



# Reaching Underserved Communities with Energy Efficiency Funding and Financing Programs

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# Agenda

- 1 Opportunity for SEOs**

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- 2 The 5 Core Principles**

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- 3 Key Program Phases and Best Practices**

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- 4 Phase 3 Deep Dive: Funding and Financing Design Strategies**

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- 5 Conclusion & Next Steps**

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# Webinar Objectives

- Outline strategies, principles, and best practices for State Energy Offices (SEOs) to develop and deploy clean energy and energy efficiency funding and financing programs that are accessible to disadvantaged communities (DACs), sustainable, and have the potential for long-term impact
- Introduce actionable steps for program design and implementation

# Opportunity for SEOs

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# Energy Equity

- An equitable energy system is one where the **economic, health, and social benefits of clean energy** participation extend to all levels of society, **regardless of ability, race, or socioeconomic status**
- Equitable energy financing programs help ensure **low-to-moderate income (LMI) communities** have equal access to **reliable, affordable energy**

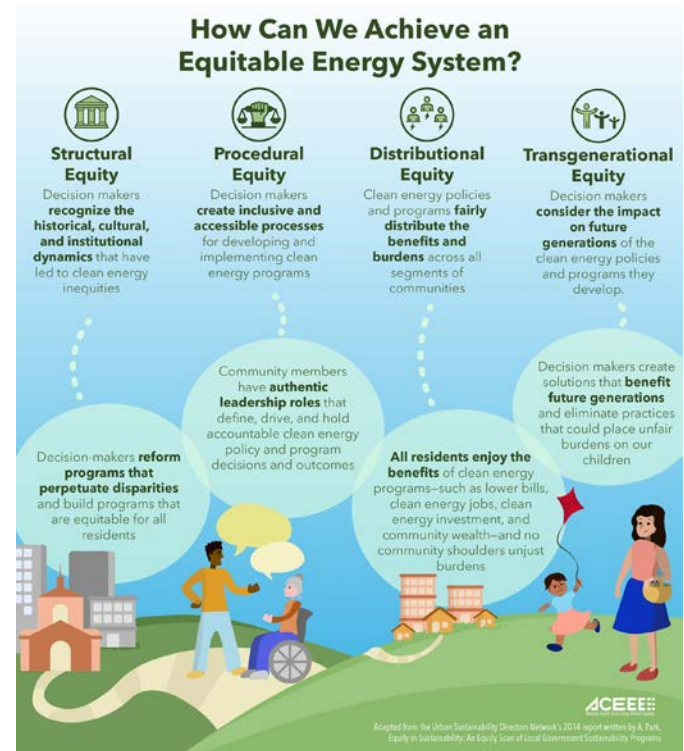


Image Source: ACEEE

# Challenges of Reaching DACs through Traditional Financing



**Narrow credit requirements**  
(e.g., credit score, DTI ratio, income verification)



**Disparities in financial literacy** among community members



**Inadequate programmatic outreach** and marketing in DACs



**Language and other cultural barriers**, which impede trust-building



## States' Role in Advancing Energy Equity

- **What is needed**: equity-informed, place-based energy funding and financing programs that are tailored to the needs of underserved American communities
- **How states can contribute**: SEOs are uniquely positioned to support this goal given their public service mandate, program oversight, and access to flexible capital

# The 5 Core Principles

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## Purpose of the 5 Core Principles:

