Solar Loan Product Considerations

MASSACHUSETTS CLEAN ENERGY CENTER®

What is a Residential Solar Loan?

- Borrower ⟶ Homeowner
- Common Loan Terms ⟶ 3 - 20 Years
- Common Loan Values ⟶ Ranging $5,000 - $60,000
- Common Construction Duration ⟶ 1 - 12 months
- Disbursement Schedule Options ⟶ 1 - 3 disbursements

MASS Solar Loan

From 2015 - 2020, MassCEC helped 17 lenders originate $180 Million in residential loans through the Mass Solar Loan program. MassCEC has developed these resources with insights from the program to support lenders in launching their own product.

Solar loans are simply another type of consumer loan.

Solar does not require a radical new loan model, and lenders have been making consumer loans for centuries.

Solar is an established technology.

Solar technology has been around for decades, with over 120,000 systems installed in MA and more than 2 million across the country.

Look to construction loan products as guidance.

A multiple disbursement loan, with a portion disbursed at loan closing and another after the project has completed, works well.

Loan Term / Rate Considerations

- A 10-year term often aligns well with the available incentive programs (such as the Massachusetts SMART program). Shorter and longer-term options can provide customers flexibility with larger/smaller payments to best fit their financial situation.
- Competitive fixed interest rates ensure your product is simple to explain and can be a value add for installers to offer their customers, helping attract new members/customers to your institution.
- Keep fees to a minimum – customers and installers appreciate simple and easy to understand costs.
- Establish a maximum loan amount that can support a majority of solar PV projects while still maintaining internal comfort.

Mass Solar Loan Program Approach:

- Required a 10-year term, while allowing 3-20 year at lender discretion.
- Capped interest rates at Prime+2.75%
- Capped closing costs / fees at $500
- Maximum loan was $60,000, median under the program was $32,000.

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Loan Structure Considerations

- Solar PV construction has a common timeline of 2-6 months and therefore is well suited to a multiple disbursement structure. Consider:
  - An initial disbursement to serve as a deposit, allowing installers to begin permitting and ordering equipment.
  - A second disbursement at or near project installation, which can cover the remaining equipment and labor costs.
  - A final disbursement after the project has been installed and interconnected to the customers satisfaction.
- Requiring interest only payments during the installation period can provide a return on the initially disbursed funds, while limiting customer payments until the system is generating revenue. To trigger the switch to principal and interest payments consider:
  - A variable term (triggered by the project reaching completion), aligning with project timeline and requiring the fewest interest only payments.
  - Or a set term (such as 12 months), which can be simpler to implement and can better ensure the customer has begun to realize incentives and other revenues before making full payments.
- Limiting the number of disbursements and funding a greater percentage initially can be a simpler and more valuable product for installers. However, this should be balanced against the increased risk for the lender/borrower and ensuring the borrower retains some control on payment until after project interconnection.
- Consider offering no cost re-amortizations and no pre-payment penalties.
  - Solar systems are revenue generating assets and eligible for incentives, such as a federal tax credit (which is more than 20% of the system cost). The ability to amortize ensures customers have the option to apply incentives and lower their loan payments to align with system savings (and therefore better enable repayment).

Mass Solar Loan Program Approach:

- The program had two disbursements – 35% disbursed at closing, starting a variable term interest only period of up to 12 months, and 65% disbursed at project completion.
- Installers noted that waiting for 65% at completion with no disbursement at installation was a strain if they had a volume of Mass Solar Loan projects.
- Lenders had to offer a minimum 1 free amortization within 18 months of closing the loan.
- Loans had no pre-payment penalties – with an average loan age of ~3 years more than 20% have fully paid off early.

See our Application / Completion resource for guidance on documentation to require as disbursement triggers.

Loan Collateral Considerations

Solar loans are well suited to a variety of collateral structures:

- Loans secured on home equity or real property –
  - Residential solar is commonly installed on owner occupied homes and equity-based loans may allow more lender comfort and lower interest rates.
  - However, real property secured loans can be more complex and costly to originate, a challenge for customers and installers who are looking for quick and simple loan processes.
- Loans secured on the equipment/personal property –
  - Securing loans on the equipment through a UCC-1 can provide a layer of collateralization without the complexities and costs of a home equity loan.
  - UCC-1 fixture filings at the registry can ensure the loan is attached to the property record and that the lender can be involved in the event of a home sale.
- Fully unsecured loans can allow for the simplest and quickest application and closing and may carry an appropriate risk in the right circumstances.

Mass Solar Loan Program Approach:

- Lenders had the option to select secured or unsecured collateralization options.
- As a revenue generating asset, unsecured or UCC-1 secured products have still demonstrated very strong loan performance to date – see loan performance data from the program here.
- The UCC-1 Fixture filing was by far the most common method utilized.

Contractor/Installer Eligibility

Approaches to installer eligibility can range. A more restrictive approach may include specifying a list of partner contractors and requiring a third party to review and approve new installers. Whereas a more open approach could allow any installer and puts all diligence on the consumer. Consider your practice for other construction loans. Options may include:

- Requiring installers provide copies of appropriate licenses, or have them simply sign to them. Note that all installations in Massachusetts require local electrical and building permits which can only be obtained by licensed electricians/contractors, so such licenses are inherent in any utility/town approved project.
- Requiring certain additional certifications or standards such as North American Board of Certified Energy Practitioners (NABCEP) certification, or Better Business Bureau ratings
- Requirements to ensure more experienced installers, such as having installed 10 other residential projects confirmed via public data or contractor attestation.
- Requiring references to contact to ensure positive prior customer experiences.
- Requiring installers to sign a partnership agreement and/or perhaps be a signatory to one of the loan application documents themselves.

Mass Solar Loan Program Approach:

- Open to all installers, allowing new installers upon successful review/inspection of their first project by a third party or with 10 prior projects / 3 positive references..

Process Considerations

- Installers and customers seek products with clear published terms which are simple to apply for and close.
- Consider a fully online process to ensure your product is accessible to customers as they are having conversations with their installer, and easy for new members/customers to pursue.
- Standards for system eligibility can help set bounds on the economic return of a given system – dependent on factors such as price, the included technologies, and the anticipated production. Consider:
  - Criteria for eligible equipment and whether common associated technologies like energy storage or roof work can be included.
  - Bounds around system pricing or anticipated production that can help ensure customers systems will generate them a positive return. Anticipated production is often measured by a Total Solar Resource Fraction, a percentage reflecting the anticipated performance relative to a perfectly sited system.

Mass Solar Loan Program Approach:

- MassCEC encouraged lenders to offer simple processes. The most successful lenders in the program had fully digital processes.
- MassCEC established technical requirements that specified eligible costs should align with federal tax credit language. Re-roofing and tree-work were specifically determined as not eligible. Many projects require roof or tree work so allowing those as eligible costs may make more projects eligible for your product.
- MassCEC established warranty requirements aligned with industry standards (5-year workmanship, 10-year inverter, 20-year panels).
- Other technical requirements were primarily based on the Massachusetts Electric Code and intended to highlight certain best practices. A summary of the technical requirements can be found here.
- Projects were required to produce 70% or more of the electricity expected from of an equally sized, perfectly sited system.

Tips from a Successful Lender

1. Installer relationships are critical as most loans are from new customers/members.
2. A secured consumer loan with a Fixture Filing UCC-1, filed at the registry, is a valuable collateralization option – lower origination and compliance costs than equity loans, better yield, and they perform just as well.
3. A Digital/Online process is important.
4. Don’t be afraid of high DTI/low-income customers – these systems generate revenue that offset the loan payment.