

PV Project Financing

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TREIA Renewable Energy Finance Forum



Presentation Overview

➤ Project Overview

- Project description
- Parties involved

➤ Project Stages

- I. Development and Project Selection
 - II. Negotiations, Diligence, and Closing
 - III. Construction
 - IV. Completion and Operation
- Financing

➤ Takeaways

- Unique factors for small utility-scale projects
- Pitfalls to avoid and strategies that work



Project Overview



Project Description

- 4 MW AC project(s) in Southern California
 - Two project sites of equal size
 - Two identical PPAs under standard-offer contract with SCE
 - 18-month COD deadline from PPA signing
 - Single-axis trackers with Tier-1 c-Si modules

- Project Timing
 - 1H10 – Feasibility studies (transmission, CEQA)
 - Sep 2010 – PPA and IA signed
 - Dec 2010 – Acquisition diligence
 - Mar 2011 – CUP obtained
 - Mar 2011 – Acquired project from developer
 - Apr-Aug 2011 – EPC and equipment selection
 - Nov 2011 – NTP
 - Mar 2012 – COD



Parties Involved and Roles They Played

- Initial Developer
 - Selected and secured sites
 - Created preliminary design
 - Applied for and received PPAs, IA, Use Permits
 - Capital invested – IA deposits, CEQA studies, land purchase options

- Equity Sponsor (PowerFin's group)
 - Sourced debt and tax equity
 - Selected EPC and equipment selection
 - Performed project oversight

- Vendors
 - Attorneys – bulk of work done during diligence
 - EPC company – turnkey installation, no capital contribution
 - Panel supplier – panels only, no capital contribution

Project Stages



I. Development and Project Selection

➤ Developer

- Site selection criteria:
 - Access to appropriate distribution/transmission lines (upgrade costs)
 - Distance from load
 - Observed pricing dynamics in specific regions and nodes
 - Friendliness of permitting authorities
 - Solar resource, topography, and geology
- Why, how, and when should the developer exit?
- Iterative question: Is this a bankable project?

➤ Equity Sponsor

- Constantly sourcing investment opportunities
- Is this a real deal?
 - Is there a PPA, what is the price, and how is the language?
 - Special assumptions (costs, incentives, interconnection, etc...)?
 - What is the timing?



II. Negotiations, Diligence, and Closing

➤ Developer Considerations

- What do I want from the project and how does it fit into my strategy?
- Should I engage a sell-side agent (5-broker deals are not good)?
- How much can I get and are the bids real (too many LOIs)?
- Whom to sell to?
 - Reliability – balance sheet, reputation, integrity, experience, focus
- What kind of progress payment schedule is acceptable?
- Critical to understand solar/power and to identify knowledgeable parties

➤ Equity Sponsor Considerations

- Is the project bankable and is it worth our time?
- Is the timing realistic (deadlines, permitting, construction)?
- Reliability of counterparties and proper recourse (lots of promises)...
 - Completing a solar project is like originating a 20-year bond



III. Construction

- Considerations (besides price) when evaluating EPCs
 - What is their scope (design-build, turnkey)?
 - Reliability and bankability
 - Balance sheet, diversity of revenues, experience with solar
 - Warranties – output, workmanship, etc...
 - Footprint and mobilization capabilities
 - Track record – safety, experience with equipment/design (trackers)
 - Timing, availability, labor and engineering capabilities

- Considerations (besides price) when evaluating equipment
 - Panel – Tier 1 and why (vertical economics, balance sheet)?
 - Inverter – warranties and complementary O&M?
 - Racking/tracking – true engineering cost/benefit/risk tradeoffs (panel price)



IV. Completion and Operation

➤ Smaller Project Interconnection

- Connect to lower voltage lines – less complex and less expensive
- Same interconnection criteria, checklists, inspections, and timelines
- More sites (POIs) = more work

➤ Smaller Project O&M

- Easier to isolate problems and easier to maintain
- Outsourcing to maintenance contractor provides wider knowledge base
 - Breadth of contractor's experience at other sites (and equipment) can be leveraged
 - Not having regular on-site personnel increases need for quality design and monitoring
- Accounting and reporting are the same for a larger project



Financing Considerations

- Institutional Debt vs. Bank Debt
 - Institutional Pros: Lower underwriting costs and longer duration
 - Institutional Cons: Make-whole (pre-pay penalty)
 - Bank Debt Pros: More banks than institutions and can go smaller
 - Bank Debt Cons: One-off loans are more expensive

- Tax Equity
 - Less of a concern when 1603 Grant was available
 - Generally not available for sub-10MW projects

- Sale-Leaseback
 - Combination of debt and tax equity
 - Be careful with (wary of) exotic structures

- ❖ *Financing dictates valuation and timing of entry and exit*
 - *Try to have as many options as possible*



Takeaways



Factors for Small Utility-Scale Projects

- Financing – hard to get tax equity and debt
 - Bandwidth – same amount of work for large project
 - Pricing – smaller, distributed projects tend to get higher PPAs
 - Costs – mobilization and diligence costs/watt are higher
 - Development – PPA and interconnection can be expedited
 - Transmission – distributed sites have less transmission risk
 - Construction – completes very quickly
 - Negotiating takes time – strong sponsor mitigates this
- ❖ *Smaller utility-scale projects diversify site and supplier risk*



Pitfalls to Avoid and Strategies That Work

➤ Pitfalls

- Smaller projects have shorter deadlines
- Larger projects have more single-site/single-developer risk
- Governance and relationships in partnerships can get strained
- Overlooking utility and regulator protocols and timing
- Avoid unknowledgeable parties (brokers, developers, etc...)
- Too many cooks spoil the soup

➤ Strategies That Work

- Ability to provide 100% equity affords significant negotiating leverage
- Understanding cap structure and costs early in the process
- Being conservative on valuation
- Agnosticism towards EPCs and equipment
- Know your contracts and counterparties
- Keep all parties informed



Thank You

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