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## The California Solar Initiative: Leveraging Private Debt Capital

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In an effort "to encourage substantial private investment in renewable energy resources," the California Legislature authorized the California Public Utilities Commission (CPUC) to create and oversee the California Solar Initiative (CSI). CSI provides an aggregate amount of approximately \$2 billion in incentives designed to encourage the installation of up to approximately 1,900 megawatts of distributed solar capacity in California by 2016.

At a basic level, the CSI program provides two types of cash subsidy payments to encourage solar power system construction. One type is an upfront lump sum cash subsidy, paid after a solar power system is fully installed, based on that system's expected performance. The second type is a performance-based cash subsidy that provides payments over a five-year period based on the actual power output of a system. In both cases, a solar power system must be complete and operational to benefit from CSI incentives. As a result, the CSI program by itself does not assist developers with the upfront costs of installing solar panels. However, the private

sector developed financing structures to monetize these incentives prior to construction, which can help developers raise capital to install solar panels.

The CPUC develops the rules for the program and publishes them with periodic revisions in the CSI Program Handbook. In later revisions of the Handbook, the CPUC has taken steps to address some of the considerations identified in this article. However, lenders that wish to provide funds to developers based on the future realization of CSI incentives must focus on provisions of the Handbook that may not fully account for the complexities that underlie monetization structures. This article focuses on identifying some of the key tensions between the Handbook provisions and the objectives of financiers providing capital to monetize CSI incentives.

The financial markets have devised a structure for financing distributed solar power projects on a portfolio basis, which allow efficient methods for deploying debt capital in high volumes and accessing new investors and segments of the capital and credit markets that may not have been fully

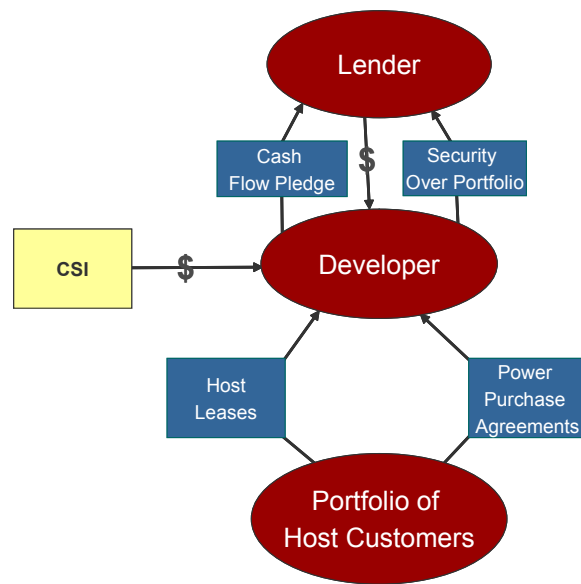
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understood when the CSI program was first adopted. Under these financing structures, a core model is often deployed involving at least three key parties. First, a host customer, who owns a building or other property to be serviced by the proposed solar power system, enters into one or more contracts with a solar developer that will own and operate the system pursuant to which the solar developer obtains a leasehold interest on the host's property. Under the lease, the solar developer is permitted to install, own and maintain the solar power system at the host's property for the term of the lease. In addition, the solar developer contracts to sell power generated by the solar panels back to the host under a long term power purchase agreement that is coterminous with the lease.



The solar developer often repeats those same steps with a number of additional host customers at various properties, and packages the leases and power purchase agreements into a portfolio of contractual assets. That portfolio has, as one of its key characteristics, long-term cash flows, which can be used to service principal and interest payments on a loan, that derive from power purchase agreements requiring host customers to buy power produced by the solar power

systems installed on their properties. The solar developer can then take the future promise of cash flows under the power purchase agreements and pledge them along with the solar power systems and other related rights and assets to a lender or group of lenders to secure a construction loan to finance installation of the solar power systems. Those lenders will rely, in large part, on those cash flows and asset security to justify loaning the funds needed to install the solar power projects.

In many instances, building the network of solar power projects anticipated by this financing structure would be cost prohibitive without the incentives under the CSI program. In these cases, a private lender gives a solar developer money to build distributed solar power projects at various host locations in exchange for the solar developer's pledge of CSI incentives and promise to use all CSI incentives and all payments made by the host customers in order to pay back the loan.

There are, however, certain scenarios that may cause anxiety among private lenders lending money based, in part, upon the promise to be repaid with incentives from the CSI program. Specifically, if a solar developer that encounters problems and defaults on its loan, the lenders may be required to foreclose on the solar power systems and related contracts in order to protect their interests. In some instances, the same issues that give rise to a default under the loan may also create breaches under the CSI program and Handbook. However, the Handbook lacks clear assurances that a lender in the unfortunate situation of foreclosing on the solar power systems has the ability to cure CSI breaches and continue to receive the incentives that formed the basis for its loan.

For instance, under Section 2.5 of the Handbook, if a solar developer removes a system on any property prior to the 10-year permanence period described in the Handbook, it could be disqualified from participating in the CSI program

for any additional installations. Absent clarification, this language could be interpreted to allow the following: A system owner/developer obtains a portfolio financing as described above based, in part, on the promise of CSI incentives related to the solar power systems in the portfolio; after the loan closes, the developer, directly or through an affiliate, proceeds to develop a new solar energy system totally unrelated to the portfolio of systems that has been financed; before all the incentives on the portfolio of solar systems has been received, the developer moves the unrelated solar energy system in violation of the Handbook; and relying on the language cited above, the program administrator refuses to pay any unpaid amounts under the CSI reservations for the portfolio of systems that was financed.

In this scenario, it is unclear whether if a lender forecloses on the portfolio of solar systems and finds a new responsible system owner and operator, the lender will be entitled to receive continued CSI incentives.

In addition, Section 2.4 contains various long-term warranty requirements. Moreover, Section 2.5 notes that “[i]n rare occasions, there may be extenuating circumstances that warrant equipment relocation,” and goes on to suggest that relocation within a particular program administrator’s territory within six months can provide a basis for continuing incentives. However, warranties are frequently voided when a solar energy system is relocated. Consequently, lenders may be unsure as to the viability of relocating a solar energy system they have financed in the event that a host refuses or becomes unable to pay for electricity. A significant amount of lender analysis could be alleviated if a lender in the foregoing situation could be provided a specified and reasonable period to relocate a system within a particular territory with assurances such relocation would preserve remaining incentives without the need for a program

administrator’s discretionary approval and irrespective of any technical warranty issues.

In response to considerations such as these, the CPUC has recently indicated that it may revise the Handbook to allow host customers to replace system installation contractors prior to complete installation of a solar power system without jeopardizing their incentives. However, lenders are also worried about issues with the system owner that can occur either before or after the system has been installed and the loan proceeds have been spent. In addition, the new language proposed by the CPUC to address these concerns does little, if anything, to address the ambiguities in the Handbook related to a lender’s ability to retain the benefit of CSI incentives following relocation of a solar power system and/or the potential impacts to CSI incentives following a technical voiding of manufacturer warranties associated with such a relocation.

Some focus on the complexities underlying the monetization structures employed by the private sector could mitigate investor anxiety over CSI incentive based financing and result in more efficient private capital investments in new distributed solar projects in California.