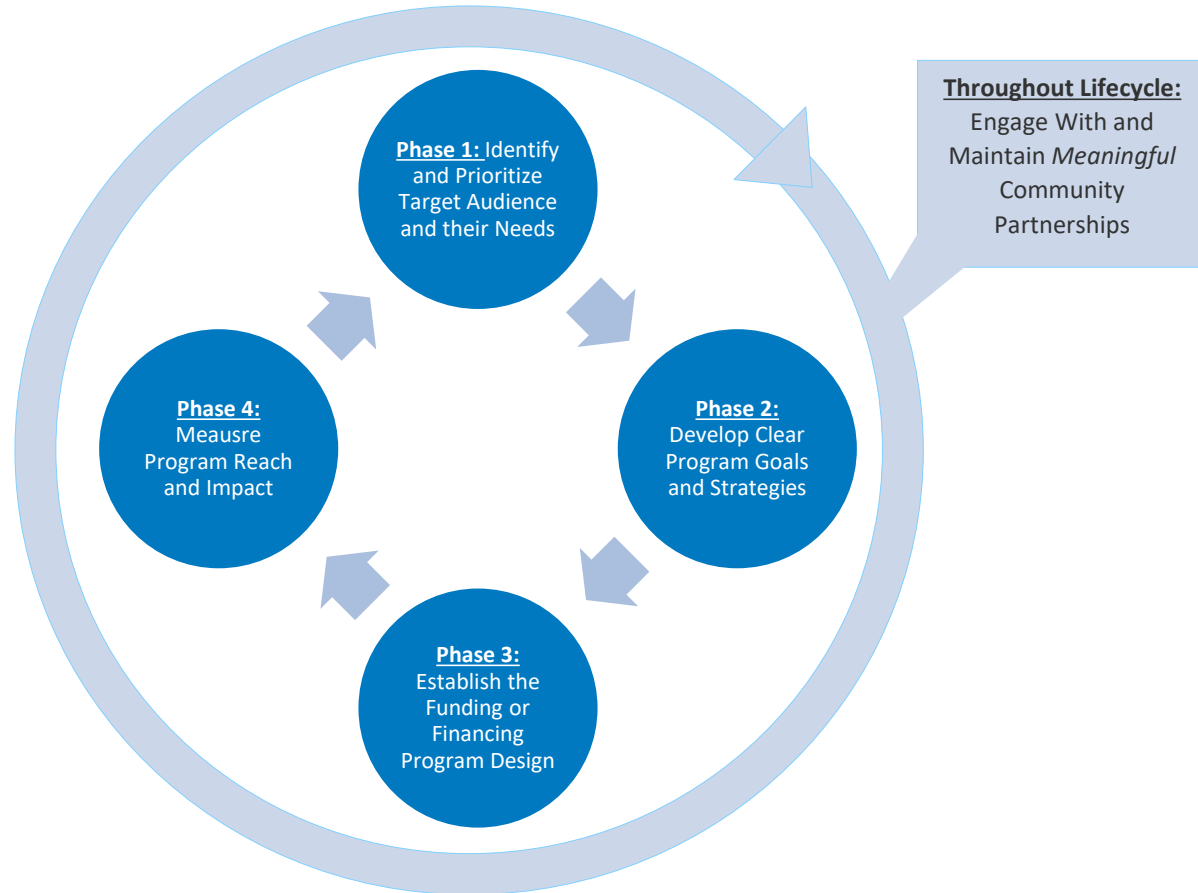
- Serve as a general guide to SEOs and program administrators
- To inform goals and help define methods and processes
- To signal areas requiring increased effort, or recalibration
- To highlight areas of strength and opportunities to leverage



# 4 Key Program Phases and Best Practices

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# Program Phases



# Community Engagement

**Throughout Lifecycle:** Engage With and Maintain *Meaningful* Community Partnerships

**Phase 1:** Identify and Prioritize Target Communities and Their Needs

**Phase 2:** Develop Clear Program Goals and Strategies

**Phase 3:** Establish the Funding or Financing Program Design

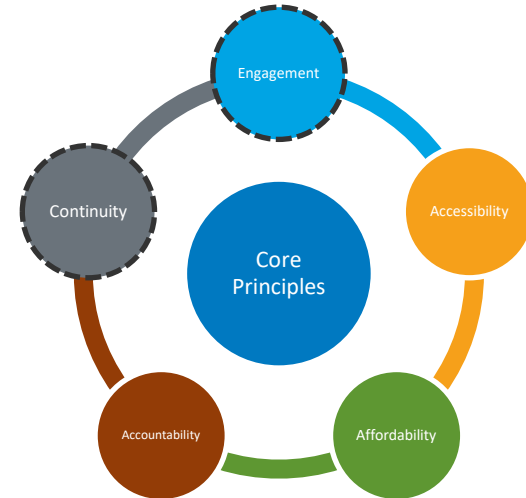
**Phase 4:** Measure Program Reach and Impact

## Potential Pitfalls

- Mistrust of authorities and negative past experiences leading to resistance
- Inadequate feedback mechanisms leading to disengagement over time
- Cultural and linguistic barriers that limit effective communication
- Lack of awareness or knowledge about key concepts to fully understand the program

## Best Practices

- Build trust through transparency
- Collaborate with other community based/center organizations
- Enhanced communication and outreach and education
- Cultural and linguistic competence
- Develop and maintain feedback and two-way communication channels



