, where NY Green Bank provides longer-term capital to projects or portfolios of projects through senior debt, subordinated debt, and/or equity
- Credit enhancements, where NY Green Bank provides guarantees, loan loss reserves, or letters of credit to third party capital providers

Elements of a Viable Transaction

- Economically viable project
- Capable and experienced management team
- Traditional project finance / “bankability” concerns have been evaluated
- Quality counterparties
- A financial model with realistic assumptions
- NY Green Bank role or roles that can be expected to lead to financing market transformation (precedent transactions, credit underwriting and contractual standardization, aggregation of investment to achieve scale, data harvesting, etc.)

Contact rgurman@gmail.com or info@greenbank.ny.gov
to discuss microgrid projects



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Developer Experience

NY Prize Stage 2 Project Update Meeting

Coordination with the Host Utility

- Communication & cooperation
- Issues involving the regulated side
- Issues involving the un-regulated side
- Progressing to meet Developers' schedule
- Valuing/monetizing DERs
- “Special” microgrid rate
- Valuing/monetizing tax credits
- Clearly defined roles & responsibilities
- Clear allocation of risks & obligations
- Ownership, joint venture, participation formats
- Alignment of interests



Rates & Tariffs; Regulatory

Applicability of net-metering / VDER

- Single microgrid with multiple owner-users
- Multiple locations with a single owner-user

Regulatory Considerations

- Existing tariffs
- Incorporating demand response product
- Demonstration project/new tariffs
- Business Models
- “Potsdam” model

Ownership

- Public, private, hybrid; legal form of ownership entity
- Public/government entity as owner, and impact/requirements in the procurement process
- Maximizing value of tax benefits and DERs
- Host utility participation in ownership
- Allocating the costs/risks/benefits
- Impact on financing; bonding capacity; third party participation

Creditworthiness

- Multiple (dispersed) load users (i.e. revenue generators)
- Varying user sizes and financial conditions
- Revenue models: Power Purchase Agreement (“PPA”); Energy Services Agreement (“ESA”); lease; others
- Hospitals and other non-profits
- Ability to Finance

Right-sizing & Right-fitting

Robust accumulation of load data (~12 months)

Transition from Stage 1 to Stage 2

- Key microgrid components
- Tangible load & utilization data
- Capability/Performance
- Capital cost
- Identifying & pricing all revenue streams
- Economics and payoff

Please submit questions to:
nyprize@nyserda.ny.gov