

## Re-Energizing the Solar Project Financing Industry

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Solar project developers in Connecticut are breathing a collective sigh of relief as Congress, once again, extended the Investment Tax Credit (“ITC”) for solar projects until 2019, and extended the bonus depreciation for solar projects through 2020. The Connecticut Public Utility Commission followed suit with the extension of its own Renewable Energy Credit Program for solar projects (“ZREC’s”) through 2017 with the State’s commitment of up to \$8 million per year for commercial projects with output ranging from 10 kilowatts to 1 megawatt. Additionally, the Connecticut Green Bank, a Connecticut agency mandated with creating solar project funding programs, continues to make funds available for innovative residential solar programs and assistance with the experimental virtual net metering programs for municipal solar arrays and solar agricultural systems.

The ITC’s are awarded to owners of solar systems once installed and operational. The owner of a project is entitled to a tax credit in an amount equal to thirty-percent (30%) of the cost of the project. The tax credit is taken on the owner’s year-end tax return and can be claimed in any year after the project is operational, for up to five (5) years. Like many tax credit programs, there is a requirement for the owner to retain ownership for five (5) years to avoid a clawback of the credit. On top of the ITC, solar systems also provide owners with an accelerated five (5) year depreciation schedule with a 50% bonus depreciation in the first year (for projects placed in service in years 2015-2017), and a three-year phase out of the bonus depreciation by 2020.

The ZREC is a credit that is paid to solar project owners by the State’s public utilities (Eversource and UI) for each megawatt-hour of electricity produced by the project through a binding fifteen year contract. Solar projects bid into the program in a reverse-auction. The ZREC program divides solar projects into three levels (small, medium and large) and the projects compete for a finite amount of credits available at each level. The auction “closes” when all of the credits are awarded for each respective level.

This construct of State and Federal credits, along with the statutory mandate that the electric transmission utility company must buy back the electrical output from these solar projects or creditworthy site owners who have agreed to purchase the electrical output from the projects, has allowed this still fledgling industry to be economically viable. The hope of regulators is that as the economies of scale and system costs continue to evolve, solar projects will ultimately become self-supporting without Federal and State subsidies through these tax credit systems.

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The extension of these federal and state credits has also allowed for lenders to continue to provide the capital for new construction of solar projects, from the construction phase through project operation. A typical commercial roof top system or a ground mount solar array of meaningful size will range in cost from \$1 million at the low end to several million dollars. And, while many solar projects end up being owned by institutional investors who can utilize the substantial tax benefits generated by the projects, developers must have access to capital to market, develop and construct the projects.

The challenge for lending institutions is to create a funding methodology where the project is adequately capitalized through the construction phase, and where the lender is adequately collateralized if the developer fails to complete the project. This routinely requires the developer to contribute sufficient capital up front in the form of an equity investment, typically 15%-20% of the project cost, with a commitment by the developer to then pledge its entire ownership interest in the project along with the ZRECs, power purchase agreements, service agreements and operating rights to the lender.

The true risk to any lender will be during the construction phase of a project since the value of the project is not fully realized until project completion and energizing of the solar array. Given the significant data that has been made available by developers throughout the earlier years of this industry's development, we now know that once the solar systems are electrified, they really do generate electricity, reliably creating positive revenue and cash flow. Assuming developers stick to relatively conservative forecasting, lenders have been able to rely on the revenue projections over time in the underwriting of their loans.

Additionally, because of the continued growth and familiarity with solar projects, developers are now able to monetize the ITC's by bringing institutional investors into projects that are utilizing the ITC's. Institutional investors will look to contribute equity to projects in exchange for allocation of profits and ITC's. Some of these transactions may involve the sale of projects to equity investors and the leaseback of projects to project operators.

Often, at the time a project is energized and the construction financing converts to a long term or committed term facility, most lenders have required a pay down of the loan based on the developer's realization of the ITC's and bonus depreciation. Once a project is energized, the loans tend to perform like any other traditional term facility based on the realization of project revenues from the sale of the electrical output to the utility or site owner, and the sale of ZRECs to the utility. Traditional debt service coverage ratios and other loan covenants are commonplace.

As the industry continues to mature and lenders get more comfortable with the economies of these projects, many financiers have begun to package and fund portfolios of solar projects. This trend is certain to continue as lenders continue to understand the technologies involved and the general reliability of these systems.

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