# Phase 1: Identify and Prioritize Target Communities

## Potential Pitfalls

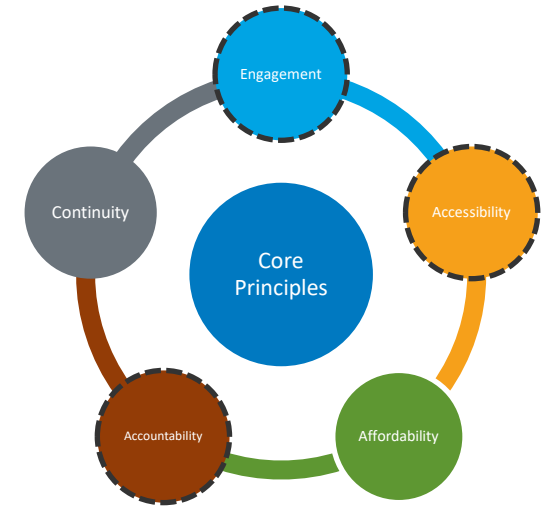
- Difficulty in selecting the appropriate parameters to define the target communities
- Data quality and availability
- Need to reflect evolving policy objectives over time

## Best Practices

- Early in-person and virtual engagements in scoping activities to ensure accessibility for a wide range of participants
- Perform a needs assessment for a variety of defined target communities
- Utilize existing data and tools and explore multi-tool approaches for identifying communities

## Actionable Steps

- Use one or more state or DOE-recommended [tools](#) to identify underserved communities or building sectors
- Establish engagement mechanisms (in-person and/or virtual) to collect input and feedback from community members who may be interested in and might benefit from an equitable energy funding and financing program.
- Conduct a needs assessment of the target audience(s) of the program.



# Phase 2: Develop Clear Program Goals and Strategies

## Potential Pitfalls

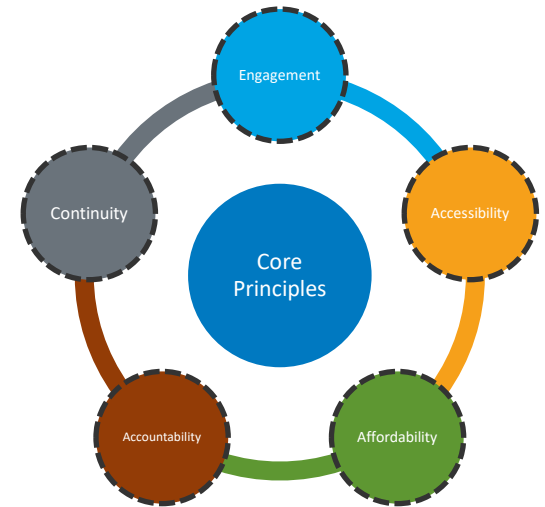
- Diversity of communities' funding needs and challenges
- Need for flexibility over time to address changing community needs and evolving policy objectives
- Unclear program goals and metrics

## Best Practices

- Perform a robust benefits analysis for the target communities and set clear target metrics
- Identify the various categories of beneficiaries and segment the strategy if needed to address the various needs and challenges

## Actionable Steps

- Conduct a comprehensive benefits analysis (i.e., how a range of different program strategies may lead to different outcomes) and establish clear impact targets.
- Identify strategies to reach each target audience(s) identified in Phase 1 and set impact targets or metrics for each audience.
- Develop a clear performance management data plan.



# Phase 3: Establish the Funding or Financing Program Design

## Potential Pitfalls

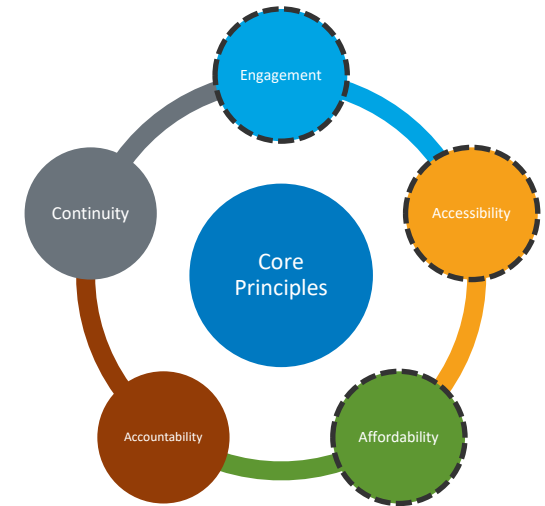
- Appropriately determining the thresholds for participant qualification criteria
- Balancing meeting current beneficiary needs with program continuity that can meet the needs of the community over time
- Lack of awareness or knowledge among community members once the program is implemented

