



Natural Gas Electricity

May 2015

Volume 31
Number 10

THE MONTHLY JOURNAL FOR PRODUCERS, MARKETERS, PIPELINES, DISTRIBUTORS, AND END-USERS

Securing Project-Based Financing for Solar PV Projects

Joe Ritter

I recently read a headline proclaiming that solar is no longer “sexy.”

There are a number of factors, including bipartisan support for the solar industry (whether it be from an energy independence or environmental platform), successful initial public offerings of solar company stocks, the introduction of other publicly traded solar investment vehicles and the desire for corporations (large and small) and homeowners to lock in long-term contracted power purchase rates, that have led to the mainstream acceptance and success of the solar industry. Though the industry has seemingly matured at a breakneck pace, one thing remains constant. Developers need capital to keep up with the insatiable thirst for solar photovoltaic (PV) projects.

Developers need capital to keep up with the insatiable thirst for solar photovoltaic projects.

As a provider of construction and permanent debt financing, as well as tax credit equity, for solar PV projects, the number of projects for which we’ve provided financing is only a small fraction of the total number of projects we’ve evaluated. There’s no singular reason as to why one project is successful in obtaining financing while another is not. However, there

Joe Ritter (jritter@seminolefinancialservices.com) is vice president of Seminole Financial Services LLC.

Other Features

New Uses/Technology for Generation and Transmission Assets

New Uses—Electric Generation

Preparing Electric-Generating Stations for Highest and Best Use

Edward Malley 7

New Technology—Electric Transmission

HVDC to Grow Rapidly

Dan Kell 11

New Users—Local Distribution of Electricity

Broadband Over Power Lines a Trend to Watch

David L. Crawley 19

Local Distribution of Natural Gas and Electricity

Necessity and Opportunity for Customer-Prescribed Outage Notifications

Robert Myers 23

Columns

Natural Gas Matters

Gulf Coast LNG Exports Still Moving Despite Oil-Price Decline

Richard G. Smead 28

Natural Gas & Electricity

Associate Publisher: Robert E. Willett Executive Editor: Margaret Cummins

Natural Gas & Electricity (ISSN 1545-7893, Online ISSN 1545-7907 at Wiley Online Library, wileyonlinelibrary.com) is published monthly, 12 issues per year, by Wiley Subscription Services, Inc., a Wiley Company, 111 River Street, Hoboken, NJ 07030-5774. Copyright © 2015 Wiley Periodicals, Inc., a Wiley Company. All rights reserved.

No part of this publication may be reproduced in any form or by any means, except as permitted under Section 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the publisher or authorization through the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, (978) 750-8400, fax (978) 646-8600. Permission requests and inquiries should be addressed to the Permissions Department, c/o John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030-5774; Tel.: (201) 748-6011, Fax: (201) 748-6008, or go to <http://www.wiley.com/go/permissions>.

Subscription price (2015): One year print only: \$1,994 in U.S., Canada, and Mexico; \$2,066 outside North America. Electronic only: \$1,994 worldwide. A combination price of \$2,393 in U.S., Canada, and Mexico, \$2,465 outside North America, includes the subscription in both electronic and print formats. All subscriptions containing a print element, shipped outside U.S., will be sent by air. Payment must be made in U.S. dollars drawn on a U.S. bank. Claims for undelivered copies will be accepted only after the following issue has been received. Please enclose a copy of the mailing label. Missing copies will be supplied when losses have been sustained in transit and where reserve stock permits. Please allow four weeks for processing a change of address. To order, call toll-free (800) 835-6770 or email cs-journals@wiley.com.

Postmaster: Send address changes to Natural Gas & Electricity, Jossey-Bass, One Montgomery Street, Suite 1000, San Francisco, CA 94104-4594. Outside the United States, go to www.wileycustomerhelp.com and click the "Contact Us" link for additional information.

Reprints: Reprint sales and inquiries should be directed to Customer Service Department, c/o John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030-5774, Tel. (800) 434-3433, E-mail: opicustomerservice@wiley.com.

Other Correspondence: Address all other correspondence to: Natural Gas & Electricity, Margaret Cummins, Executive Editor, Professional Development Division, c/o John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030-5774.

Indexed by ABI/Inform Database (ProQuest) and Environment Abstracts (LexisNexis).

Editorial Production, Wiley Periodicals, Inc.: Ross Horowitz

This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is sold with the understanding that the publisher is not engaged in rendering legal, accounting, or other professional service. If expert assistance is required, the services of a competent professional should be sought.

