

Illinois Solar For All Evaluation

December 10, 2019

Jackie Berger

Presentation Overview

Introduction

Phase I Evaluation

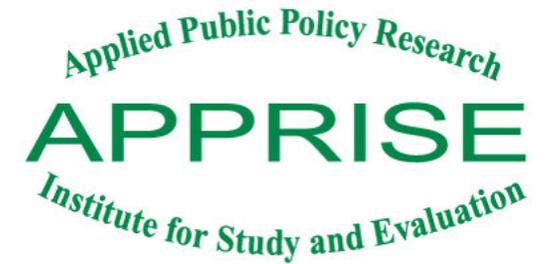
- Objectives
- Program Design Review
- Initial Implementation Experience
- Stakeholder Outreach Design & Feedback
- Grassroots Education Design & Feedback
- Findings & Recommendations

Phase II Evaluation

- Objectives
- Metrics
- Research Activities
- Timeline

Discussion

APPRISE



Nonprofit Research Institute

Established in
2002

Princeton, NJ

Mission

Analyze data
and
information
to assess and
improve
public
programs

Research Areas

Energy
Efficiency &
Renewable
Energy

Energy
Affordability

Clients

Federal
Government
(DOE, HHS)

State
Governments

Utility
Companies

Nonprofits

INTRODUCTION

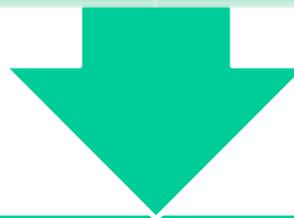
ILSFA Foundation



**Mandated by Public Act 99-0906
Future Energy Jobs Act (FEJA)**

Enacted 12/7/2016

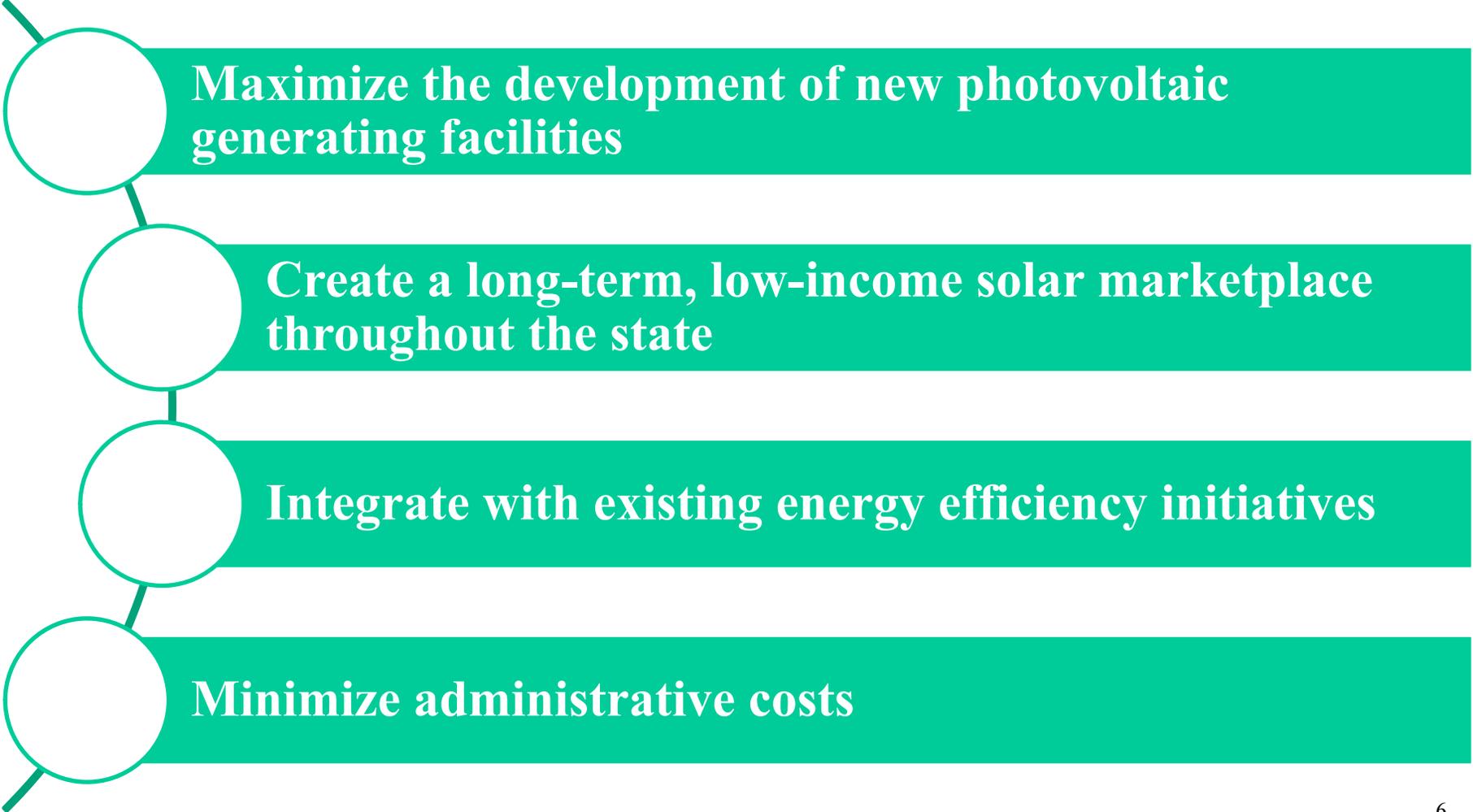
Effective 6/1/2017



**Overcome barriers to participation in the solar market
faced by low-income community**

Provides more generous Renewable Energy Credit (REC)
contracts than the Illinois Adjustable Block Program (ABP)

ILSFA Objectives



Maximize the development of new photovoltaic generating facilities

Create a long-term, low-income solar marketplace throughout the state

Integrate with existing energy efficiency initiatives

Minimize administrative costs

ILSFA Sub-Programs

Low-Income Distributed Generation

- PV systems on individual homes or multi-family dwellings, or ground-mounted

Low-Income Community Solar

- Subscriptions to a share of a PV system

Non-Profits and Public Facilities

- PV for non-profits and public facilities in EJ or low-income communities

Low-Income Community Solar Pilot Projects

- Community Solar projects funded using a competitive procurement approach

Key ILSFA Characteristics

Environmental Justice Communities

- Higher risk of exposure to pollution based on environmental and socio-economic factors
- 25% of incentives for DG, CS, and NP/PF

Low-Income Households

- Income $\leq 80\%$ of Area Median Income
- Adjusted for family size
- Revised every five years

Low-Income Communities

- Census tracts with at least 50% low-income

Job Training

- Job trainee staffing requirements
- Coordination with FEJA job training programs

Key ILSFA Characteristics

Incentives

- The IPA or utility purchases RECs for first 15 years of operation
- Upfront payment made when system is interconnected and energized

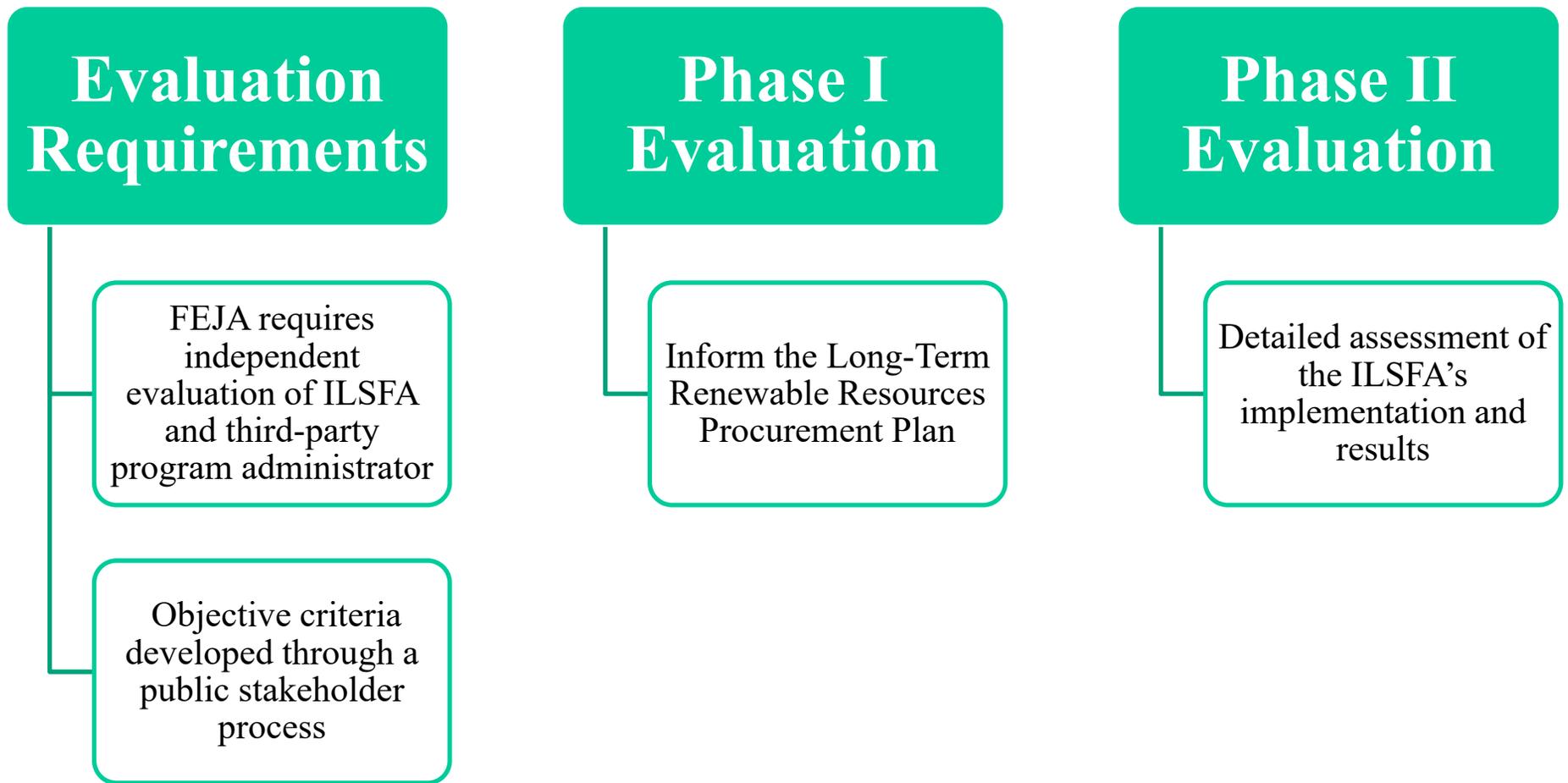
Community Partnerships

- Approved Vendors required to identify partnerships
- Grassroots education by community-based organizations

Consumer Protections

- Ensure economic benefits flow directly to participants
 - Financial
 - AV marketing
 - Site suitability

ILSFA Evaluation



PHASE I EVALUATION AUGUST – SEPTEMBER 2019

Phase I Evaluation Information Objectives

Provide feedback & recommendations to the IPA for use in updating the Long-Term Plan.