## Best Practices

- Explore various approaches for program qualification
- Consider using a combination of funding and financing types dependent on beneficiary
- Explore risk-sharing strategies
- Undertake an assessment of program impact under the various models, as well as the ability to ensure program continuity over a sustained period

## Actionable Steps

- Perform an internal capacity assessment to determine whether a state-administered or partnership model is most suitable.
- Meet with potential lending partners to understand the strategies and mechanisms that would best align with their objectives.
- Engage with the community to understand their challenges in borrowing or receiving funds to identify the strategies that would best address their needs.



# Phase 4: Measure Program Reach and Impact

## Potential Pitfalls

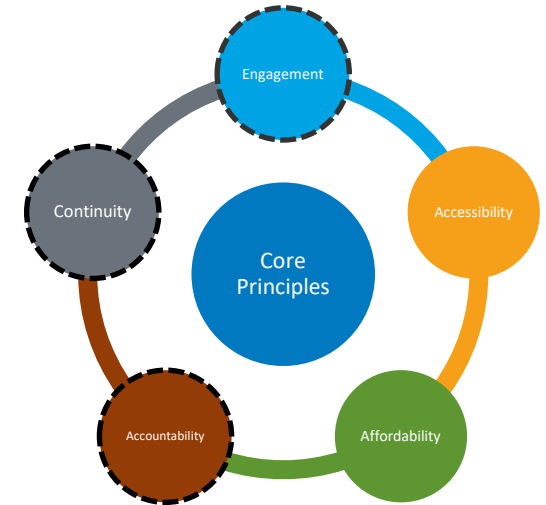
- Poorly defined program goals and metrics at the start of program design and implementation
- Inadequate feedback mechanisms leading to disengagement over time

## Best Practices

- Establish clear goals, metrics, reporting standards, timelines, and data collection mechanisms
- Build in flexibility that allows for impact assessment results to impact future program operations
- Establish open communication channels for follow-up, implement input from direct engagement with the program beneficiaries, and transparently communicate progress and results

## Actionable Steps

- Track and report transparently on key program performance metrics.
- Analyze the collected data to evaluate the program impact against the stated objective developed in Phase 2.
- Engage directly with the program beneficiaries to gather their feedback on their participation in the program.
- Adjust the program based on findings from Phase 4 as needed.



# Phase 3 Deep Dive: Funding and Financing Design Strategies

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# Financing Low-Income Community Members

- SEOs may want to consider approaching lending to *low-income* community members with caution given risk of exacerbating financial insecurity
- Alternative approaches: grant-based assistance, rebates, subsidies, tariffed on-bill financing
  - May be eligible for stacking and/or braiding to maximize assistance
- Thresholds for “low-income” can inform when to offer grants vs. lending, for example, some existing programs provide grants instead of loans for households earning less than xx% of the federal poverty line (e.g., SEP RLF funding this threshold is less than 100% of the FPL)

# Financial Design Considerations: Funding

## Grants

- **Example:** The Maryland Energy Administration's (MEA) [Community Solar Low-to-Moderate Income \(LMI\) Power Purchase Agreement \(PPA\) Grant Program](#) provides funding to Community Solar Subscriber Organizations, enabling them to offer below-market-rate electricity to LMI households.

## Rebates & Subsidies

- **Example:** In Arizona, the Governor's Office of Resiliency has been tasked with administering the [energy efficiency rebate programs](#) in the State, providing rebates for both whole-house retrofits and qualified electrification projects in low-income and historically underserved households.

## Tariffed on-bill financing (TOBF)

- **Example:** Hawaii Electric Companies have a TOBF program, [Green Energy Money Saver \(GEM\\$\)](#), that enables LMI customers to pay back the cost of installing solar PV, solar water heaters, and other eligible clean energy upgrades with no upfront costs.

