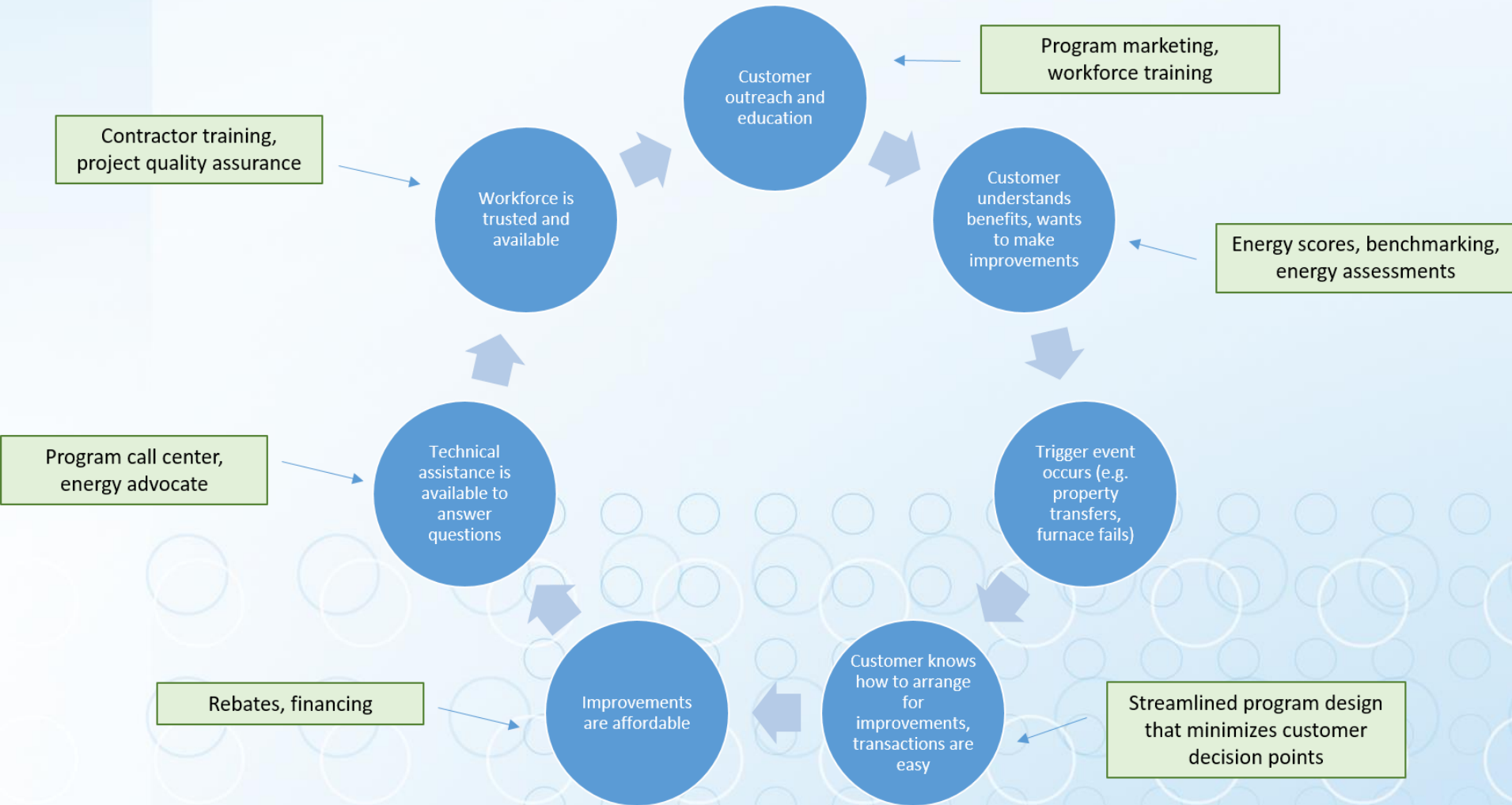




EXPLORING OPTIONS FOR ENERGY EFFICIENCY FINANCING

April 12, 2017

Encouraging Clean Energy Investments



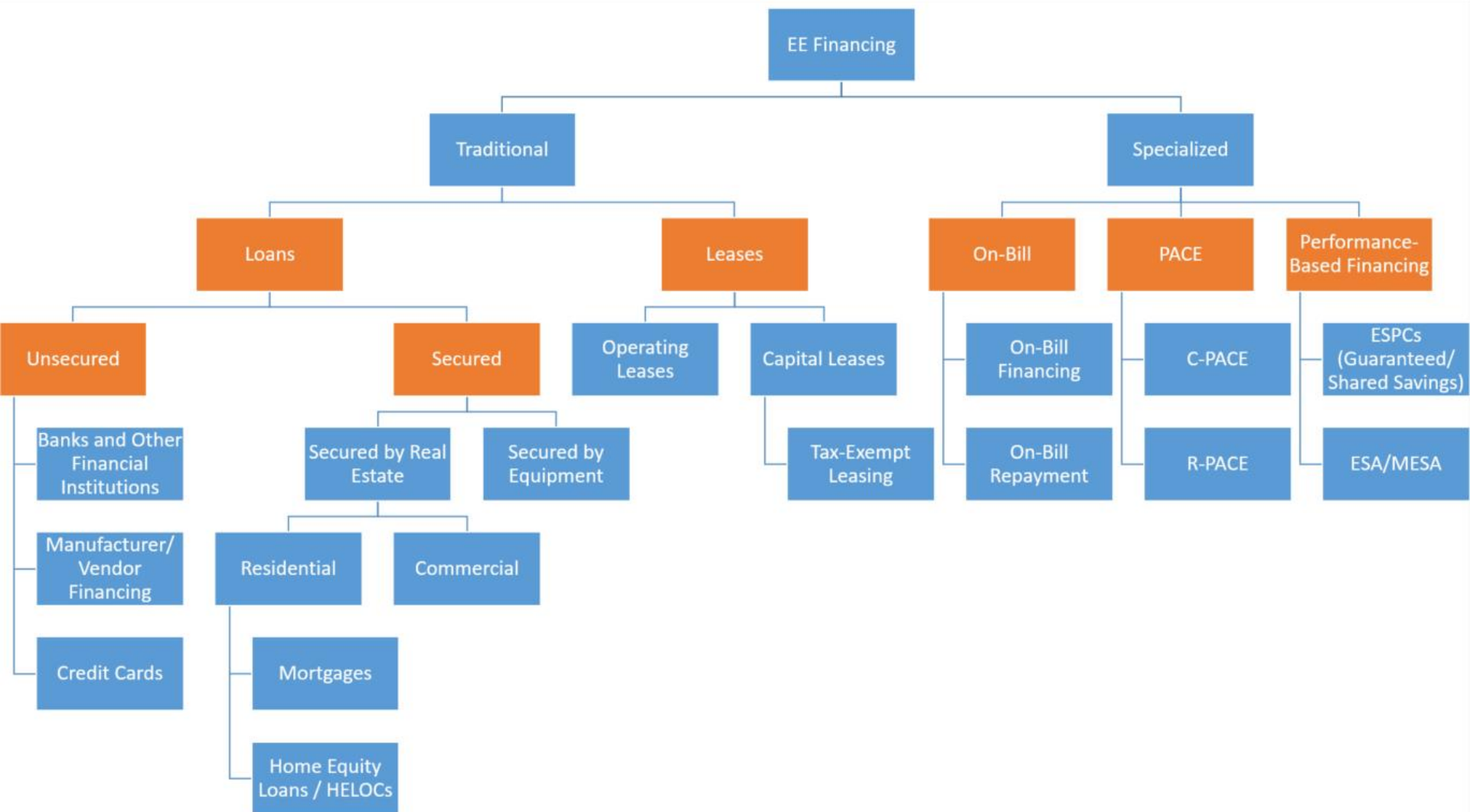
Financing: Barriers and Strategies

Barrier	Programmatic Strategies to Address These Barriers
Access to Capital	Alternative underwriting (e.g., bill payment history)—but be aware of consumer protection concerns
Cash Flow/Budgeting	Reduced rates; longer terms; cash-flow-positive arrangements
Long Payback Period	Transferable financing (e.g., PACE, some on-bill)
Debt Limits	Only certain specialized products (e.g., true shared savings); be aware of accounting requirements and recent changes
Split Incentives	Anecdotally, some products may help under certain pass-through leasing arrangements (e.g., PACE and on-bill)

TRADE-OFFs: Specialized products designed to address these barriers can come with disadvantages relative to traditional products:

1. Lack of Familiarity
2. Increased Complexity
3. Lack of Convenience
4. Increased Administrative Costs

EE Financing Options in the Market



Match the Financing Product to the Need

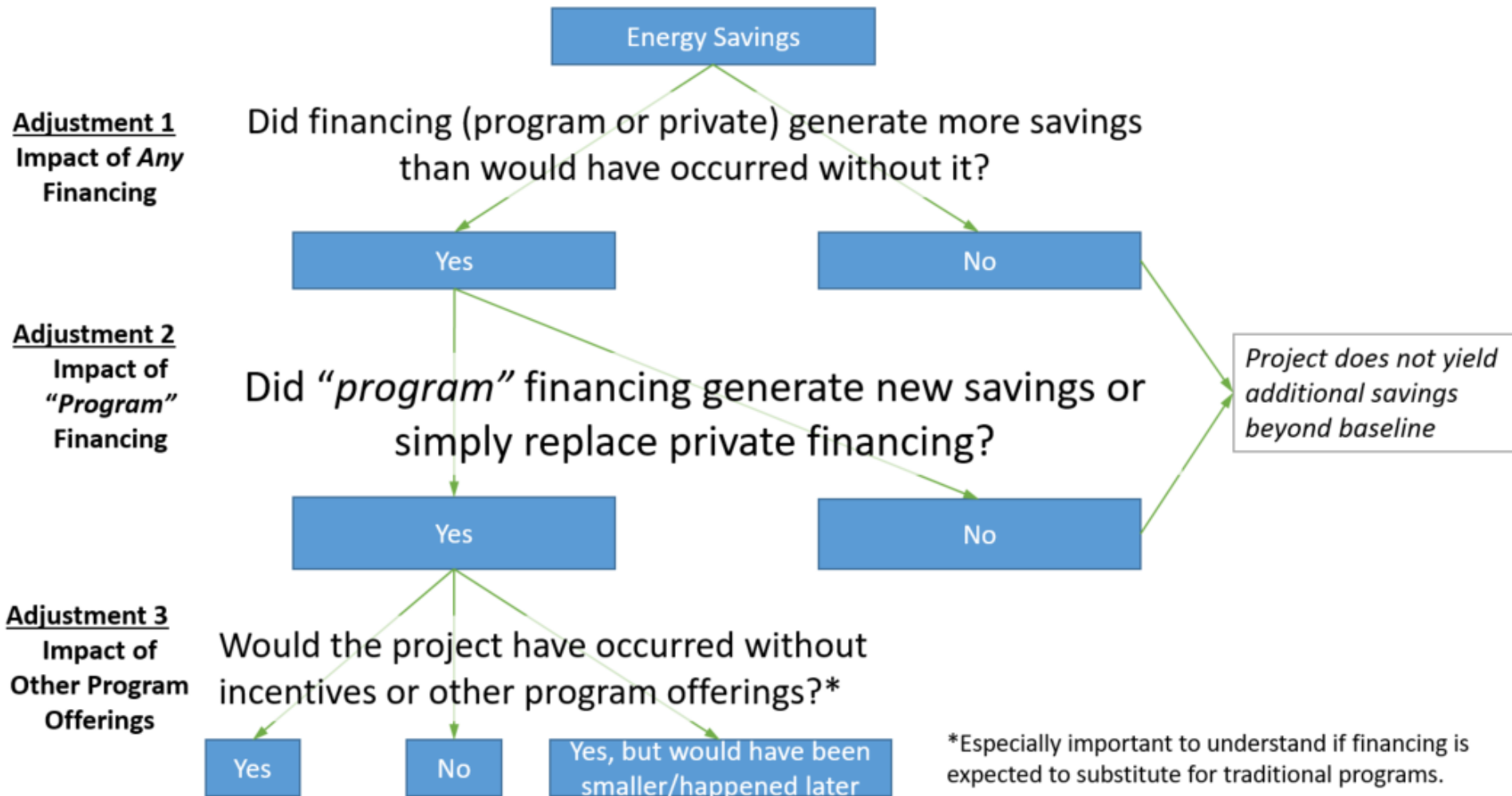
MARKET BARRIER	UN-SECURED	SECURED	LEASING	ON-BILL	PACE	PERFORM-BASED
Access to Capital	~	~	~	✓	~	~
Cash Flow	~	✓	~	~	✓	✓
Payback Period	X	X	X	✓	✓	~
Debt Limits	X	X	X	~	~	✓
Split Incentives	X	X	X	~	~	X
Familiarity	✓	✓	✓	~	X	X
Complexity	✓	~	✓	~	X	X
Convenience	✓	~	✓	✓	X	X
Admin Costs	✓	~	✓	X	X	X

Best Practices:

