On the Grid

Here Comes The Sum

Larger Solar Projects Lure Lenders

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Solar, often on the backburner of energy financing, has recently surged in popularity due to its low risk exposure, and government and state support. For solar to reach grid parity, developers and financing groups must work on projects of scale, and implement the same financing vehicles that have driven traditional energy funding. To do so, developers must be able to package large portfolios of projects that carry minimal performance risks and secure cash flows from the sale of power.

Portfolios that have significant size in terms of generation capacity can be attractive to institutional lenders, but must be examined carefully to ensure success. Here are two key focuses that the financing parties must take into account:

Number of Projects**:** Every project, regardless of size, will incur the same transaction costs (legal fees, structuring fees, account management costs, etc.). A fewer number of individual projects would result in lower overall portfolio transaction costs. Since portfolios are driven by size, high transaction costs can erode fund margins and put the entire portfolio at risk.

Strength of Off-Takers: The highest performance risk of any PV system is the sale of the generated electricity. To mitigate this risk, developers must negotiate and execute power purchase agreements (PPAs) with off-takers that are financially strong. PPAs are generally written for 15+ years, so off-takers should have strong balance sheets and stable or growing businesses that will have sustained demand for electricity. Solar developers typically look for a single off-taker for a portfolio of projects. A portfolio's PPA counterparty risk is increased with every off-taker that is added, and project operating costs can quickly become a problem. An aggregated portfolio with a single or few off-takers is seen as the most favorable approach.

Stepping Up

Aside from the technical and financial risks of a given project, a closer look at the development firm can help ensure early project success. Arranging a solar portfolio requires industry-specific knowledge, and a motivated and knowledgeable development team is critical to undertake the steps that are needed to bring a project to commercial operation date (COD).

Successful lenders have looked at solar projects with three financing segments that mirror traditional energy sector financing.

First, development costs range from initial property control fees, to environmental and construction permits, to interconnection fees. These costs are typically burdened by the developers, but on projects of scale, developers sometimes use back-leverage.

Second, similar to real estate developments, construction financing is raised to help fund the costs of materials and labor. A revolving credit facility can provide the flexibility developers need while giving the lenders oversight and transparency. Once a plan of action is developed that outlines the construction timeline and budget for the portfolio, the revolving credit facility can be drawn on and repaid as projects begin to be taken-out by final buyers. Lenders that are willing to lend on this portion of a portfolio must be comfortable with the developer's abilities to construct and commission PV systems, and should pay very close attention to the Engineering, Procurement, and Construction (EPC) portion of the developer's role.

Third, project and operations financing, which consists of a hybrid of tax equity investment, private equity, and project-level debt that is utilized once the PV project reaches COD. Tax equity usually invests 40% of a project's cost. Private equity and senior level debt amounts to the remaining portions, and this is where traditional banks usually feel most comfortable in a project. Lenders would typically contribute 45% of the project's cost in long-term debt at the project level. In a well developed project, the coverage ratios available from project cash flows are quite safe.

There are many roles that institutional lenders can play in the PV industry. The true strength lies in each individual party's ability to deliver their responsibilities. Each party must recognize the strengths of the participants, and let them do their own jobs. Developers must understand their roles in a dynamic business model, and must fully grasp their cash flow models. Lenders need to identify the success rate of developers and understand that the projects must originate with them.

The success and attractiveness of solar PV must be well evaluated to gain traction within the lending community. Larger portfolios with fewer projects and contracts help mitigate performance risks, and allow justifiable profit margins to facilitate the involvement of both equity and consolidated debt.

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