WILEY

Editorial Advisory Board

Deborah Carpentier, Esq.
Crowell & Moring LLP
Washington, DC

Christine Hansen,
Executive Director
Interstate Oil and Gas,
Compact Commission
Oklahoma City

Jonathan A. Lesser, President
Continental Economics, Inc.
Albuquerque, NM

Keith Martin, Esq.
Chadbourne & Parke
Washington, DC

Rae McQuade,
Executive Director
North American Energy
Standards Board
Houston

Robert C. Means,
Energy Policy and Climate
Program
Johns Hopkins University

John E. Olson,
Managing Director
Houston Energy Partners,
and
Chief Investment Officer,
SMH Capital
Houston

Brian D. O'Neill, Esq.
Van Ness Feldman
Washington, DC

Anthony M. Sabino, Esq.
Sabino & Sabino, P.C. and
Professor of Law,
St. John's University
New York

Donald F. Santa Jr., President
Interstate Natural Gas
Association of America
Washington, DC

Benjamin Schlesinger,
President
Schlesinger and
Associates, Inc.
Bethesda, MD

Richard G. Smead,
Managing Director,
Advisory Services
RBN Energy LLC
Houston

William H. Smith Jr.,
Executive Director
Organization of MISO States
Des Moines, IA

Dena E. Wiggins
President and CEO
Natural Gas Supply
Association
Washington, DC

are steps that solar developers can take that will differentiate their project from the rest.

Lenders are sometimes viewed with a jaundiced eye, or as an adversary, but getting in the right frame of mind with respect to financing is a key in securing long-lasting financial partners. That's right, developers should set out on their path to obtain financing with the goal in mind to find financing parties—debt, tax equity, sponsor/developer equity—who share the mutual view that, in order to develop a successful project and ensure that all parties' end-goals are met, everyone must work together, as if partners. That partnership, between the developers and their financing partners, is crucial to building scale and velocity in a time when speed and efficiency are of utmost importance in order to deliver projects in advance of looming expirations of various state and federal incentives.

Everyone must work together, as if partners.

PROJECT FINANCING PACKAGE

The first step to getting a prospective financial partner on board with a developer's vision is to provide the financier with a professional project finance package so that the lender or equity partner is able to conduct a quick initial analysis. Submitting a thorough project package to the financiers will impress upon the financing parties that the developer is professional and motivated to see the project through to completion. The project finance package that a developer submits to its financier should begin by providing the person conducting the review with answers to the five W's: who, what, when, where, and why.

1. *Who?* Who are the parties to the project? The developer should provide some background information on the company, principals, résumés, financials, and track record and experience within the solar industry. Additionally, the developer should also provide some information on the other parties to the project, including off-takers/power purchasers, interconnecting utility company, site host (i.e., the party that owns the land on which the solar project will be located), contractors, legal, accounting, engineering, and other financing parties (if applicable).
2. *What?* What type of project and installation is being proposed? What types of technologies

are being proposed? Will the project use battery storage or a tracking system to maximize efficiency?

3. *When?* What is the anticipated notice to proceed (start date)? What is the anticipated completion, or "commercial operations date"? Are there any factors driving those dates, such as deadlines within contractor agreements, offtake contracts, or interconnection agreements?
4. *Where?* Geographically, where will the project be located? Will the project be ground-mounted (i.e., situated on a racking that is affixed to a parcel of land), rooftop (either affixed or ballasted upon a business's roof), a carport/canopy structure (i.e., steel structures specially designed for the integration of solar panels), or some combination thereof?
5. *Why?* What is the benefit to the parties involved in the project? What is the primary motivating factor of the off-taker?

Spelling out the answers to those questions—typically through an executive summary—will provide the lenders and/or equity partners with the information they need to properly understand the proposed transaction. The executive summary will also prove that the developer has left "no stone unturned" and has truly thought out not only the positives of the transaction but also the potential risks and mitigants to those risks.

In addition to answering the five W's, the project financing package should also include a detailed budget and pro forma for the project. The developer should prepare a budget that includes all of the anticipated costs related to the project, including hard costs, such as the engineering, procurement, and construction (EPC) contract; equipment outside of the EPC contract; and interconnection costs. The budget should also include all soft costs, such as legal, accounting, permitting, and financing-related costs. The total costs, or "uses," for the project should balance with the total projected "sources" of capital for the project (i.e., construction loan, equity, deferrals, and other sources). If any imbalance exists in which the "uses" exceed the "sources," then the developer should expect to be required to fund the imbalance as sponsor equity, which will be in addition to any sponsor equity required by the lender.

The pro forma provided by the developer should include all economic data relative to the project, including the power purchase agreement

(PPA) rate and the rate of escalation (if applicable), the price of any solar renewable energy certificates (SRECs), any other income-related items, as well as all expense-related items, such as operations and maintenance (O&M), real estate taxes, personal property taxes, insurance, and lease payments.