Phase I Evaluation Activities

Document & Materials Review

Interviews

- Illinois Power Agency
- Elevate Energy
- Stakeholders
- Grassroots Educators

Program Data Analysis

- Approved Vendor Characteristics
- Submitted Job Characteristics
- Selected Job Characteristics

Phase I Evaluation Program Design Review

ILSFA Funding

Program Component	% of RERF	Funding Sufficiency (Years)	2018-2019 Funding (\$ Millions)		Funding Supports
			RERF	Utility	
Distributed Generation	22.5%	7-8 Years	\$4.5	\$3.0	<ul style="list-style-type: none"> • REC Payments • Program Admin • Grassroots Education • Evaluation
Community Solar	37.5%	7-8 Years	\$7.5	\$5.0	
Non-Profits & Public Facilities	15%	7-8 Years	\$3.0	\$2.0	
Community Solar Pilot	25% (\$50 Million CAP)	TBD	\$5.0	\$0.0	

Long-Term Plan

Long-Term Renewable Resources Procurement Plan

- Approved by Illinois Commerce Commission on April 3, 2018

Details ILSFA Requirements

- ILSFA terms, conditions, and requirements
- REC prices
- Low-income energy and economic benefits
- Environmental Justice community definition

Economic Benefits

Accrued through net metering or avoided consumption

Benefits flow to low-income participants

- No up-front costs for DG installation or upfront fee for CS subscription
- Immediate, reliable reductions in energy costs for residents or subscribers
- Payments must be less than 50% of first year estimated annual production / net metering value
- Incentives are not customized to individual economic circumstances

Sub-Program Requirements

Distributed Generation

- Benefits through net metering or reduced energy costs
- Master-metered buildings must pass 50% or more of energy savings to tenants

Community Solar

- Subscribers receive credit on utility bill for their share
- Projects must identify partnerships with community stakeholders
- Incentives for low-income subscription portion

Non-Profit/ Public Facility

- On-site PV generation
- Located in EJ or Low-Income communities
- Provide essential services to those communities

Community Solar Pilots

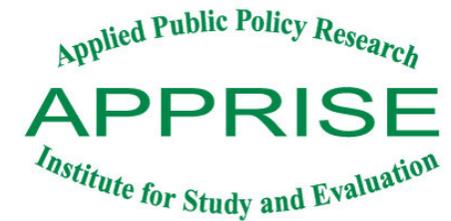
- Competitive procurement based on price
- Price for 15 years of delivery for all RECs
- Payments made over first 10 years

Non-Profit & Public Facilities

Critical Service Providers

- Youth centers
- Hospitals
- Schools
- Homeless shelters
- Senior Centers
- Community Centers
- Places of worship
- Affordable housing providers

Community Solar Pilots



Minimum Criteria for Eligibility

Result in economic benefit for members of the community where project is located

Partnerships with community stakeholders

Commitment to local hiring, or

Offer subscriptions to community residents and organizations

Partnership with community-based organization

Existing non-profit providing services in the community of the proposed project

Funds cannot be distributed solely to a utility

Some funds must include community ownership by project subscribers

Income Eligibility

SF Distributed Generation

- Household level verification
- Tax returns, 3rd party system, low-income energy program participation

MF Distributed Generation

- 50% verified low-income, or
- Alternative
 - HUD voucher qualified or rental assistance
 - Affordable housing
 - MF energy efficiency qualified

Community Solar

- Same as DG
- Or participant resides in a HUD qualified census tract and signs affidavit
- 50% must be low-income subscribers

Non-Profit/ Public Facility

- Within EJ community or low-income community

Financial DG & CS Consumer Protections

Payments

- Payments or fees may not begin until the project is producing value for the participant

Costs & Fees

- Ongoing costs and fees cannot exceed 50% of the value of energy generated by the system

Loans

- Loans cannot be secured by the participant's home or home equity

Financing Terms

- Financing amounts, terms, and conditions must be based on the participant's ability to repay

Forbearance

- Contracts for loans must include forbearance

Environmental Justice Communities

Definition

- Higher risk of exposure to pollution based on environmental and socioeconomic factors

25% of funds in sub-programs allocated to projects in EJ communities

- Low-Income Distributed Generation
- Non-Profit and Public Facilities
- Low-Income Community Solar

Other EJ Requirements

- Non-Profits and Public Facilities must be within EJ or low-income communities

Environmental Justice Factors & Designation

Exposure

- Ozone
- Particulate Matter
- NATA Diesel PM
- Air Toxics Cancer Risk
- Respiratory Hazard Index
- Traffic Proximity & Volume
- Lead Paint Indicator

Environmental

- Proximity To:
 - Risk Management Plan Sites
 - Hazardous Waste Facilities
 - National Priorities List Sites
- Wastewater Dischargers Indicator

Demographic

- % Low-Income
- % Minority
- Less than High School Education
- Linguistic Isolation
- Under age 5
- Over age 64

Designation

- Top 25% scoring communities designated as EJ communities
- 2,422 census block groups designated
- Communities can self-designate
- Assessment is based on qualitative and quantitative evidence

Approved Vendors

Approved Vendor Types

Approved Vendors

Aggregator AVs
(project managers)

Aggregator Designees
(subcontractors)

Single Project
Approved Vendors

Approved Vendor Requirements

Community
Involvement

Job Training & Hiring
Trainees

Income Verification

Marketing

Consumer Protections

Incentives

REC prices adjusted from ABP

Based on system size, building size, geography

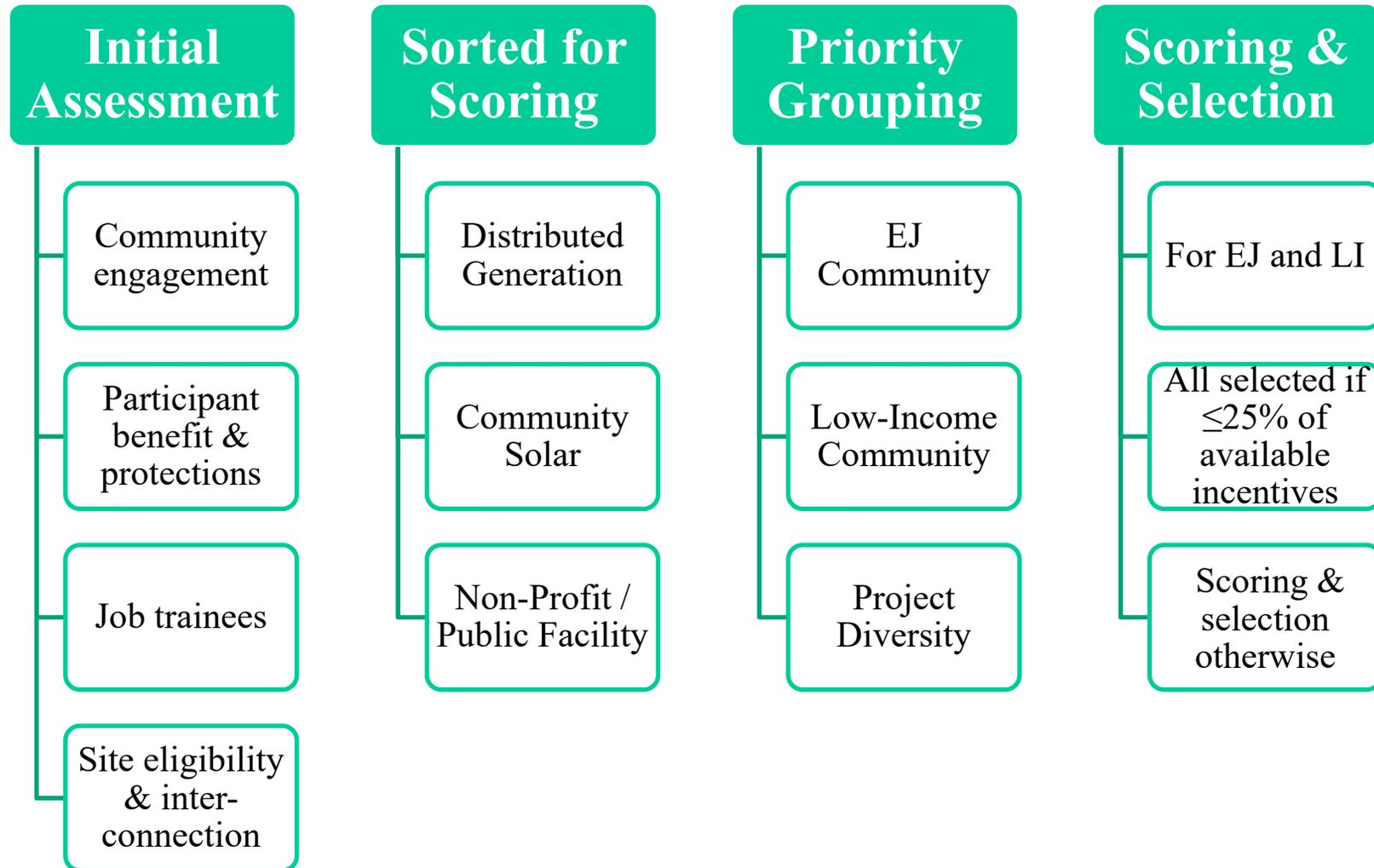
DG	CS	NP/PF	CS Pilots	Geography
0% Debt	35% Debt	--		
1-4 unit: customers retain 100% of net metering benefit	Customer retains 50% of virtual net metering credits	50% of energy value	REC price based on bid price	Group A: Ameren, Mt. Carmel, Mid-American, rural elec coops & munis in MISO
Larger buildings: customers retain 50% of net metering benefit	Higher incentive for LI subscriber share		Total funding up to \$50 million	Group B: ComEd, rural elec coops & munis in PJM.
	Adder for 100% LI Adder for >25% small subscribers		Project funding up to \$20 million	

Site Suitability Guidelines

Identify site conditions that are barriers to the installation of rooftop DG and ground-mounted PV systems.