# Financial Design Considerations: Financing

## Utilize nontraditional loan underwriting approaches

- Example: proof of utility bill repayment history
- Often used by utilities acting as capital providers

## Reduce debt costs

- Consider longer loan terms
- Adopt concessionary interest rates
- Interest Rate Buy-Downs (IRBs)

## Credit enhancements with lending partners

- Loan Loss Reserves (LLR)
- Debt Service Reserves (DSR)
- Subordinated Capital
- Loan Guarantees
- Loan Loss Insurance

## Performance contracting

- [ESCO Model](#)
  - Example: [Rockford Housing Authority](#)
- [Energy-as-a-Service \(EaaS\)](#)
  - Example: [Montgomery County](#)

# State-Administered Financing vs. Partnership Model

	Advantages	Disadvantages
<b>State-Administered Financing Programs</b>	<ul style="list-style-type: none"><li>• Full control over program design and underwriting standards</li><li>• Ability to offer tailored, place-based solutions</li><li>• Ability to align program design with broader state policies and objectives</li></ul>	<ul style="list-style-type: none"><li>• SEOs may lack the capacity or resources to manage large-scale financing programs</li><li>• More limited capital pool</li><li>• Misses out on leveraging potential trusted relationships between financial institutions and community members</li></ul>
<b>Partnerships with Private Capital Providers</b>	<ul style="list-style-type: none"><li>• Crowding-in of private capital leads to larger funding pool to maximize impact</li><li>• Risk-sharing between state and capital providers through credit enhancements can broaden the customer base</li></ul>	<ul style="list-style-type: none"><li>• Potentially less control over equity-focused outcomes</li><li>• Potentially higher interest rates/fees required by the capital providers, which can reduce affordability to LMI customers</li></ul>

LLR  
Example:

## Green Colorado Credit Reserve



*Source: Colorado Energy Office*

The [Green Colorado Credit Reserve](#) (GCCR) is a loan loss reserve that was created by the Colorado Energy Office (CEO) to incentivize private lenders throughout Colorado to make small commercial loans up to \$100,000 for capital improvements that promote energy efficiency and renewable energy. For each loan made by a participating lender, the GCCR will provide a loan loss reserve equal to 15% of the amount of the loan. According to the CEO, **this increases lenders' risk thresholds, enabling them to offer more accessible and affordable interest rates for loans.**

LLR  
Example:

Michigan  
Saves



# Michigan Saves<sup>SM</sup>

*Source: Michigan Saves*

Under the [Michigan Saves residential loan program](#), once a customer selects the eligible energy-saving home improvements they want an authorized contractor to install, they can apply for a loan from a Michigan Saves lender. Michigan Saves contributes a fixed percentage of each eligible loan to a lender-specific loan loss reserve fund. **Approximately 59% of Michigan Saves residential loans are made to households with household income of 60–120% of area median income.**

## Subordinated Capital Example:

## CT Green Bank SBEA Program



*Source: Connecticut Green Bank*

Amalgamated Bank and the Connecticut Green Bank have an [agreement with Eversource's Small Business Energy Advantage \(SBEA\)](#) to purchase tranches of SBEA loans to ensure the program has a continuous flow of affordable capital to support additional loans in the future and **allowing a wider range customers to benefit through lower program costs**. CT Green Bank's tranche is subordinate to Amalgamated Bank's tranche. To further support the Small Business Energy Advantage program, CT Green Bank created Green Liberty Notes, offered quarterly through Raise Green's online investment platform with a minimum investment of \$100 so everyone can support Connecticut's small businesses' efforts to become more energy efficient.

