Solar PV Financing Survey Findings

Solar PV Financing Workshop for
Massachusetts Financial
Institutions

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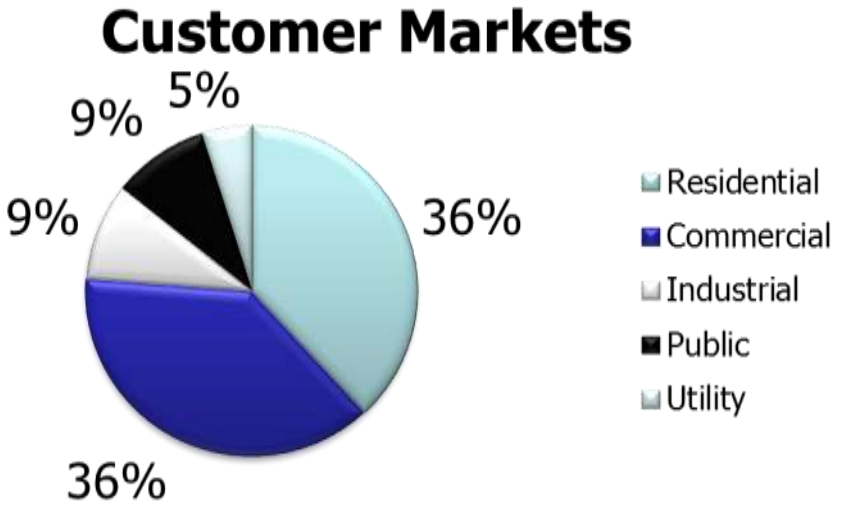
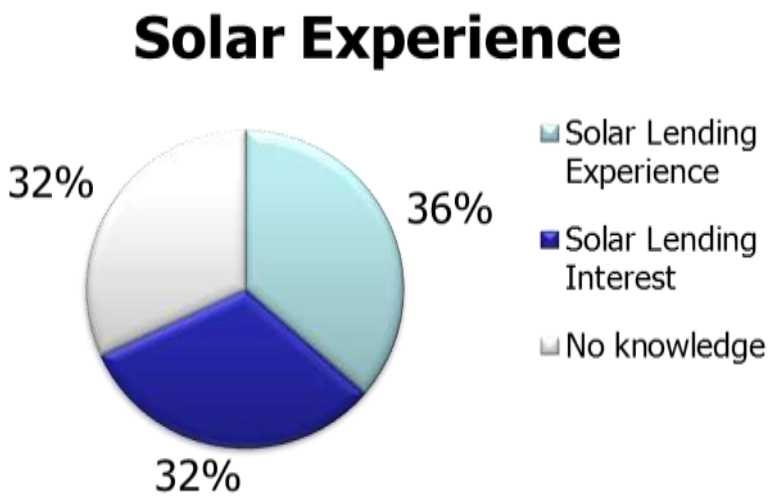
Purpose of Solar PV Lending Survey

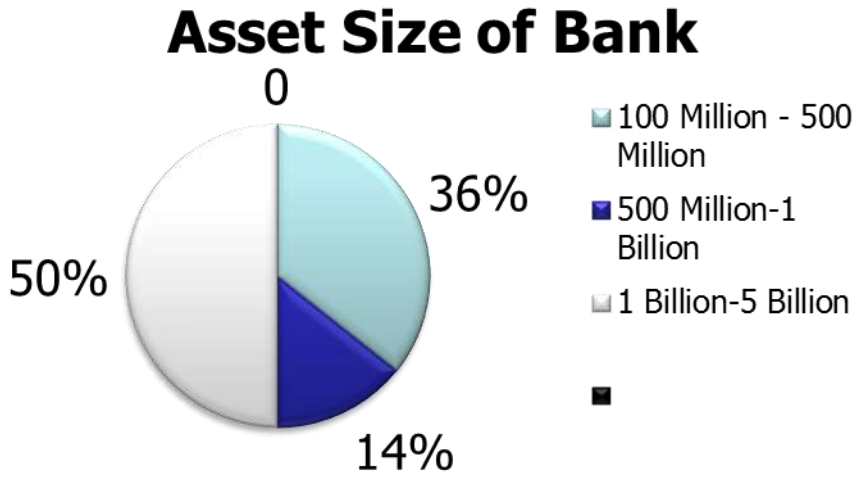
The questions were designed to:

- Gauge the experience level and interest
- Understand familiarity and confusion with policies and incentives
- Understand concerns about solar lending
- Receive suggestions on information and programs to increase solar lending