Roofing	Structural	Electrical
<ul style="list-style-type: none">• Material inspection• 15 years of life• Local building codes	<ul style="list-style-type: none">• Withstand PV load• No decay, fire or water damage• Local structural code	<ul style="list-style-type: none">• Current National Electric Code• No hazardous conditions• No active knob & tube wiring
Space & Accessibility	Health & Safety	Ground Mounted
<ul style="list-style-type: none">• Safe access to panel and equipment• Space for system equipment• Accessibility clearances	<ul style="list-style-type: none">• No hazardous materials that will be disturbed• No pests in work areas	<ul style="list-style-type: none">• Foundation that can support PV load• Flood risk, wetlands, protected resources

Project Selection



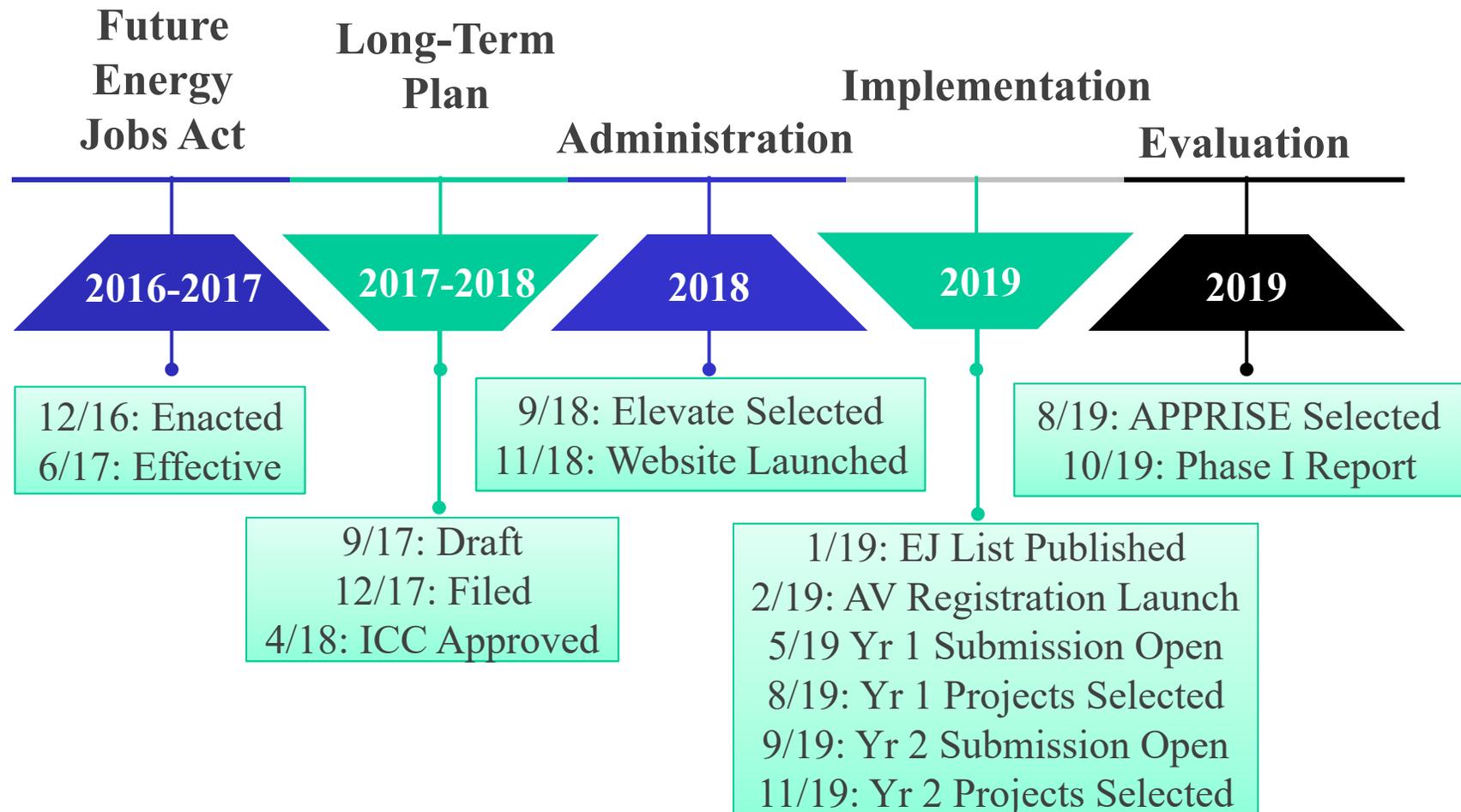
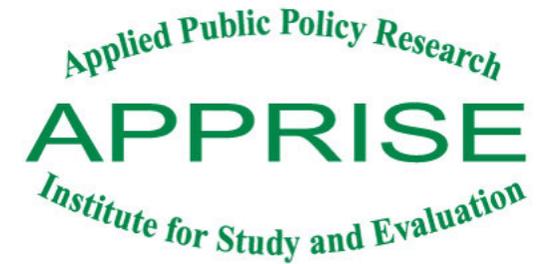
Project Selection

Project Selection Point Attributes

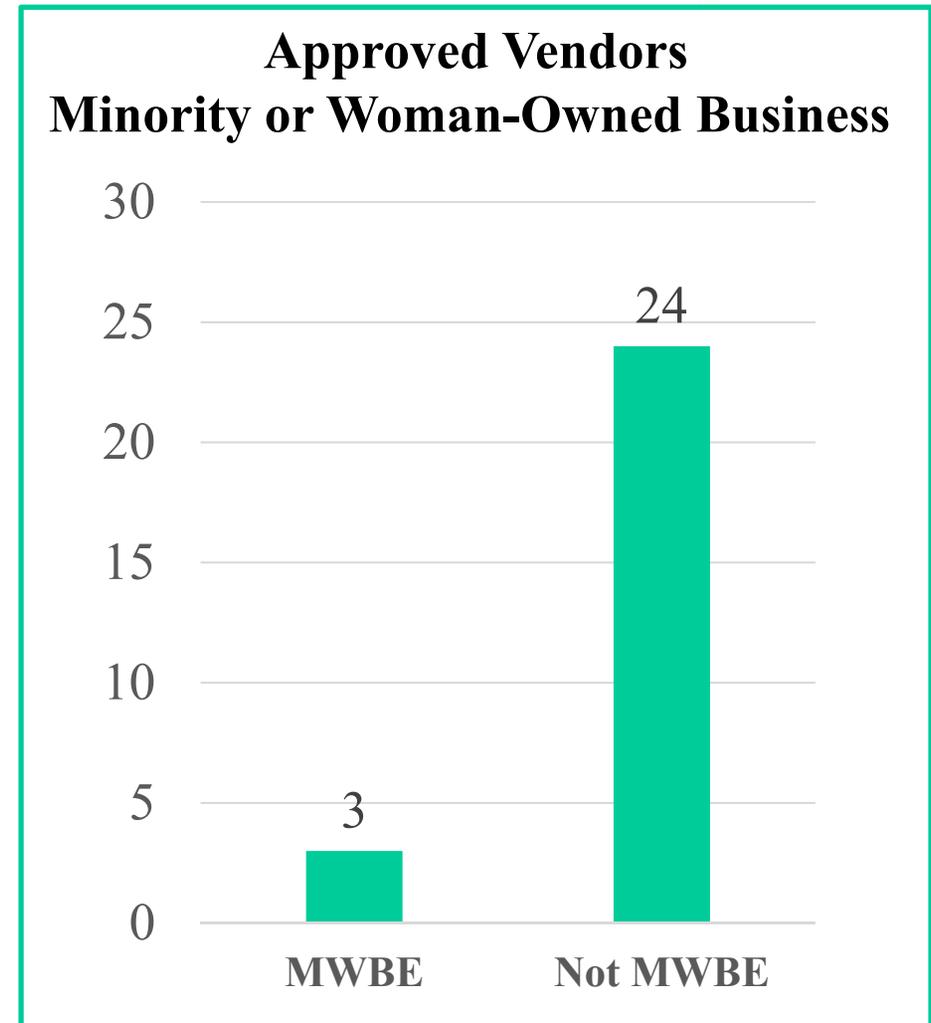
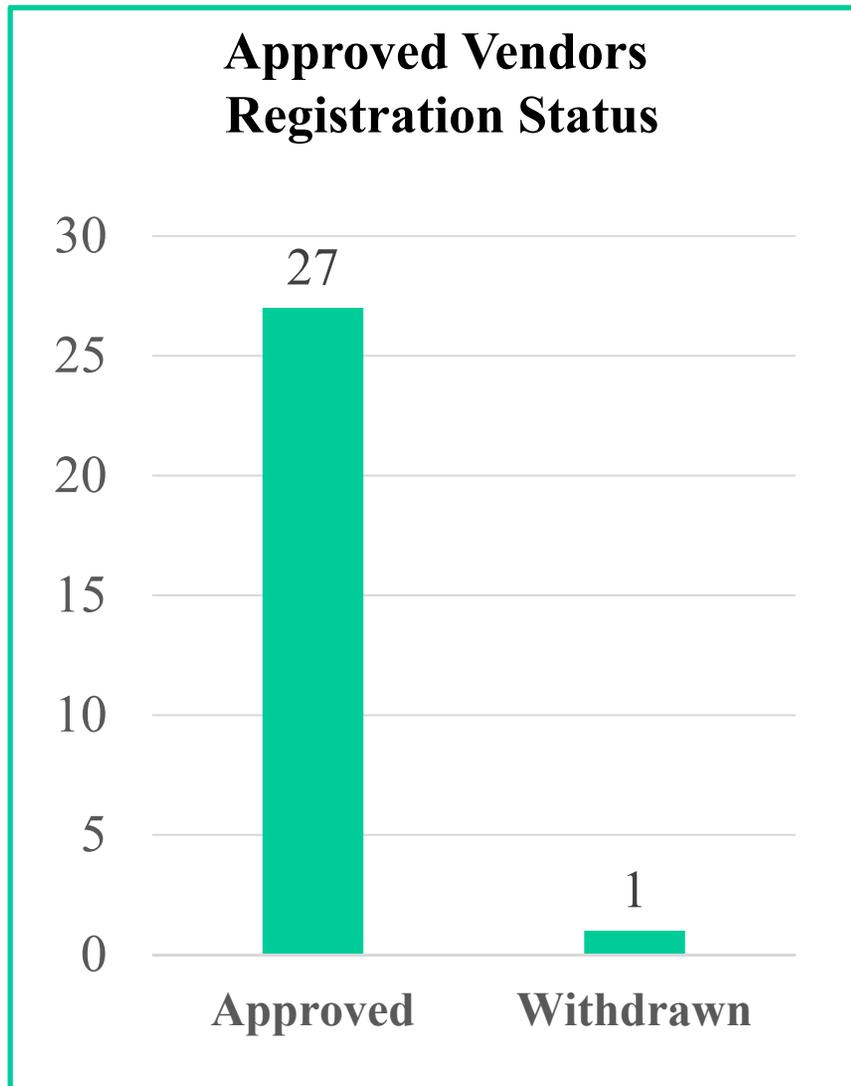
	Environmental Justice	Low-Income Community	Project Diversity
All Sub-Programs	<ul style="list-style-type: none"> • LI Community • MWBE AV 	<ul style="list-style-type: none"> • EJ Community • MWBE AV 	<ul style="list-style-type: none"> • EJ & LI Community • MWBE AV
DG	<ul style="list-style-type: none"> • Participant Savings >50% • Diversity: Utility Group A or Group B • Diversity: 1-4 Units , 5+ Units 		
CS	<ul style="list-style-type: none"> • 100% Subscriber Owned • NP or PF Anchor • Diversity: Utility Group A or Group B • Diversity: ≤250kW, >250kW 		
NP & PF	<ul style="list-style-type: none"> • Participant Savings >50% • Diversity: Utility Group A or Group B, Non-Profit or Public Facility • Diversity ≤100kW, >100kW 		

