



Whitepaper

Mitigating solar lending risk

Overview

Driven by plummeting prices, growing pressure to achieve sustainability initiatives, and lucrative financial incentives such as tax credits, US business and residential consumers have made solar a [\\$36 billion industry](#). In 2022 alone, a new solar project was installed [every 44 seconds](#), contributing to the nation's base of more than 4.4 million systems. Today, [more than five percent of US electricity](#) comes from solar — 11 times greater than the share from a decade ago. In fact, in the first half of 2023 alone, [solar represented 45 percent](#) of all new generating capacity.

While the rapid growth in solar energy represents a bright forecast for lenders, solar loans remain a complex endeavor. To reduce risk, lenders must not only navigate a dynamic market burgeoning with varied jurisdictional obligations and regulatory requirements but also stay on top of ongoing requirements throughout the lifetime of the loan.

Sunny skies ahead: Appraising lender opportunity in the solar market

Several factors have contributed to the estimated [155.2 GW](#) of solar currently installed in the US, most notably:



Plunging prices

The price tag associated with solar installation has decreased by more than [60 percent over the last decade](#), enabling the industry to expand into new markets and deploy thousands of new systems nationwide. Even more, consumers are now more likely to purchase panels, prompting an increased need for financing options.



Sustainability initiatives

There are growing pressures at both local and federal levels for companies to adopt green technologies, with governments introducing incentives and increasingly stringent penalties to drive sustainability. In an effort to help address climate change, the solar industry set a goal to achieve [30 percent electricity generation by 2030](#).



Residential incentives, regulations, and credits

A variety of policies, programs, and regulations is helping to reduce capital costs to make residential solar a more feasible option. In addition, net metering enables residents to sell surplus power generated by their solar panels to the utility operator to offset the electricity they use from the grid.

Undeniably, the industry yields significant opportunities for lenders. However, when it comes to managing solar loans, the process isn't always easy. To succeed in this market, it is essential that lenders understand the risks of solar loans, how to properly protect their investments, and the value of implementing unique processes and workflows specifically tailored to their needs and objectives.

Understanding regulatory requirements in solar lending

Whether delving into solar lending for the first time or expanding an existing solar loan business, it is important for lenders to thoroughly understand the unique intricacies of this niche market to effectively mitigate risk. While financial organizations may approach solar with different portfolio goals, all solar loans must be kept accurate and up-to-date, with interest in the equipment remaining protected and perfected. Solar lending also mandates a thorough understanding of:



Uniform Commercial Code (UCC)

UCC Article 9 applies to transactions where assets or collateral such as solar panels are used to secure a financial obligation. The original UCC-1 establishes a lien on the financed equipment and gives a lender priority over potential third-party claimants. Because a UCC expires after five years, it must be refiled throughout the lifespan of the loan.



UCC 9-105 Safe Harbor criteria and authoritative copy

Lenders seeking the advantages of electronic signatures in their lending process must further have an understanding of UCC Article 9-105 to support the establishment, maintenance, and transferability of an electronic authoritative copy. Lenders must adhere to strict UCC 9-105 Safe Harbor criteria for managing electronic chattel paper, the document that shows that the holder (controller) has a security interest in the goods. To comply, documents must be originals and preserved within a system such as an electronic vault, which demonstrates proof of control maintained in a single authoritative copy. Additionally, electronically signed documents must be tamper-evident to protect against alteration, manipulation, or fraudulent representation. Being in control of the authoritative copy proves that the controlling entity is the only company that can claim rights to the underlying payments and/or collateral, just as if they had possession of the physical ink-signed original.



Jurisdictional specifications

The complexity of solar regulatory requirements is further magnified by individual jurisdiction regulations under Article 9. Laws not only vary by state, but can even differ among counties. Depending upon the jurisdiction, the UCC may require additional types of real property documentation.