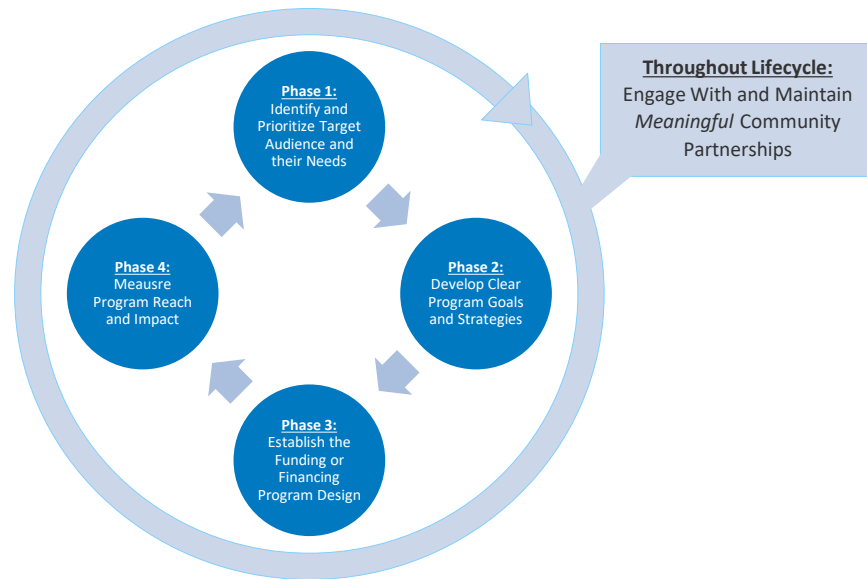
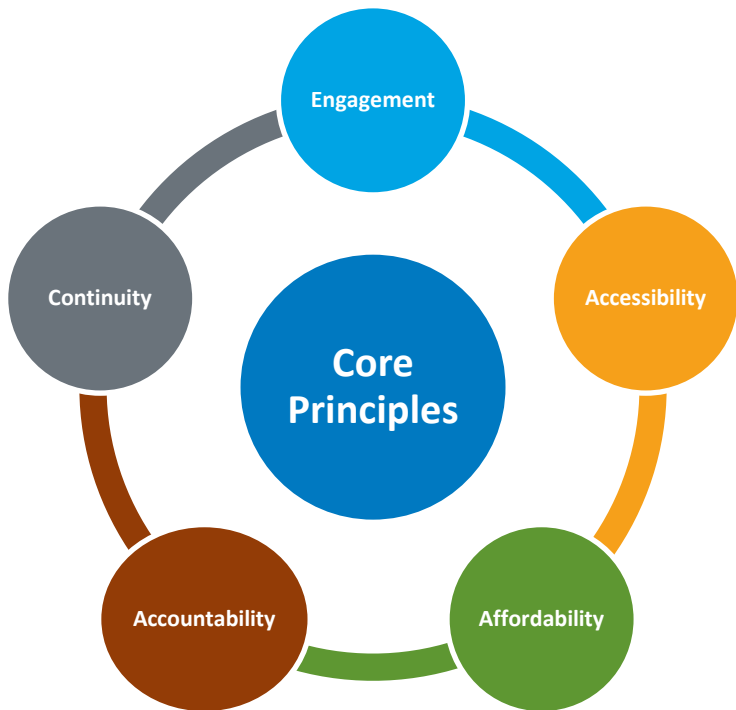
# Conclusion and Next Steps

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# Opportunity for SEOs

- By prioritizing **community engagement, accessibility, affordability, accountability, and continuity**, SEOs can help ensure that the economic, health, and social **benefits of clean energy reach all communities**
- There are distinct advantages and disadvantages across a **wide range of program design options**, so SEOs should undertake robust **needs and impact assessments** to ensure maximum reach in their communities

# Key Takeaways



- ✓ Utilize existing tools & resources (see Appendix)
- ✓ Target best practices and actionable steps at each program phase
- ✓ Recognize and prepare for potential pitfalls
- ✓ Channel the five core principles when addressing any encountered pitfall

# Upcoming Resources

- Written primer expanding on the content of this presentation to be available on the SEP webpage
- Additional webinars in Spring 2025 which will highlight case studies of equitable funding and financing programs (Spring 2025)

# Thank You! Questions?

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[www.nrel.gov](http://www.nrel.gov)


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# Appendix

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# Strategies for Public Participation

		INCREASING IMPACT ON THE DECISION 				
		INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
PUBLIC PARTICIPATION GOAL		To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
	PROMISE TO THE PUBLIC	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

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Source: IAP2 Spectrum of Public Participation

# Phase 1 Actionable Steps

Actionable Steps	Core Principles Applied
<p>Use one or more state or DOE-recommended tools to identify underserved communities or building sectors (Appendix A).</p> <ul style="list-style-type: none"> <li>• Which geographic areas and communities face high energy burden?</li> <li>• Which areas and communities have limited financial resources (low-to-moderate income households) to fund energy efficiency and renewable energy upgrades?</li> <li>• Which areas have older, less energy efficient building stock?</li> </ul>	<p>Accountability Accessibility</p>
<p>Establish engagement mechanisms (in-person and/or virtual) to collect input and feedback from community members who may be interested in and might benefit from an equitable energy funding and financing program.</p> <ul style="list-style-type: none"> <li>• Explore existing engagement tools and resources (e.g., <a href="#">HUD Community Engagement Toolkit</a>) ; leverage technology and social media if relevant; and reach out to existing community engagement platforms, groups, and organizations for partnership (e.g., cultural affinity groups, neighborhood associations, civic organizations, etc.).</li> </ul> <p><i>Tip:</i> Meaningful engagement ensures that the program considers community members' firsthand account of their needs and priorities that might not always be reflected in third-party collected data.</p>	<p>Engagement Accessibility</p>
<p>Conduct a needs assessment of the target audience(s) of the program.</p> <ul style="list-style-type: none"> <li>• A needs assessment involves scoping (defining the audience, outreach goals, and outreach methods, etc.); data collection (this may involve using both digital and offline tools including surveys, interviews, questionnaires, forums, etc.); and analysis.</li> <li>• Potential questions to explore include: <ul style="list-style-type: none"> <li>○ The level of current access to energy funding/financing or awareness of existing programs within certain communities, the challenges faced in making energy upgrades, and their energy priorities.</li> <li>○ How certain energy efficiency and renewable energy measures that might be funded by the program would impact the beneficiary's existing energy burden e.g., anticipated energy savings, reduction in electricity consumption from the baseline, etc.</li> <li>○ What financial parameters would be necessary to ensure affordability for the target beneficiaries, e.g., monthly or annual savings achieved net of any financing costs, interest rate or rebate amounts needed.</li> </ul> </li> </ul>	<p>Engagement Accessibility Affordability Accountability</p>