Phase I Evaluation Initial Implementation Experience (Year 1)

Key Implementation Dates

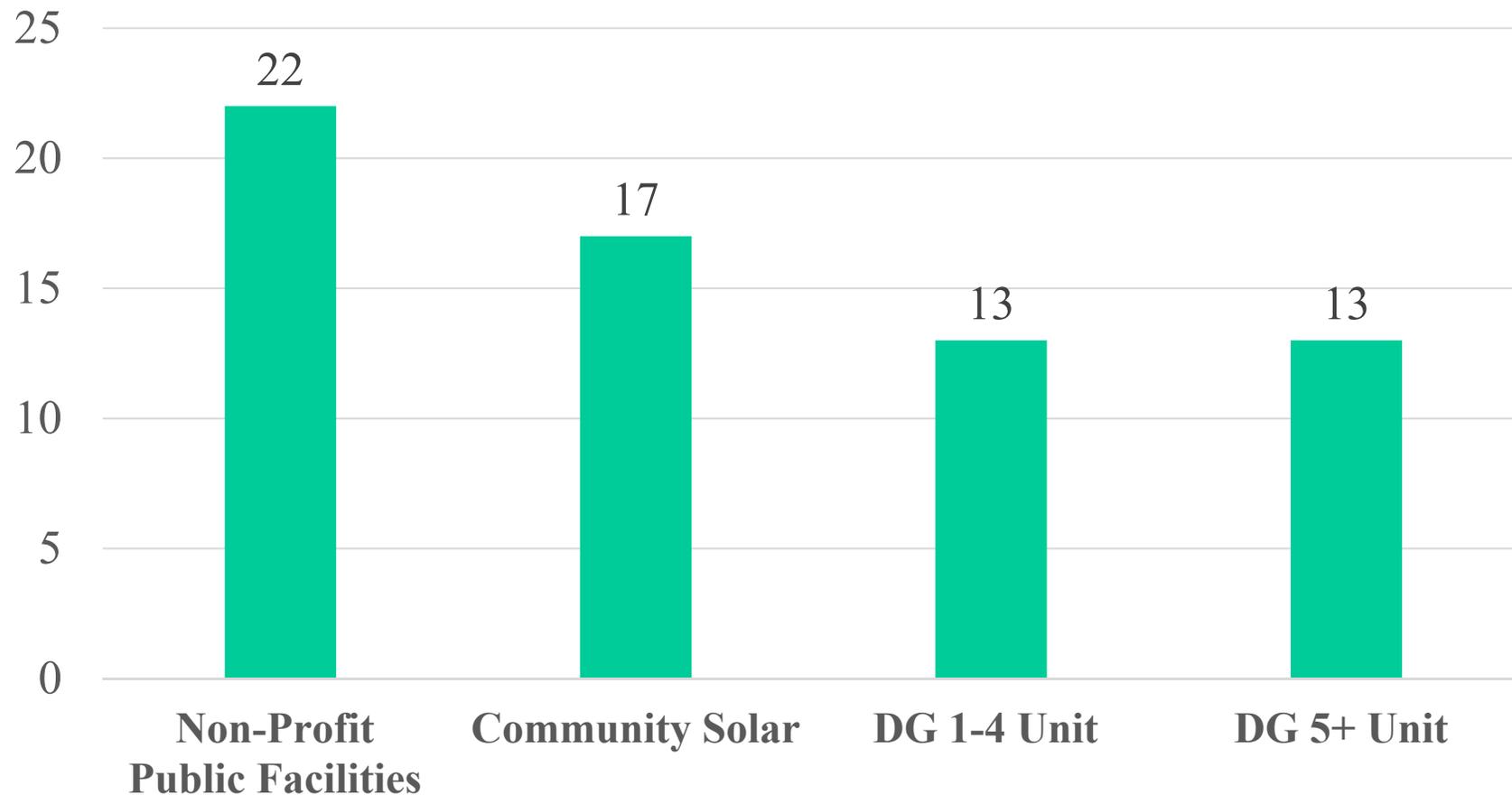


AV Registration



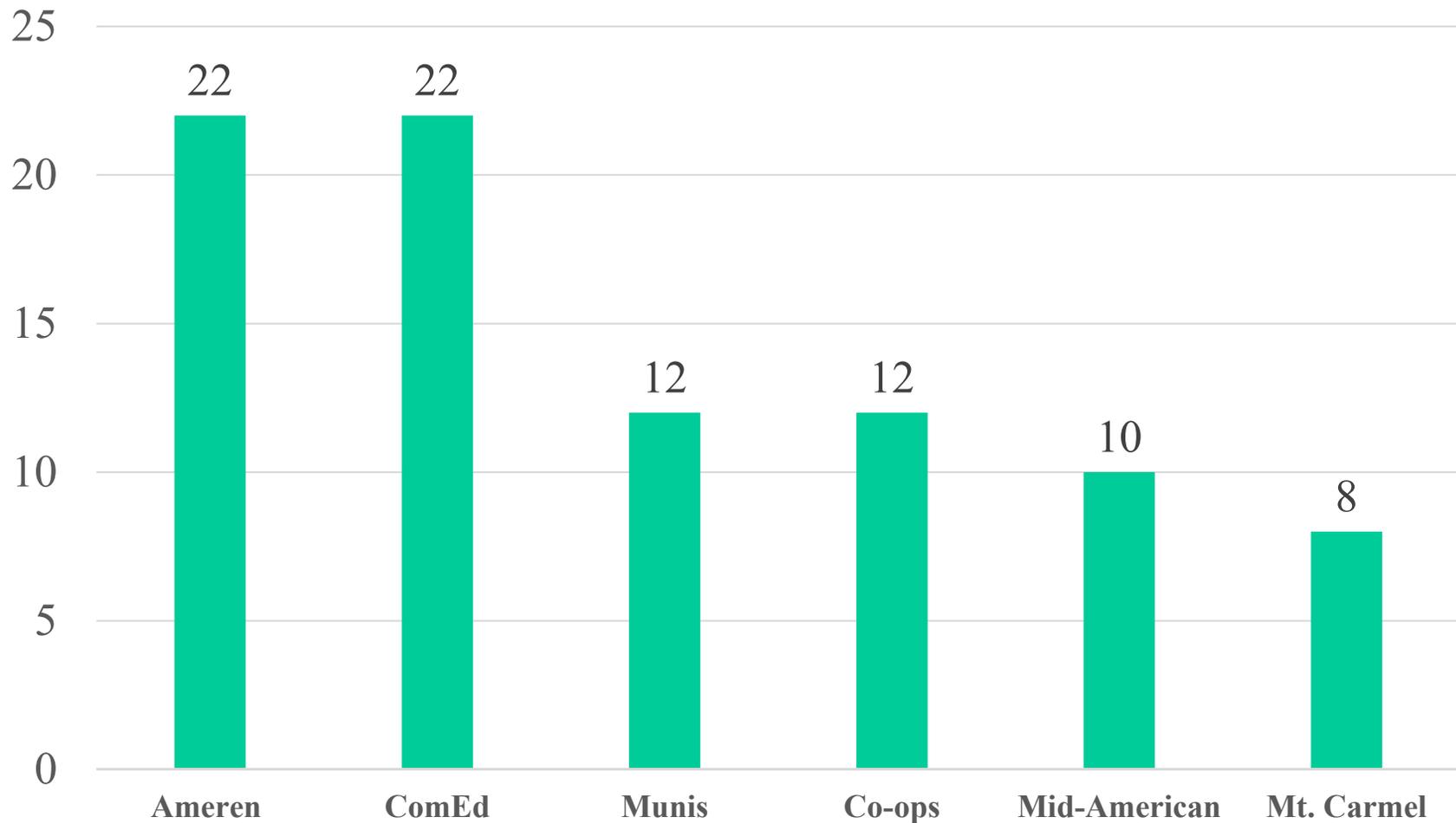
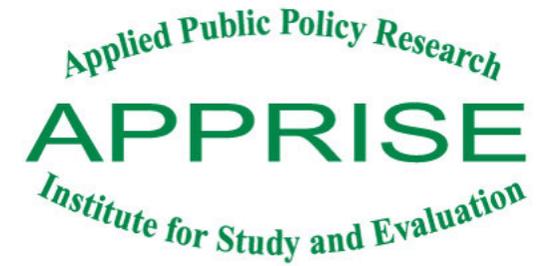
Vendor Data as of September 2019

AV Project Types



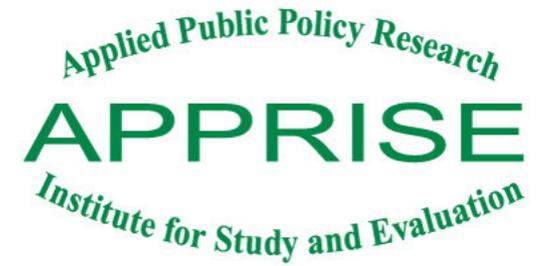
Vendor Data as of September 2019. Vendors may indicate more than one project type.

AV Service Territory



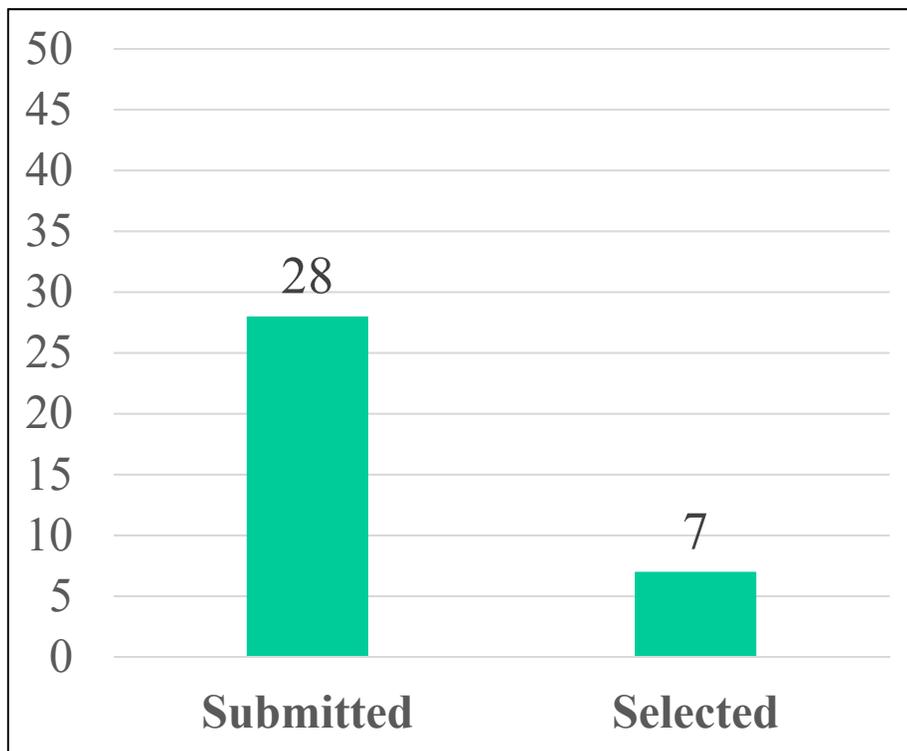
Vendor Data as of September 2019. Vendors may operate in more than one territory.