Undoubtedly, the financiers will have a few questions as they pore over the information that the developer has provided. It is essential that a developer respond quickly to provide the financial partner with as much information as possible to satisfy the financier's request or question. The developer's willingness to provide the requested information in a timely manner will go a long way to solidifying the developer/borrower-and-lender relationship.

The developer's willingness to provide the requested information in a timely manner will go a long way to solidifying the developer/borrower-and-lender relationship.

SIZING A LOAN

Different projects qualify for different loan sizes.

That may seem like an obvious statement. However, the reason why a loan for one project may be larger than a loan for another project isn't always related to the size of the project itself. Lenders look at a number of factors when calculating the maximum amount, or "sizing," of a particular loan.

The developer fee is not used when sizing the loan, because the developer fee is typically only paid out once the project is complete.

By using the budget and pro forma information provided by the developer, the lender will begin the loan-sizing task. Although different project-based lenders have different approaches to loan sizing, most lenders will size their construction loans to anywhere between 80 and 90 percent of the costs for the project. However, lenders will not provide a loan that exceeds the total anticipated sources of repayment (i.e., permanent loan, tax credit equity, grants, rebates, and other amounts). In almost all cases, the anticipated developer fee is not used when sizing the loan, because the

developer fee is typically only paid out once the project is complete and to the extent that sufficient proceeds exist after fully repaying the construction loan. The difference between the 80-to-90-percent construction loan and the costs to fully construct the project will be the lender-required sponsor equity contribution.

To illustrate the sizing calculation for a construction loan, assume that the total cost to build a 4-megawatt, ground-mounted, solar PV project comes in at \$2.50 per watt (inclusive of all hard and soft costs, financing-related costs, and other costs). The total cost to construct the project would be \$10 million. Assuming the lender provides a construction loan sized at 90 percent loan-to-cost (LTC), the developer would be left with a sponsor equity requirement of \$1 million. Project-based senior lenders will require that the sponsor equity be contributed to the transaction prior to the disbursement of any loan funds.

Permanent lenders typically size the loans that they provide using a number of metrics, including debt service coverage ratio (DSCR) and loan-to-value (LTV) ratio. The DSCR—or amount of net cash flow relative to debt service—is determined by dividing the project's annual net operating income (NOI) by the annual debt service payments (interest expense plus principal repayment). NOI is calculated by taking all income-related items (PPA revenue, SREC income, performance-based incentive income, grants, rebates, and other income items) and subtracting from it all ordinary expense items (O&M contract payments, taxes, insurance, land lease payments, and other expenses). Lenders will typically size their permanent loans using anywhere from a 1.25 times DSCR (debt service is 125 percent of cash flow) to a 1.40 times DSCR (debt service is 140 percent of cash flow) because they want to make sure that the amount of the debt service obligation is sufficiently covered by the cash flow available to support the obligation.

To illustrate how a lender would size a typical permanent loan, let's assume the following in order to calculate NOI as shown in **Exhibit 1**. The next step is to take the NOI calculation and divide it by the lender's DSCR requirement to determine the maximum annual debt service for the loan. For the sake of this example, assume a DSCR requirement of 1.30. Dividing \$861,750 by 1.30 yields maximum annual debt service of

\$662,885. Now, using the rate and terms provided by the lender, the developers can determine the size of the loan that they may be able to expect.

Once the lender has conducted the initial analysis and sized the loans, and once a term sheet has been mutually agreed upon and executed, the loan will be sent to an underwriter, who will conduct a more rigorous review of the five W's and budget and pro forma information. Underwriting a loan can take weeks, or sometimes even months. It is the job of the underwriter to determine, at a more granular level, the financeability, or bankability, of the project, its participants, and the underlying agreements and contracts.

WHAT MAKES A PROJECT BANKABLE?

Underwriting is often referred to as an art rather than a science, and a project's financeability rests on, among other things, the ability to prove the positive value of the project (i.e., that the economic value of the project exceeds the costs to construct the project), the financial condition and track record of the myriad project participants, and the security of the collateral package being pledged to the lender.

Although there may be external and not so easily quantifiable factors that affect a project's "value" from a developer's, off-taker's, or other project participant's viewpoint, in the eyes of the lender and most financial partners "value" is black and white. Financial partners and investors desire a return on the capital they deploy and, based on their respective return hurdles, can quickly greenlight a deal based on this factor alone.

When evaluating the financial condition and track record of the project's participants, there is no clear-cut answer as to how many digits should show on a developer's balance sheet. Nor is there a specific requirement for how many years of experience the developer has in the space. What *is* important is that when the underwriter weighs the many factors that fit into this part of the analysis, the overall sentiment is concluded as positive.

There is no clear-cut answer as to how many digits should show on a developer's balance sheet.