# Phase 2 Actionable Steps

Actionable Steps	Core Principles Applied
<p>Conduct a comprehensive benefits analysis (i.e., how a range of different program strategies may lead to different outcomes) and establish clear impact targets. Data to review in an analysis may include:</p> <ul style="list-style-type: none"> <li>Beneficiary-level impact data, e.g., individual, household, or business energy cost savings; estimated avoided emissions ; and energy resilience benefits.</li> <li>Program-level impact data, e.g., the number of beneficiaries served, total capital mobilized, and the number of LMI beneficiaries impacted.</li> </ul> <p><i>Tip: Engage directly with the target audience to learn what they consider their main priorities when it comes to energy efficiency and renewable energy implementation.</i></p>	<p>Accessibility Affordability Engagement Accountability</p>
<p>Identify strategies to reach each target audience(s) identified in Phase 1 and set impact targets or metrics for each audience.</p> <ul style="list-style-type: none"> <li>Recognize the different audiences the program aims to serve, such as small businesses, single-family households, or others, and segment the strategy to address their unique needs and challenges, if needed. For example: <ul style="list-style-type: none"> <li>A program serving both low- and moderate-income households may define income thresholds for eligibility for zero- versus low-interest loans.</li> <li>A program serving both households and businesses for efficiency upgrades might have a higher loan cap for the businesses compared to households.</li> </ul> </li> <li>Set distinct impact targets for each audience, if applicable, and ensure the metrics selected for tracking align with the sector and recipient type. For example, a residential financing program that serves both renters and owners, or a rebate program that serves both the residential and commercial sectors, may lead to different impacts and therefore require unique targets. These targets may include a percentage reduction in energy consumption from the baseline, monthly energy bill savings, and the number of community members impacted.</li> </ul>	<p>Accountability Accessibility</p>
<p>Develop a clear performance data management plan.</p> <ul style="list-style-type: none"> <li>Create a strategy for collecting, tracking, and reporting program performance data over time to assess progress toward impact targets.</li> <li>Define roles and responsibilities for data tracking, including who will collect the data and the frequency of collection.</li> <li>Establish a formal review process to assess collected data, and plan for adjustments to the program structure based on outcomes.</li> <li>Ensure the performance data management plan complies with all mandatory reporting requirements tied to program funding.</li> </ul>	<p>Accountability Continuity</p>