Project Application & Selection

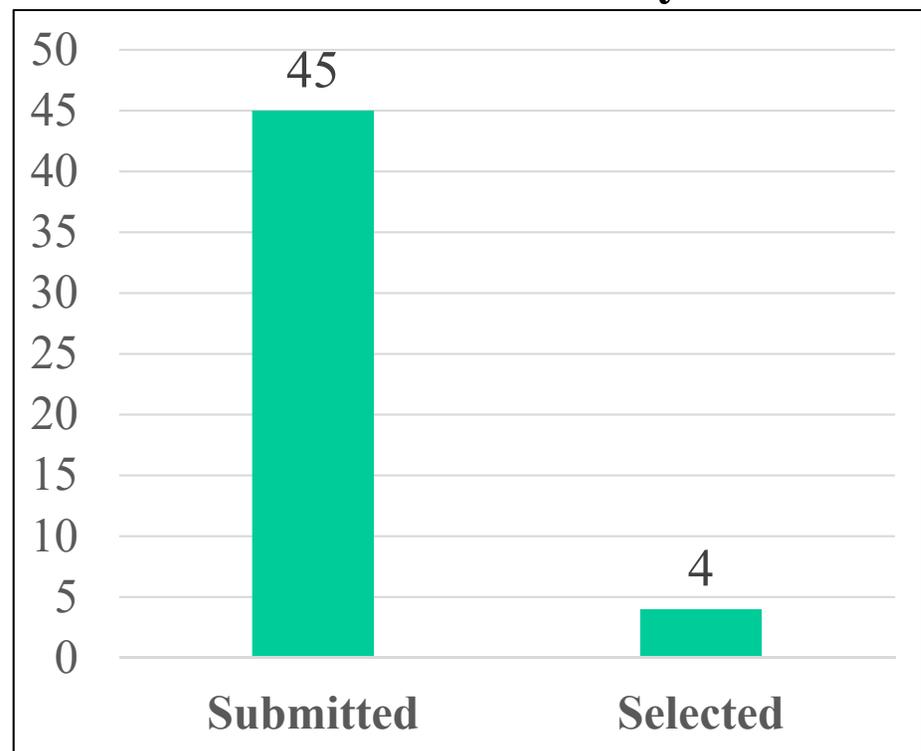


2018-2019 Projects Submitted & Selected

Non-Profit/Public Facilities



Low-Income Community Solar

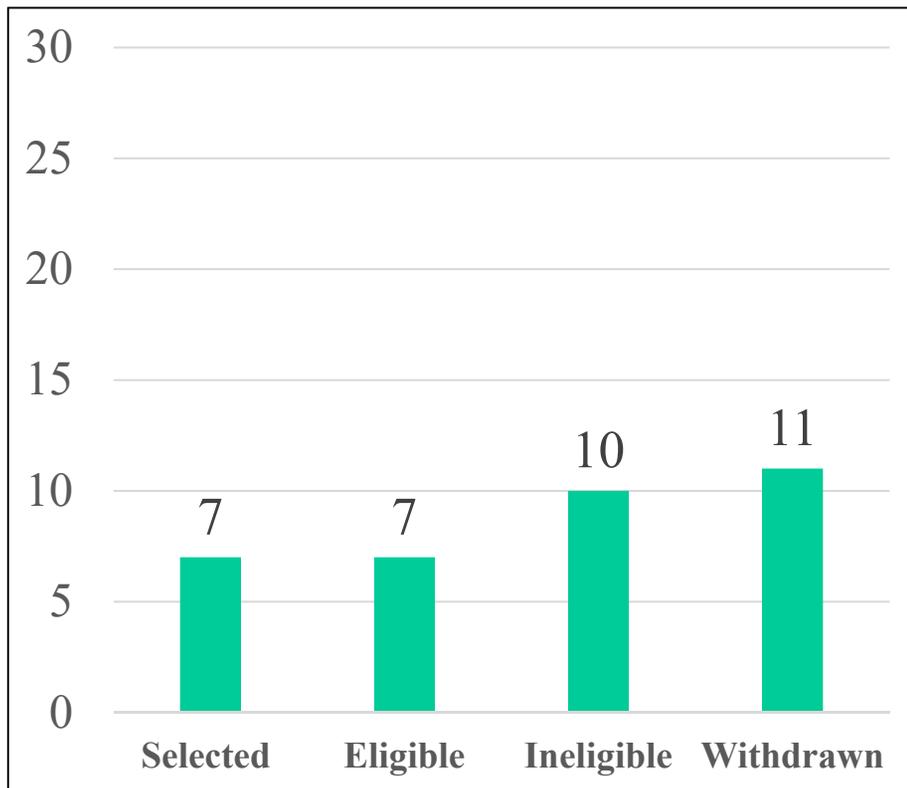


Only one Low-Income Distributed Generation project was submitted and was later withdrawn.