Interviewee Profiles: 22 Interviewees



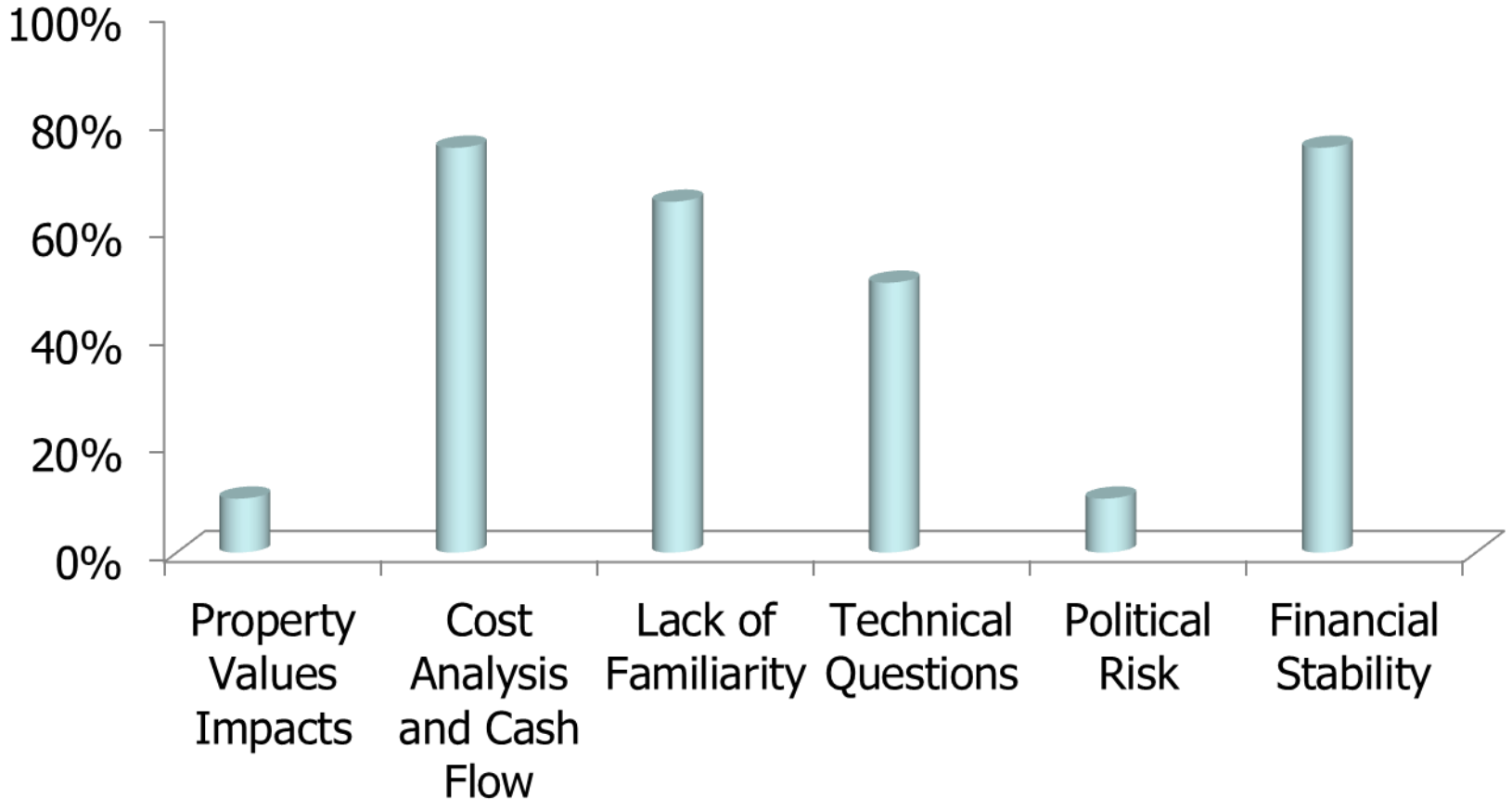




Interviewees' Solar Loan Terms

- **Commercial Loan Terms**
  - Collateral –
    - Real Estate;
    - Solar System equipment;
    - Assignment of RECs and Net-metering;
    - Personal guarantees;
    - Cash flow of energy generation and sale
- **Residential Loan Terms – typically home equity loan**
- **Profitable Loan terms: Less than 10 years; Interest rates – 4-6%**

Main Concerns and Barriers to Solar PV Lending



Main Concerns and Barriers to Solar PV Lending

Property Values (residential)

- Concern over resale value of the home with PV system.

Cost Analysis and Cash Flow

- Unclear collateral in solar system and energy generation.
- Multiple layers of incentives .
- Lack of case studies and documented experience on cash flow and timing.
- Few borrowers can meet underwriting requirements.

Main Concerns and Barriers to Solar PV Lending

- **Lack of Familiarity**
  - Newness and unfamiliarity in bank community.
  - Lack of borrower knowledge about intricacies with permitting, interconnection, structural requirements, and underwriting criteria.
- **Technical Questions**
  - Life of the system and panels; technology, infrastructure components, warranties, and interconnection issues, etc.
- **Governmental Risk**
  - Federal and state incentives affected by changing policies.
- **Stability**
  - Programs and incentives are changing (i.e. SRECs and net metering)

Agenda

- 7:45 - Check In and Breakfast
- 8:15 - Welcome and Introduction
- 8:35 - Commercial and Residential Cash Flows
- 9:30 - Solar Project Costs - Introduction to Solar Systems
- 10:00 - Networking Break
- 10:20 - Solar Project Revenues - Tax Credits, SRECS, Incentives
- 11:15 - Discussion of Risks and Opportunities—Participant Ideas and Feedback

Cash Flow Analysis

Owner Name				
Solar System Project	40	kw system	Cost per KWT	
			4200	
Cost	$168,000			
Less tax credit	$50,400	30% of cost		
Net Cost	$117,600			Monthly
		Loan Rate	loan term - months	Cost
		4.25%	84	(Revenue)
Monthly Loan Pmnts	$1,621	Farm Credit East		$1,621
Total of payments	$136,165.69		45	
SREC Proceeds (yrs)		($12,825)	SREC*	
7	($89,775)	Min. $300/SREC)	annual	($1,069)
		$285	10 years total	
Net costs	$46,391		*SREC: Solar Renewable Energy Credit	
Less:				
Electricity savings		45,427	kwh production	
$6,360	($44,519)	0.14	price/kwh	($530)
(per year)		Solar System Production		
		3.12	kwh production/day-average	
Net costs	$1,872	124.8	total (x system kw)/day	
		45,427	kwh/year	
Deprec expense	($29,400)	25.00%	tax rate	
Net costs	($27,528)	($3,932.57)	per year cost	$22

Cash Flow Analysis – Costs and Revenues

- **Project Costs (blue)**
  - **Project Size**
  - **Project Cost**
- **Revenues (green)**
  - **Tax Credits**
  - **SREC Proceeds**
  - **Electricity Savings**

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