# Phase 3 Actionable Steps

Actionable Steps	Core Principles Applied
<p>Perform an internal capacity assessment to determine whether a state-administered or partnership model is most suitable.</p> <ul style="list-style-type: none"> <li>• Estimate the budget, full-time equivalent (FTE), equipment, software, etc. that would be needed to self-administer a program.</li> <li>• Research and meet with existing financial institutions that operate in the target communities to assess their experience and what value-add they could provide through a partnership model. For example:               <ul style="list-style-type: none"> <li>○ Are they already recognized and trusted by community members?</li> <li>○ Do they have prior experience in energy efficiency and renewable energy lending?</li> </ul> </li> </ul>	<p>Accountability</p> <p>Continuity</p>
<p>Meet with potential lending partners to understand the strategies and mechanisms that would best align with their objectives.</p> <ul style="list-style-type: none"> <li>• Model how the different financing strategies and mechanisms impact the lending partner's ability to take on more risk and expand the customer base. For example:               <ul style="list-style-type: none"> <li>○ A sensitivity matrix assessing how a 1% increase in a loan loss reserve fund allocation would improve the lending partner's ability to take on more risk through serving lower credit scores, higher debt-to-income ratios, etc.</li> </ul> </li> </ul>	<p>Accessibility</p> <p>Affordability</p>
<p>Engage with the community to understand their challenges in borrowing or receiving funds to identify the strategies that would best address their needs.</p> <ul style="list-style-type: none"> <li>• Ask them about their prior experiences in taking on debt and receiving grants and other types of funding. Questions might include:               <ul style="list-style-type: none"> <li>○ What has been your experience with applying for loans or credit for energy efficiency and renewable energy projects?</li> <li>○ Were there specific loan terms or conditions that made borrowing easier or more difficult for you?</li> <li>○ What types of financial institutions have you worked with? Credit unions, CDFIs, community lenders, etc.?</li> <li>○ Have you received any grants or other financial assistance before? How was that process for you?</li> <li>○ What would make it easier for you to take advantage of available grants or rebates?</li> </ul> </li> </ul>	<p>Engagement</p> <p>Accessibility</p> <p>Affordability</p>

# Phase 4 Actionable Steps

Actionable Steps	Core Principles Applied
<p>Track and report transparently on key program performance metrics.</p> <ul style="list-style-type: none"> <li>Report data on both beneficiary-level data (e.g., average individual, household, or business energy cost savings; estimated avoided emissions; energy resilience benefits) and program-level data (e.g., number of beneficiaries served, total capital mobilized, number of LMI beneficiaries impacted).</li> <li>Use <a href="#">standardized, trusted digital tools (e.g., Microsoft Excel, Microsoft Power BI, Oracle, etc.)</a> for data collection, visualization, and analysis to ensure consistency and reliability.</li> <li>When possible, streamline the data collection process. For example, if building energy audits are a part of the program, utilize the data collected by the auditors about the household characteristics and energy savings.</li> </ul>	Accountability
<p>Analyze the collected data to evaluate the program impact against the stated objective developed in Phase 2.</p> <ul style="list-style-type: none"> <li>Compare the targeted impacts with the actual impacts to measure overall program performance.</li> <li>Identify specific areas within the program where it may be falling short of expectations (e.g., if fewer LMI households participated than expected), and consider why this may be the case. For example:             <ul style="list-style-type: none"> <li>Was the community outreach insufficient, leading to low awareness of the program?</li> <li>Were the financial requirements of the program too limiting?</li> <li>Does mistrust of authorities among target beneficiaries appear to have negatively impacted involvement? If so, how could community partnerships be leveraged to overcome this?</li> </ul> </li> </ul>	Accountability
<p>Engage directly with program beneficiaries to gather their feedback on their participation in the program.</p> <ul style="list-style-type: none"> <li>Share public program progress reports with a variety of stakeholders including program beneficiaries. Example reporting: <a href="#">Green Jobs Green NY Data and Trends - NYSERDA</a>.</li> <li>Gather and use firsthand qualitative stakeholder feedback, along with collected data, to refine metrics, program goals, and funding or financial design as needed.</li> </ul>	Accountability Engagement
<p>Adjust the program based on findings from Phase 4 as needed.</p> <ul style="list-style-type: none"> <li>Adapt the target audience, funding and financing mechanisms, or outreach strategies based on the combination of data-driven analysis and direct community engagement. This may require collaboration with lending partners, if using a partnership model for program administration.</li> <li>Ensure that any adjustments maintain alignment with the program's overall objectives and principles.</li> </ul>	Accountability Continuity

# Establishing Criteria for Participant Qualification

- Below is a list of tools and resources that can be used or adapted for identifying DACs:
  - *DOE recommended tool:* [Climate & Economic Justice Screening Tool \(CEJST\)](#): This interactive map shows information about the climate, environmental, health, and socioeconomic burdens faced by communities across the nation.
  - *DOE recommended tool:* [Low-income Energy Affordability Data Tool \(LEAD\)](#): This interactive map displays community energy burden to identify communities paying a higher percentage of their income on energy and includes the ability to display a layer of CEJST data.
  - [EPA EJ Screen Tool](#)
- Examples of state-created resources include:
  - Illinois Solar for All: [Environmental Justice Communities - Illinois Solar for All \(illinoissfa.com\)](#).
  - California has a system for tracking benefits to state disadvantaged communities and provides an interactive mapping tool: [Priority Populations 2023 \(ca.gov\)](#).