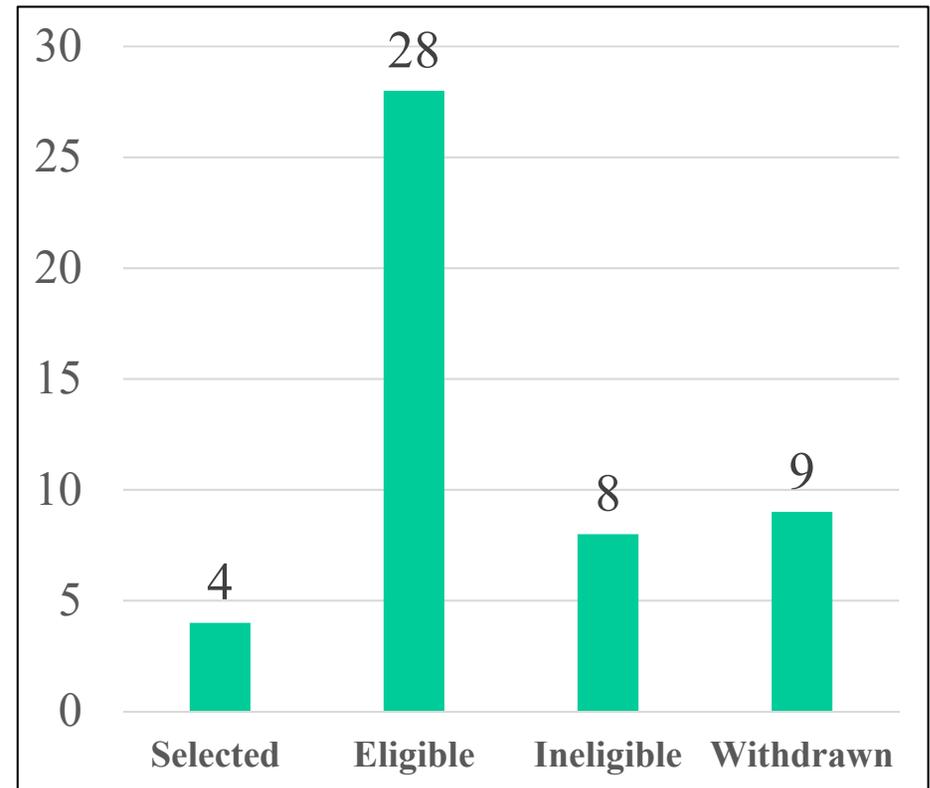
Project Eligibility

2018-2019 Projects Eligibility Status

Non-Profit/Public Facilities



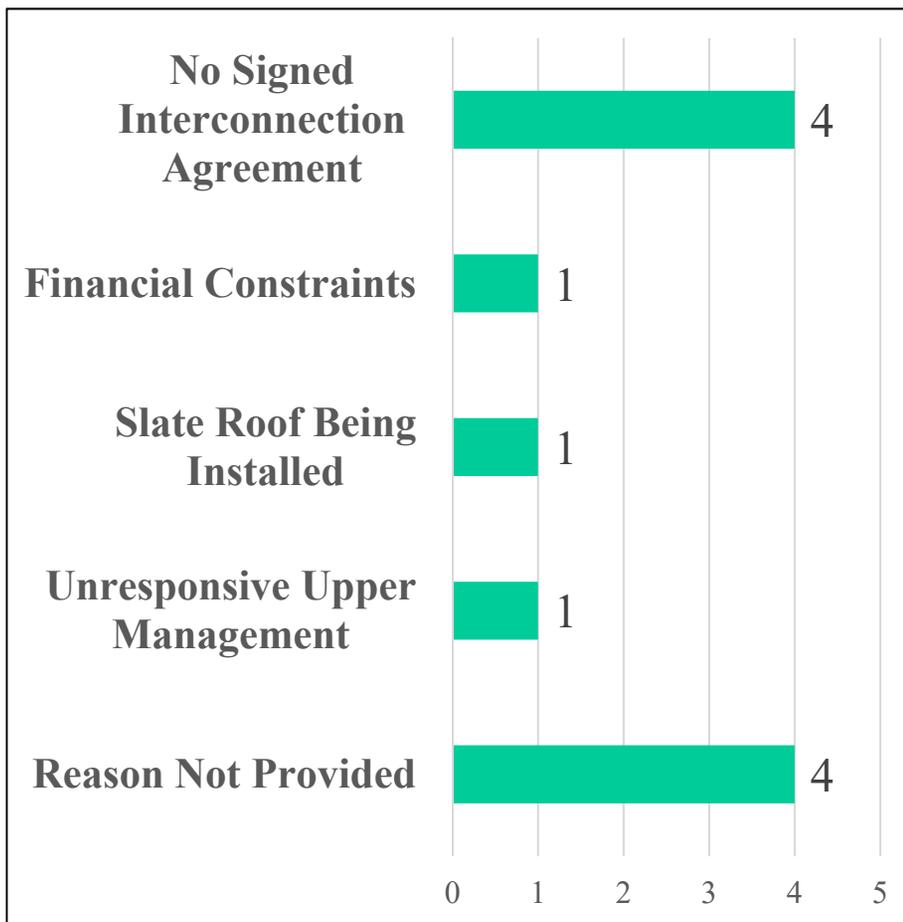
Low-Income Community Solar



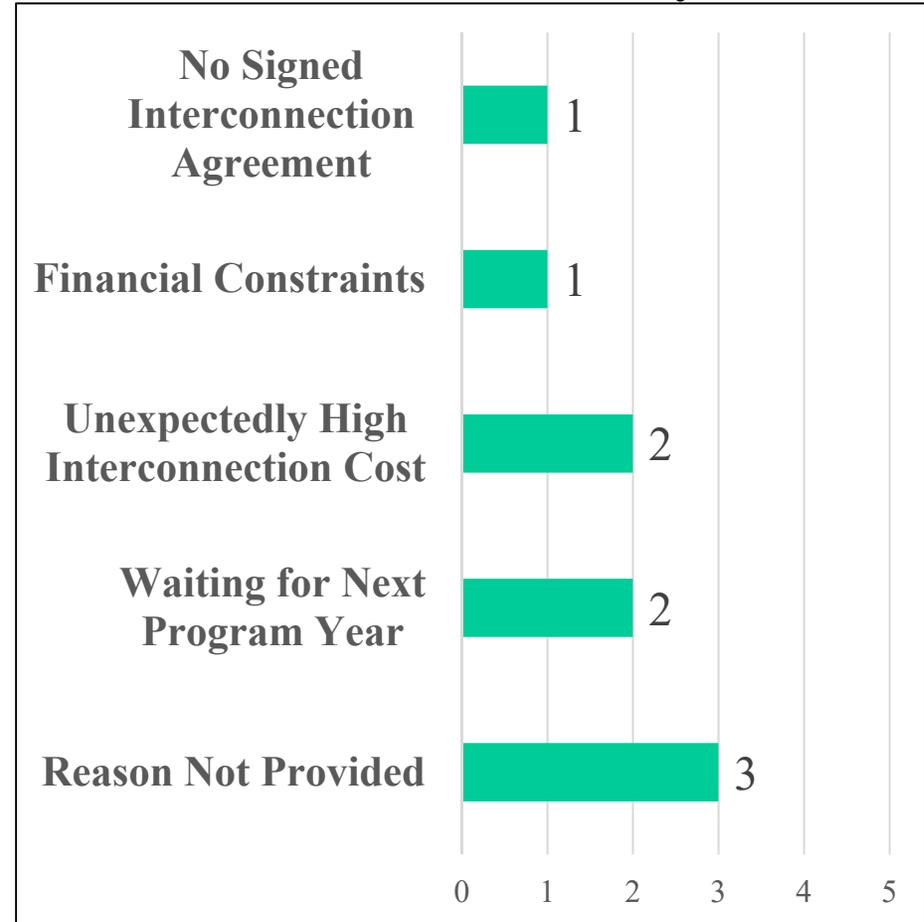
Projects Withdrawn

2018-2019 Projects Reasons for Withdrawal

Non-Profit/Public Facilities

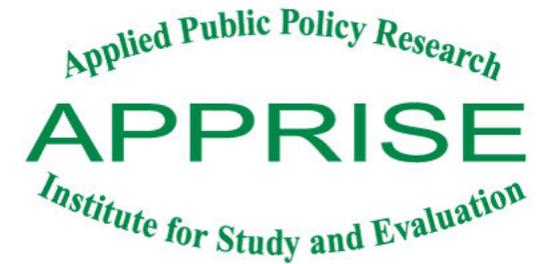


Low-Income Community Solar

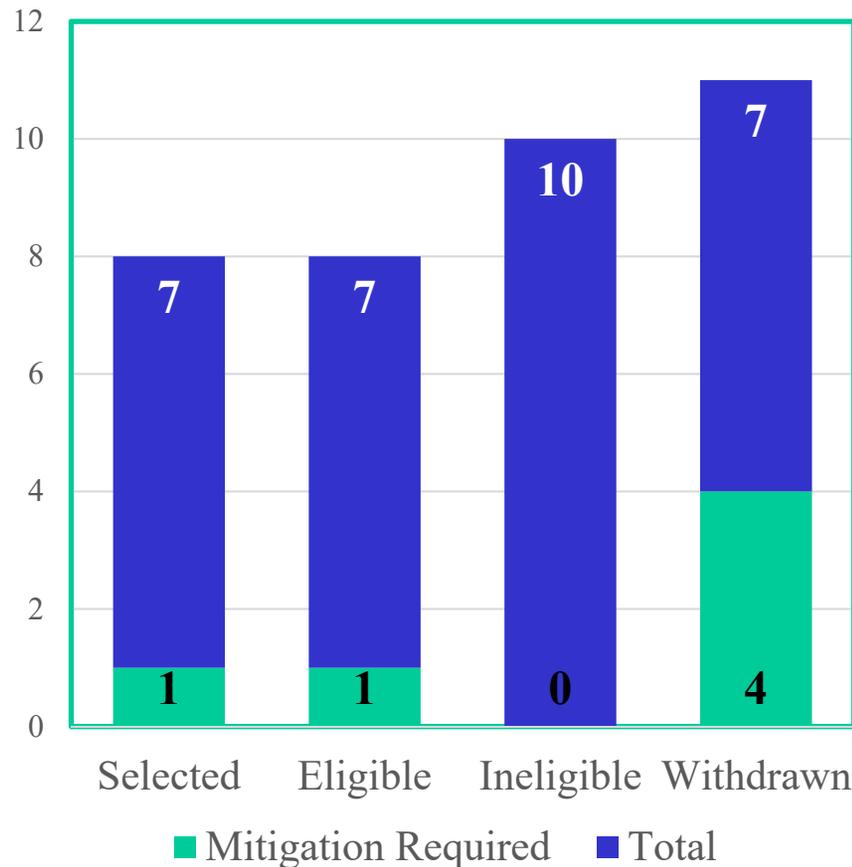


Mitigation Required

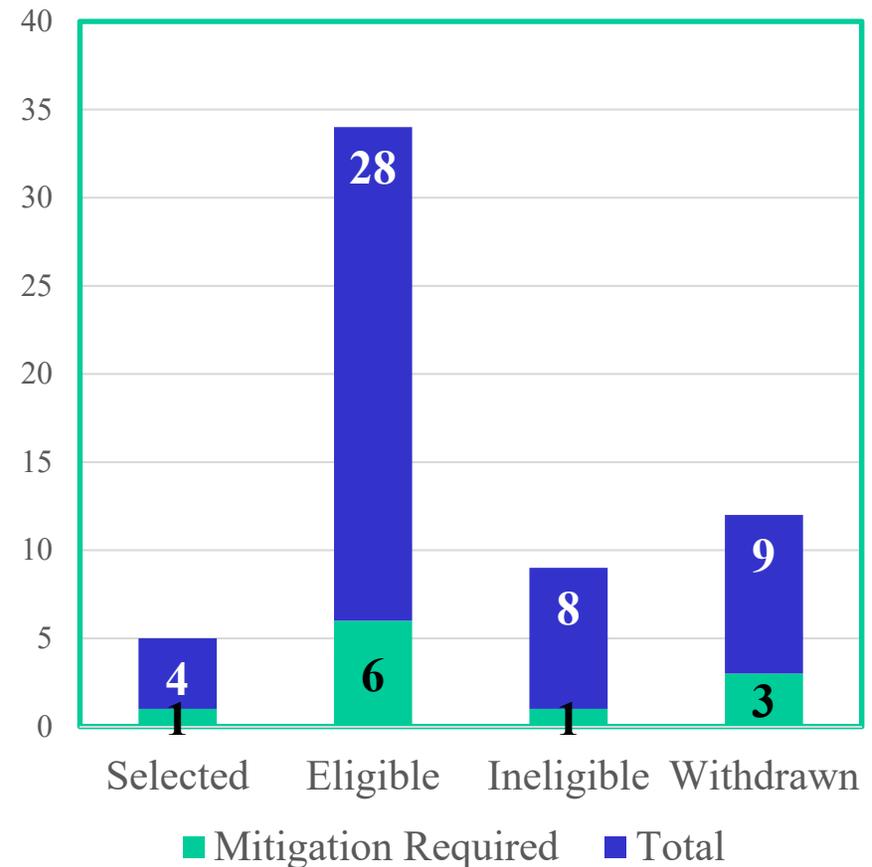
2018-2019 Projects Project Mitigation Required