Key Elements of Successful Financing Products

	Key Element	Considerations
1.	Make rates and terms affordable and attractive	<ul style="list-style-type: none"> • 0% is an attention grabber • Higher-rate products have achieved comparable success, at least where demand is already high (e.g., HVAC replacement)
2.	Make the application process simple	<ul style="list-style-type: none"> • Consider unsecured products and leasing (easy applications) • Balance simplified underwriting with consumer protection
3.	Treat contractors as your sales force	<ul style="list-style-type: none"> • Marketing and outreach to contractors is essential, both on rollout and over time—if they don't use it, no success • Make the product easy and attractive for them to use
4.	Make the business model depend on success	<ul style="list-style-type: none"> • Consider working with partners that depend on successful EE financing • Be wary of automatic continued investment mechanisms
5.	Understand “ low hanging fruit ” vs. hard-to-reach markets	<ul style="list-style-type: none"> • Most high-volume EE financing products have targeted projects with high demand (e.g., HVAC replacement) • Harder-to-reach markets may have lower volume but higher need • Factor in <i>measure mix</i> and <i>attribution</i> when evaluating impact

Tracking Financing's Impact



Tracking Financing's Costs and Benefits

- ◆ Where financing is used as an *alternative* to traditional programs, must track two factors:
 1. Costs: Using financing as an alternative can sometimes (but not always) reduce program costs.
 2. Benefits: May also lead to lower savings and benefits if other strategies are not also employed.
- ◆ To maximize benefits to ratepayers, financing should only be used up to the point that the net result (“net benefits”) actually *increases*.



Delaware Legislative Context

*“Programs shall be designed to **maximize the cost-savings benefits** for ratepayers by utilizing private financing and allowance proceeds from the Regional Greenhouse Initiative to the maximum extent practicable and consistent with this section as the preferred sources of program financing prior to the expenditures that would otherwise be eligible for rate recovery.*

The advisory council shall also recommend adoption of financing mechanisms, including, but not limited to, on-bill financing, property assessed clean energy (‘PACE’) models, and other innovative financing tools.”

Delaware Current Offerings

Product	Org	Eligibility	Loan Amt	Rates/ Terms	Annual Volume
Residential Loan Program	SEU (via Renew Financial)	<ul style="list-style-type: none"> Owner-occupied 1 – 4 units Energy Audit required Must receive a rebate through the Home Performance with ENERGY STAR program 	\$1,000 - \$25,000	5.99%	\$372,600 (2016)
Commercial Loan Program	SEU	<ul style="list-style-type: none"> C&I and MUSH customers EE, RE, EVs, other carbon emissions reduction measures 	\$10k-\$1mil for private and non-profit orgs. No limit for gov. agencies and school districts.	50%-120% of Municipal Bond Yields for 20 year bonds with AA rating	\$8.3 million (includes \$4.5 million loan to DE National Guard)
State Energy Program Revolving Loan Fund	DNREC	<ul style="list-style-type: none"> C&I & MUSH customers Energy audit required 	No minimum or maximum	varies	n/a
Tax Exempt Bond Issue	SEU	<ul style="list-style-type: none"> State Agencies & School Districts 	TBD	TBD	TBD

Short Term Opportunities

- ◆ Often the simplest solutions work best
- ◆ Focus on simple, familiar, convenient options
- ◆ Explore opportunities to expand access, improve rates and terms, and encourage private investment

Strategy	Pros	Cons
Revolving Loan Funds	<ul style="list-style-type: none">• Direct investment allows maximum flexibility on rates, terms, and underwriting	<ul style="list-style-type: none">• May not be scalable over the long-run (though can be replenished)
Loss Reserves	<ul style="list-style-type: none">• Relatively inexpensive• Allows leveraging of private capital• Reduces private-capital rates• Can expand access to credit	<ul style="list-style-type: none">• Locks up funds• Higher rates than interest-rate buy-downs or self-funded revolving loan funds
Interest-Rate Buy-Downs	<ul style="list-style-type: none">• Can be combined with other strategies (e.g., loss reserves)• Brings down private-capital rates further than loss reserves alone	<ul style="list-style-type: none">• Can be expensive• Requires direct expenditure on every loan• May not expand access

Long Term Holistic Approach: Identifying Financing Barriers in Key Markets

MARKET BARRIER	SF (Mkt)	SF (LMI)	MF (LMI)	MF (Mkt)	C&I (Small)	C&I (Large)	MUSH
Access to Capital	Green	Red	Red	Green	Red	Green	Green
Cash Flow	Yellow	Red	Red	Yellow	Yellow	Yellow	Yellow
Payback Period	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green
Debt Limits	Green	Yellow	Red	Yellow	Yellow	Yellow	Red
Split Incentives	Green	Yellow	Red	Red	Red	Red	Green

1. Interview stakeholders (e.g., lenders, contractors, customer focus groups) regarding need for financing (or lack thereof) and most important features
2. Identify key barriers in each market and full range of product designs that address these barriers (e.g., PACE, on-bill, savings-back financing)
3. Balance against overarching concerns of familiarity, convenience, complexity, and cost

Q&A

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