In other words, if the developers are new to the solar space and have only completed one or two small projects, as long as they have aligned

Exhibit 1. Hypothetical Finances

Income	
PPA income	\$650,000
SREC income	<u>300,000</u>
Total Income	\$950,000
Expenses	
O&M	\$40,000
Land lease	10,000
Insurance	5,500
Taxes	<u>32,750</u>
Total Expenses	\$88,250
Net Operating Income	\$861,750

themselves with other project participants (EPC contractor, legal team, accounting team, tax equity partner, and other experts) that have greater experience, then the lender will typically view this as a positive. The whole of the remaining project team members' experience is a mitigant, or offsetting factor, to the inexperience of the developer. Similarly, should the developer not have a balance sheet that illustrates sufficient net worth and/or liquidity, then as long as the developer has teamed up with a sponsor equity partner that has capital available to fund any cost overruns or other capital needs, then lenders will generally view this as a positive.

While truly creditworthy off-takers are wonderful, the reality is that not every commercial off-taker has rated credit.

There are varying views taken by lenders and investors regarding the underwriting of off-takers. Some require that an off-taker be truly creditworthy, meaning that the off-taker possesses a rating of at least BBB by one of the major rating agencies and have nothing less than a "stable" outlook (as determined by the rating agency). Other lenders, and our organization falls into this category, take a more entrepreneurial approach when it comes to off-taker credit. While truly creditworthy off-takers are wonderful, the reality is that not every commercial off-taker has rated credit. In these instances, a close look at the off-taker's history, financial statements, and credit references is needed.

As for the collateral that a developer/borrower will pledge to the lender as security for the loan, there are a few key concepts that should be adhered to so that the collateral, generally the major project contracts and agreements (e.g., PPA, lease, interconnection, EPC, and O&M), as well as the project-specific property (solar panels, inverters, racking, and related property), will be considered bankable by the underwriter/lender.

The first, and arguably most important, concept is that the lender be in a first-lien position with respect to the project. That means that, in the event of a default by the developer/borrower and subsequent foreclosure (should the default go uncured), the lender will be viewed as the rightful owner of the project without contest by other parties (contractors, other lenders, and other concerned parties).

The second concept to ensure a bankable project is to ensure that all major project contracts and agreements are assignable. The assignment of the contract as collateral for a loan is extremely important for a lender because it gives the lender the right to effectively step into the shoes of the developer should the need arise (e.g., default or insolvency). Most counterparties (the off-taker, utility, EPC contractor, O&M provider, and other parties) share the idea that they do not want their contracts to be assigned freely.

However, ensuring that language exists in the underlying document that allows assignment for financing purposes is crucial to ensure the financeability of the document. Should that language not already exist in the document, then the lender and its legal team will likely require that the developer go back to the counterparty to the underlying document and request an amendment to the document. Obviously, that can present various challenges so the key is in making sure that the language is inserted during the initial contract negotiation.

Among additional concepts, a project-based lender will typically seek a separate document memorializing the collateral assignment. That document, known as a “Consent and Agreement,” is a triparty agreement between the lender, developer/borrower, and the original counterparty to the underlying document. The purpose of the Consent and Agreement is to cement the lender’s security, and it will usually contain estoppel language (whereby the counterparty confirms that the underlying

document is still valid and that no default exists) as well as additional cure rights to be provided to the lender in the event of a default by the developer under the respective project document.

A project-based lender will typically seek a separate document memorializing the collateral assignment.

GETTING TO THE CLOSING TABLE AND BEYOND

Once the lender has underwritten and approved the loan, it’s time to march toward closing.

Recall the concept that all sponsor/developer equity required to balance the sources with the uses of a project must be the first funds placed into a transaction. In other words, the lender typically will not fund any proceeds from the construction loan until all required equity has been funded. Additionally, most project-based construction lenders will not close until they have received some assurance from the sources of repayment (permanent lender, tax equity investor, or other sources) that the various forms of takeout are secure. This is typically handled through commitment letters or simultaneous closings.

It’s key for a developer to remember that even though closing has occurred, only half of the task is complete. Developers should remain in constant communication with their financing partners so that there are no surprises. This is where the concept of a shared vision truly comes into play.

The idea of a perfect project is unrealistic; every deal has its obstacles. Identifying the road blocks in a timely manner and facing them as a collective unit will prove to be much more efficient than going it alone. Although some obstacles may seem insurmountable at times, it’s very rare that we, as a lender or investor, encounter an obstacle that we haven’t faced before.

Understanding what lenders and investors need in order to evaluate, underwrite, and close transactions will hopefully set solar PV developers on a path to securing the financing that they need to develop projects. Remember that a professional project financing package, financeable parties to the project, bankable project documents, and constant communication will ensure a long-lasting relationship between the developer and their financing partners, thus allowing the developer to build scale and velocity in the development of solar PV projects. 