Non-Profit/Public Facilities



Low-Income Community Solar

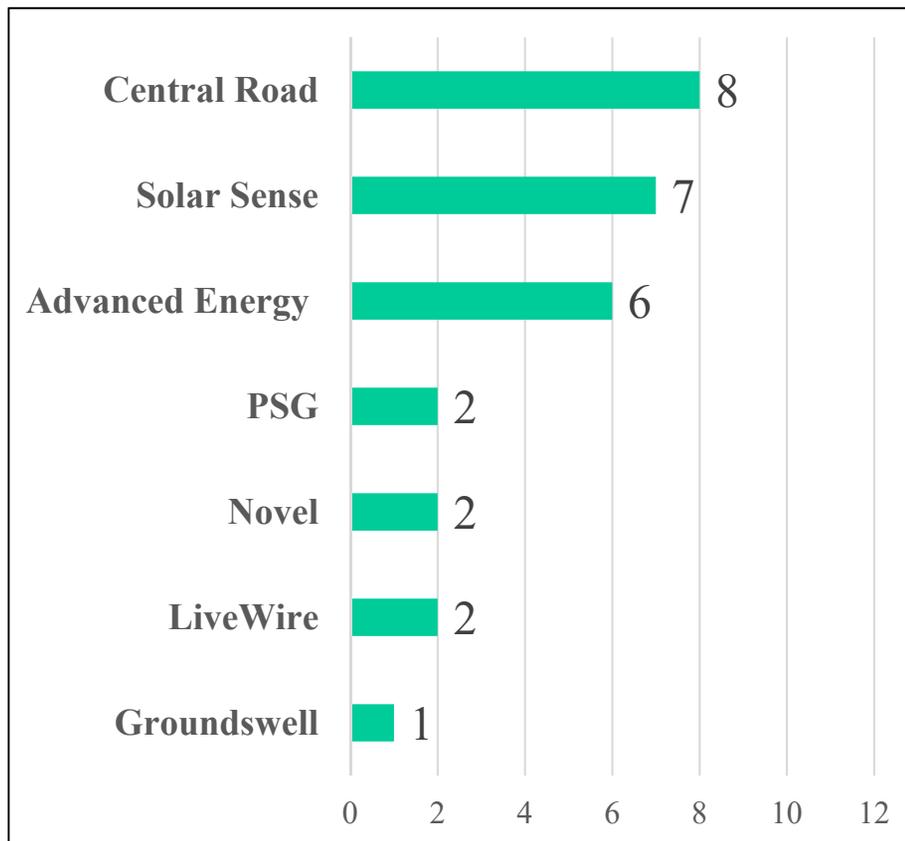


Submitted Projects

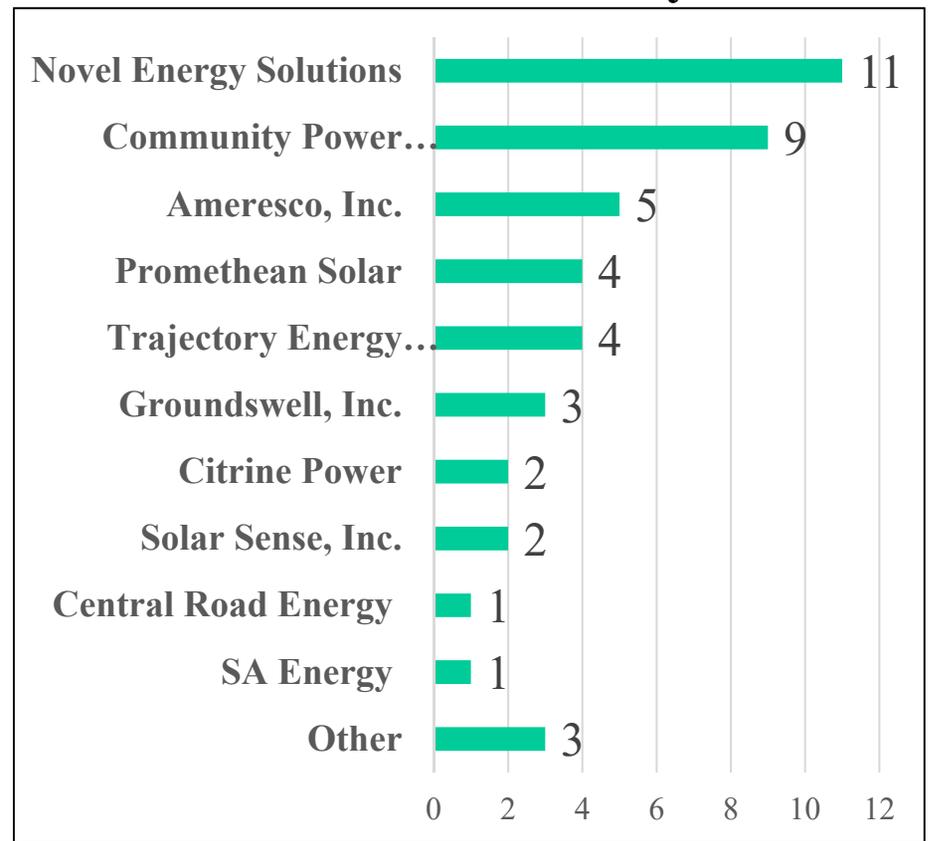


2018-2019 Projects Submitted By Approved Vendor

Non-Profit/Public Facilities

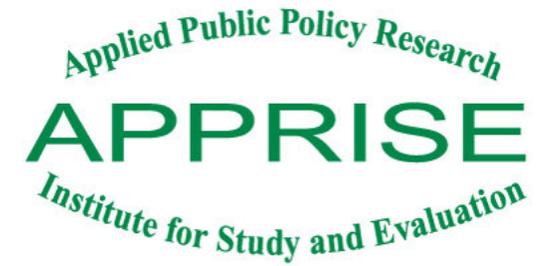


Low-Income Community Solar

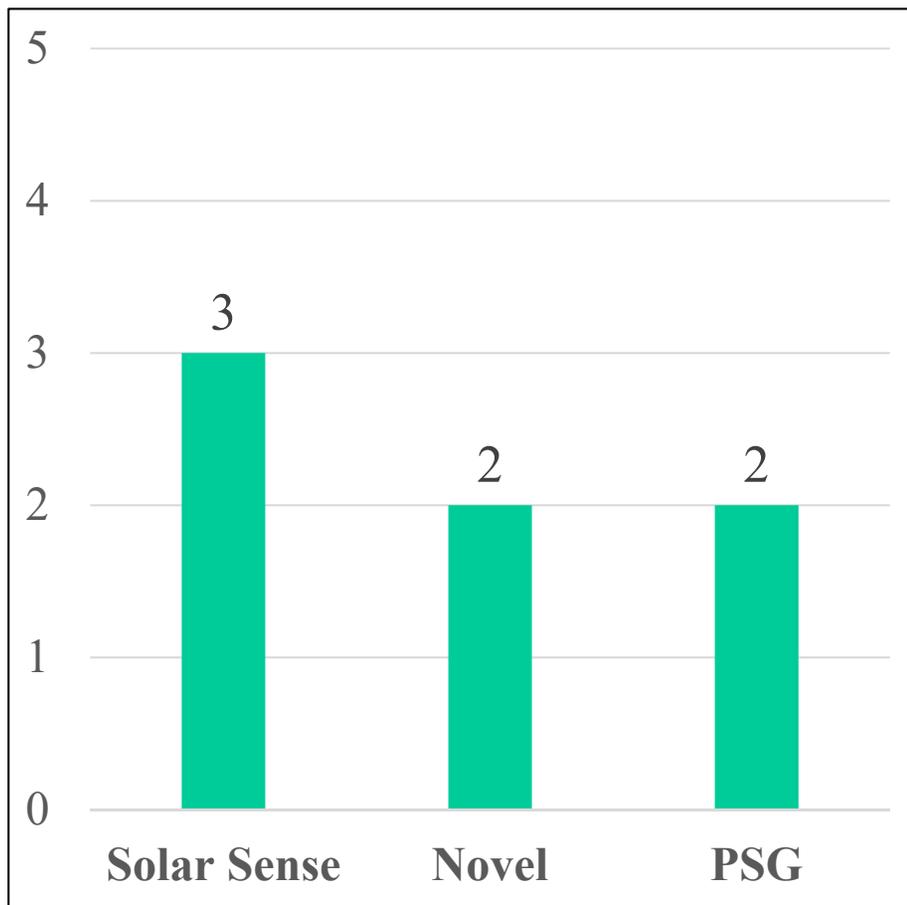


Selected Projects

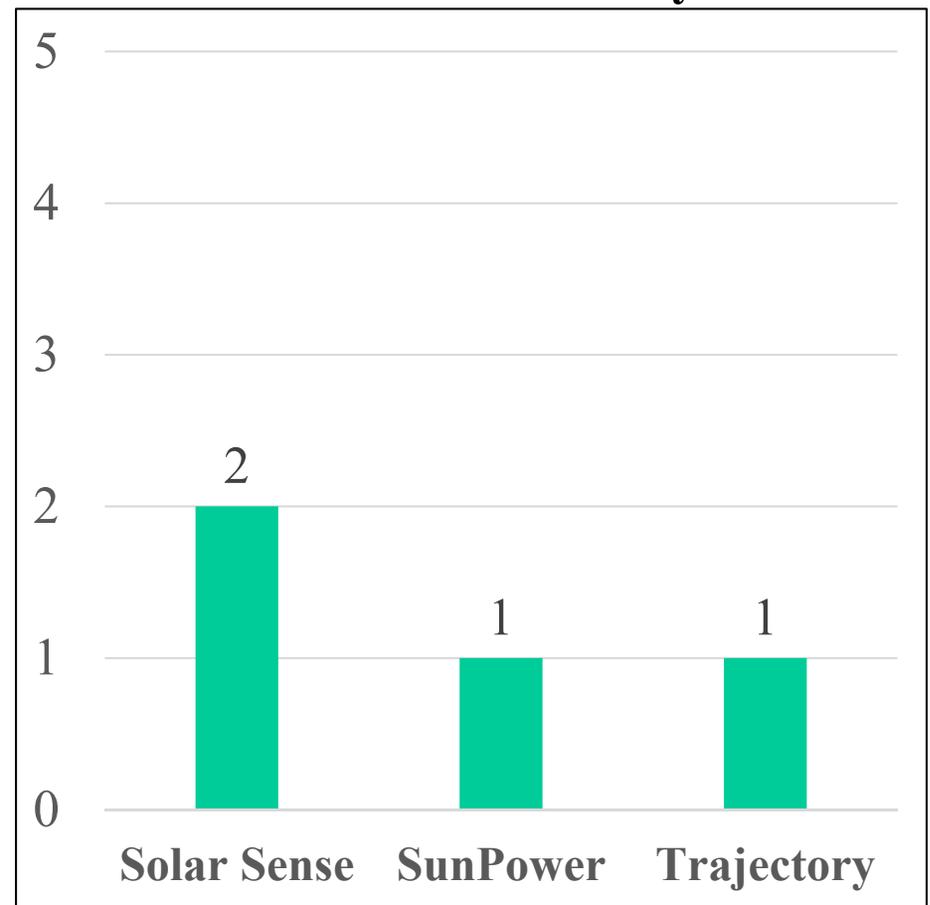
2018-2019 Projects Selected
By Approved Vendor