Evaluating solar portfolio goals

Establishing a long-term solar loan strategy will help define your operational preferences, determine which best practices are most important to implement, and allow you to hone in on the solutions or services that will enable you to optimally organize and manage your portfolio. Is it your intent to hold the portfolio until all loans mature, use it as collateral, or securitize and sell the portfolio to investors? Specific solutions are available to help facilitate both long- and short-term plans.

Whether held, used as collateral for other loans, or sold among investors, solar loans must be kept accurate and up-to-date. In addition, preserving your portfolio in prime position for resale requires you to maintain visibility into the status and stage of your filing.

Assessing solar lending risks

In the solar industry, a variety of circumstances can increase lender risk over the course of the loan term. Borrower-driven threats are most often focused around UCC filing protection, while lender operational risks are tied to the need to maintain the authoritative loan copy.

Borrower-driven risks

1

Resale/refinance of property

The refinance or sale of a house to which solar panels are attached is among the greatest risks for a lender to lose the collateral through transfer of ownership. The residential real estate market is prone to consistent turnover; on average, a home is sold every seven to eight years. In order to ensure the collateral, a lender must receive notification that the asset is being sold. However, borrowers often fail to do so.

2

Payment delinquency/default

In the event of a foreclosure or loan default, lenders must position themselves to collect on the lien. When a debtor defaults, the lender who holds the first position — which will almost always be the first title mortgage company in a home foreclosure — will collect first, and any remaining funds will then be disbursed to the second lien holder. Having a valid, up-to-date UCC filing in place will allow the solar lender to seize and sell the asset to offset their loss. Having control of the authoritative copy of the electronically signed solar agreement will further prove the solar lender's rights to seize the assets.



Lender-operations risks

1 Unenforceable contract/unperfected lien

Incomplete or inaccurate contracts can result from both human error and the lack of proper records maintenance. If lien documents are incomplete or were filled out incorrectly, lenders will have to rewrite them. Further, their documents may prove invalid in court. Maintaining proper records, particularly a proper chain of control for electronically signed loan documents, helps reduce the threat of contractual issues.

2 Need for historical records

In the event of an audit, lenders must be able to tender the historical record of a loan and guarantee the integrity of origination and management workflows at all times, especially those regarding a consumer's use of electronic signatures. In order to be compliant, electronically signed documents require a higher threshold of security and accessibility than is provided by some document management solutions.

3 Liquidity

Rather than hold the asset for the duration of the loan, many lenders opt to sell, pledge, and re-capitalize through the securitization process, in which the assets are pooled and repackaged into interest-bearing securities. In these instances, it is imperative that lenders are able to prove that they hold the authoritative copy of the loan contract.

4 Need to prove ownership

In instances where liens are being transferred or where lenders have borrowed money from different investors when creating loans, they must be able to demonstrate both proof of ownership and their priority to collect by possessing the authoritative copy of the contract.



What lenders need to reduce solar lending risks

Deploying the right tools and technologies, and engaging with an experienced partner, are essential to mitigating the many issues that increase risk for solar lenders. The ideal approach will combine multiple methods, including:



A UCC filing and management solution

Safeguarding solar equipment financing is a critical step in protecting a lender's interests against the many known and unknown events. Using solutions that alleviate the challenges of monitoring and filing can minimize risks while reducing costs and turnaround time.



An authoritative copy solution

An authoritative copy solution, which incorporates electronic signatures and an electronic vault (eVault) to establish long-term management and transferability of an authoritative copy, creates a compliant and tamper-proof demonstration of ownership and control of the authoritative copy. In addition to tracking activity around the asset — including signing, maintenance, sale, pledging, collateralization, and securitization — electronic signing workflow helps ensure the contract is accurate while enabling lenders to maintain a clear chain of custody.



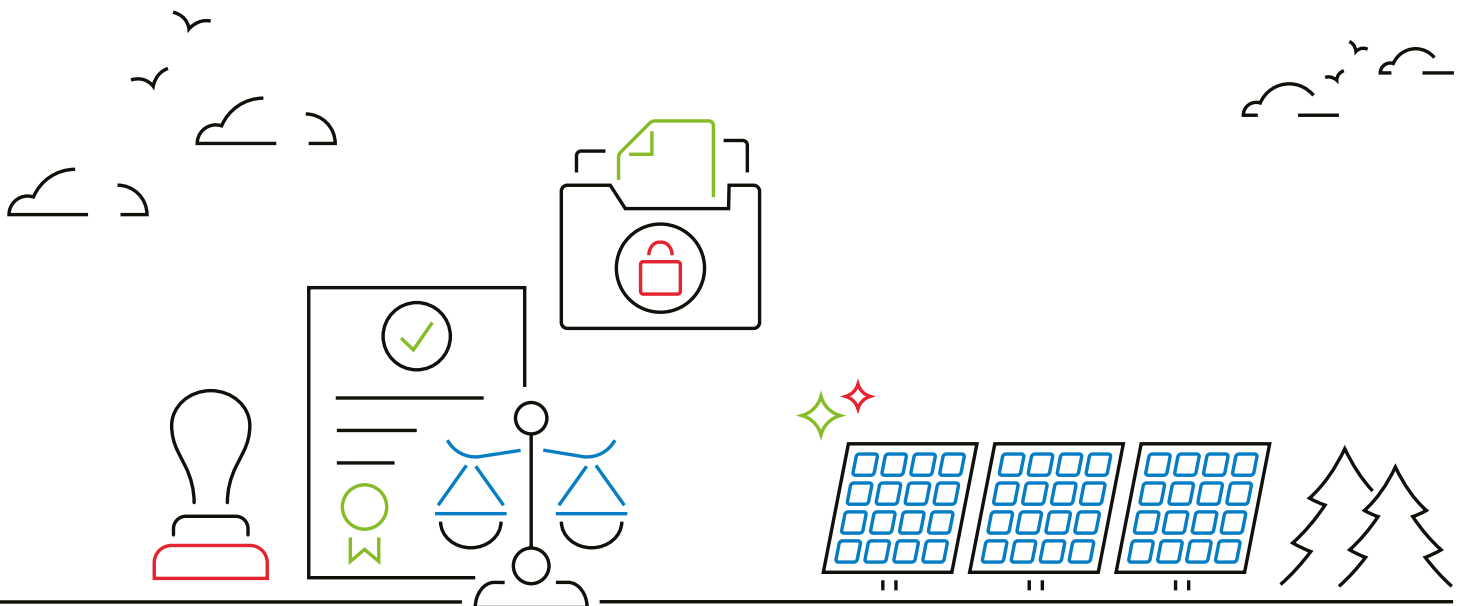
Automated tools

Automation is integral to minimizing solar lending risk by helping lenders avoid mistakes from the onset. Integration and process automation, such as UCC filing, offer an alternative to tedious and time-consuming manual procedures, while enabling lenders to isolate potential concerns, maintain visibility into their solar portfolios, and scale their operations.



Support from a trusted vendor

To flourish in solar lending, you don't need to be a solar industry expert — but it certainly helps to partner with one. Engaging with a knowledgeable vendor can help lenders cost-effectively deploy the optimal platform and services for their specific needs, seamlessly automate processes and workflows, establish best practices, and develop processes for long-term loan management.



Conclusion

It is clear that the rapid growth in solar energy has created a bright landscape for lenders. However, the complexity of solar loans necessitates that financial organizations thoroughly evaluate their appetite for risk, assess their operational readiness, and ensure that they are equipped with the right tools and processes to operate efficiently and safely within the dynamic market. Borrower-driven risks and challenges to lender operations remain prevalent throughout the lifetime of a solar loan, underscoring the importance of properly securing the portfolio.

Lenders must take vital steps to navigate ongoing requirements throughout the lifetime of the loan. In the absence of perfected liens, a lender can lose priority position to other creditors and may be forced to share or lose the proceeds from collateral sales in the event of default. Yet with the right solutions and services, financial organizations not only gain tools to remediate issues that impact their lien position, but also simultaneously maximize efficiency to save time, resources, and costs.



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