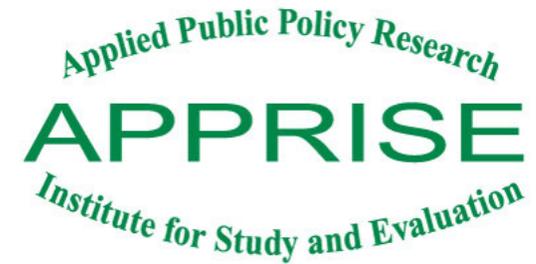
Non-Profit/Public Facilities



Low-Income Community Solar

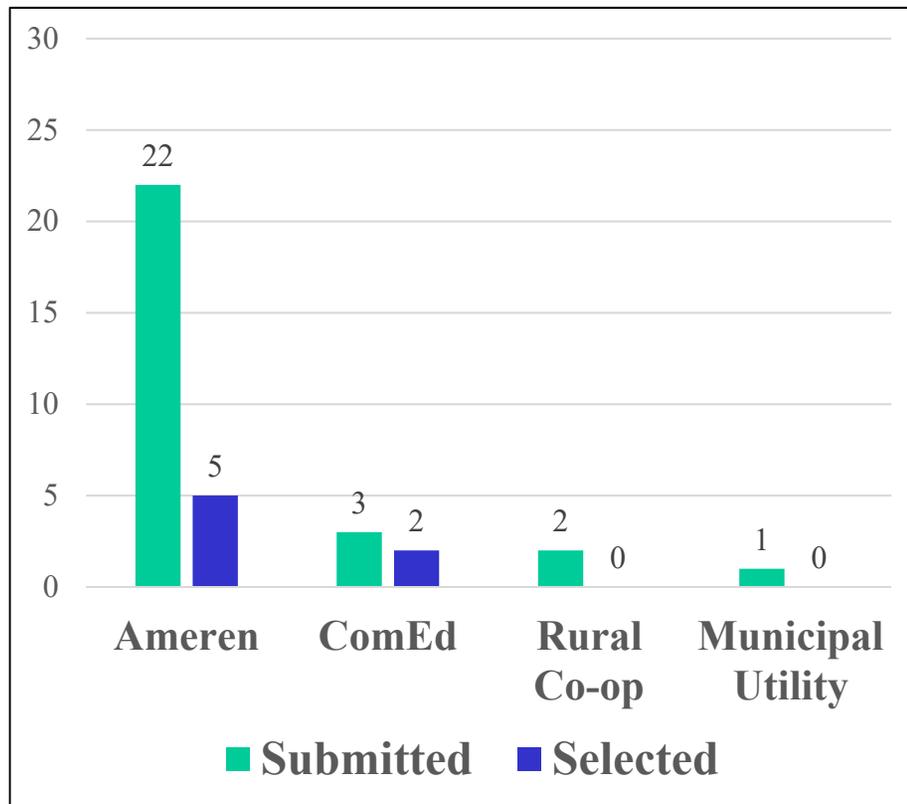


Project Application & Selection

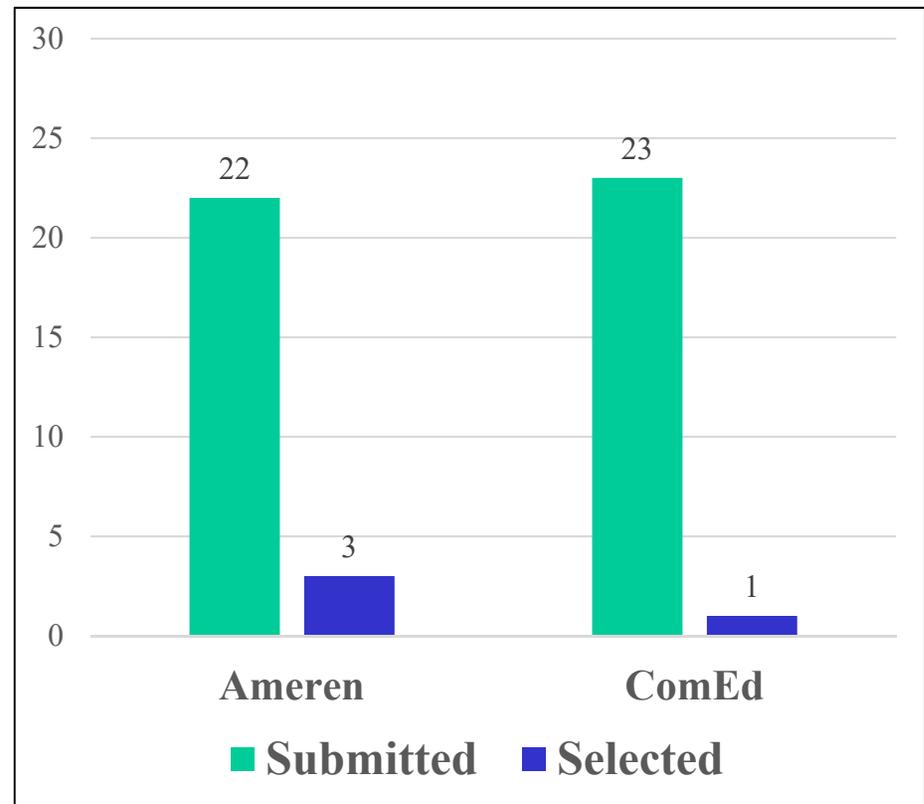


2018-2019 Submitted & Selected Projects By Utility

Non-Profit/Public Facilities



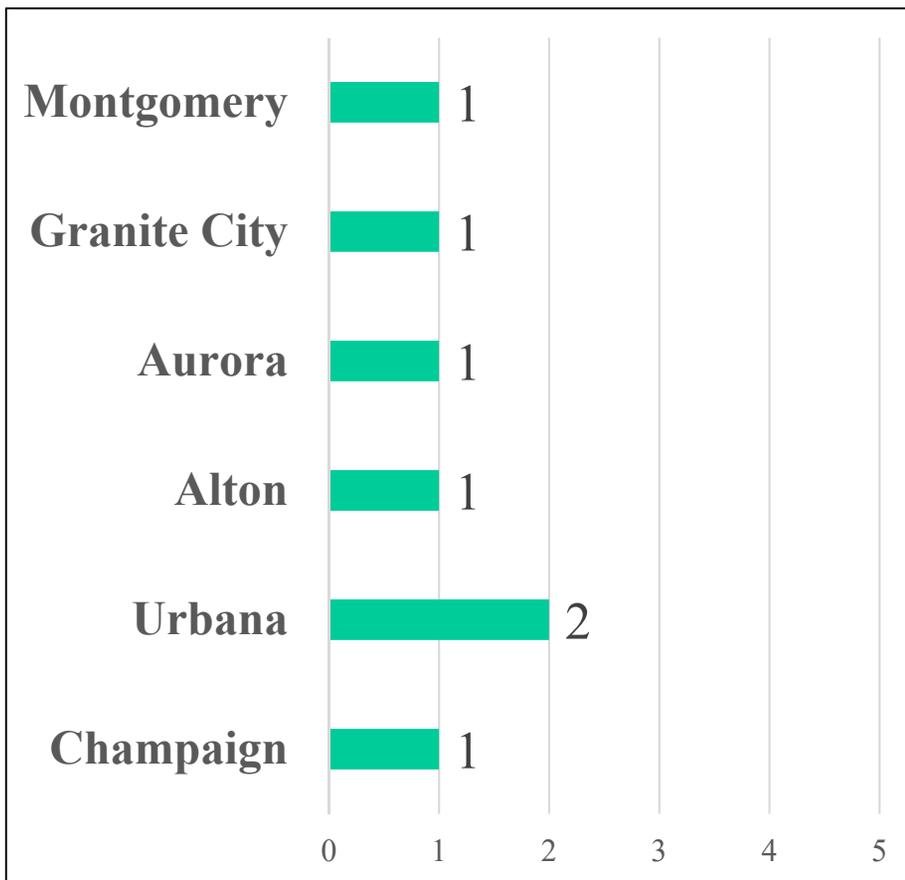
Low-Income Community Solar



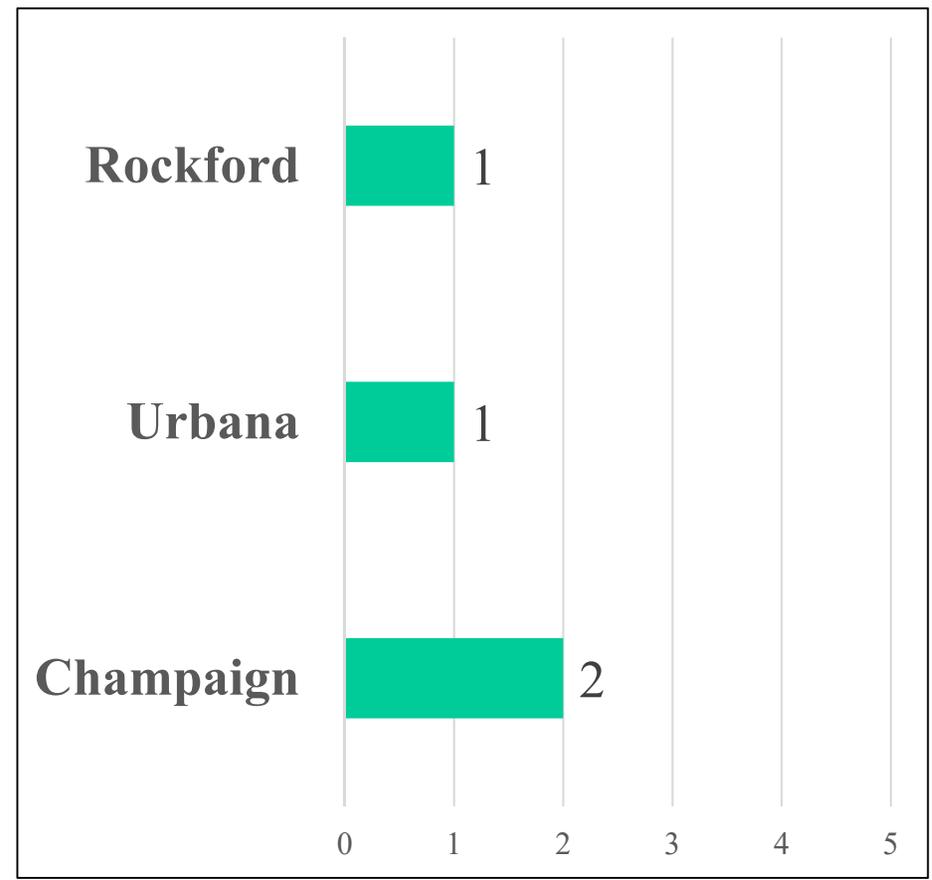
Selected Projects

2018-2019 Selected Projects By City

Non-Profit/Public Facilities



Low-Income Community Solar

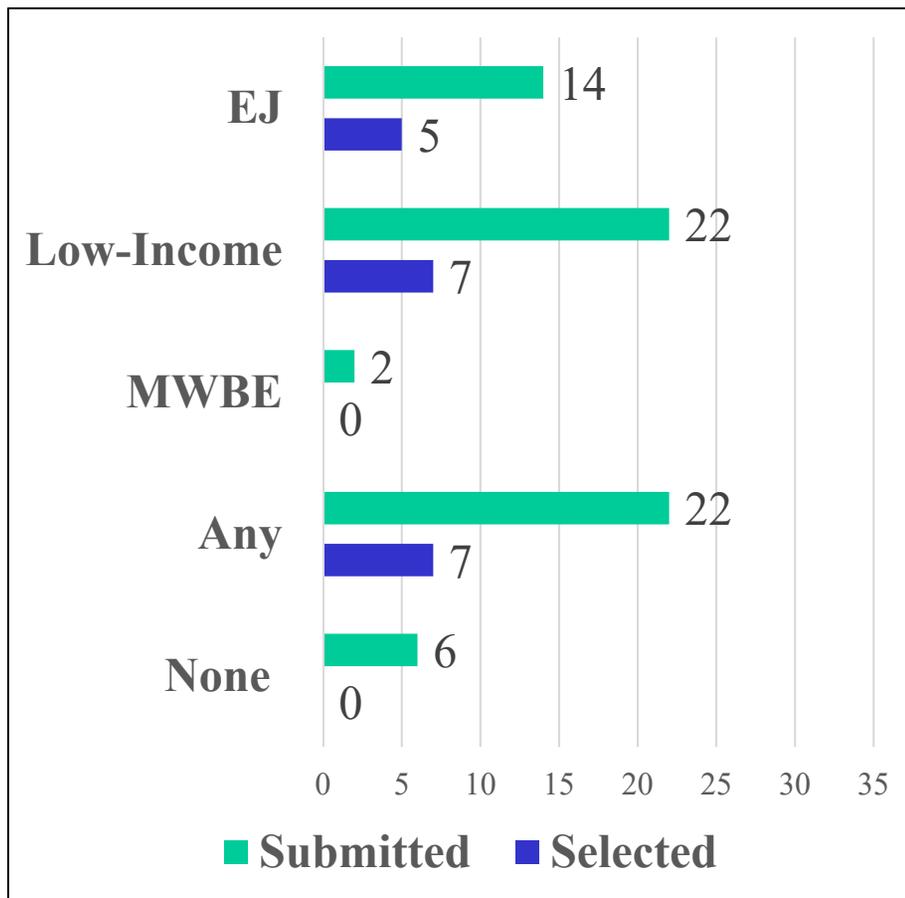


EJ & LI Communities



2018-2019 Submitted & Selected Projects

Non-Profit/Public Facilities

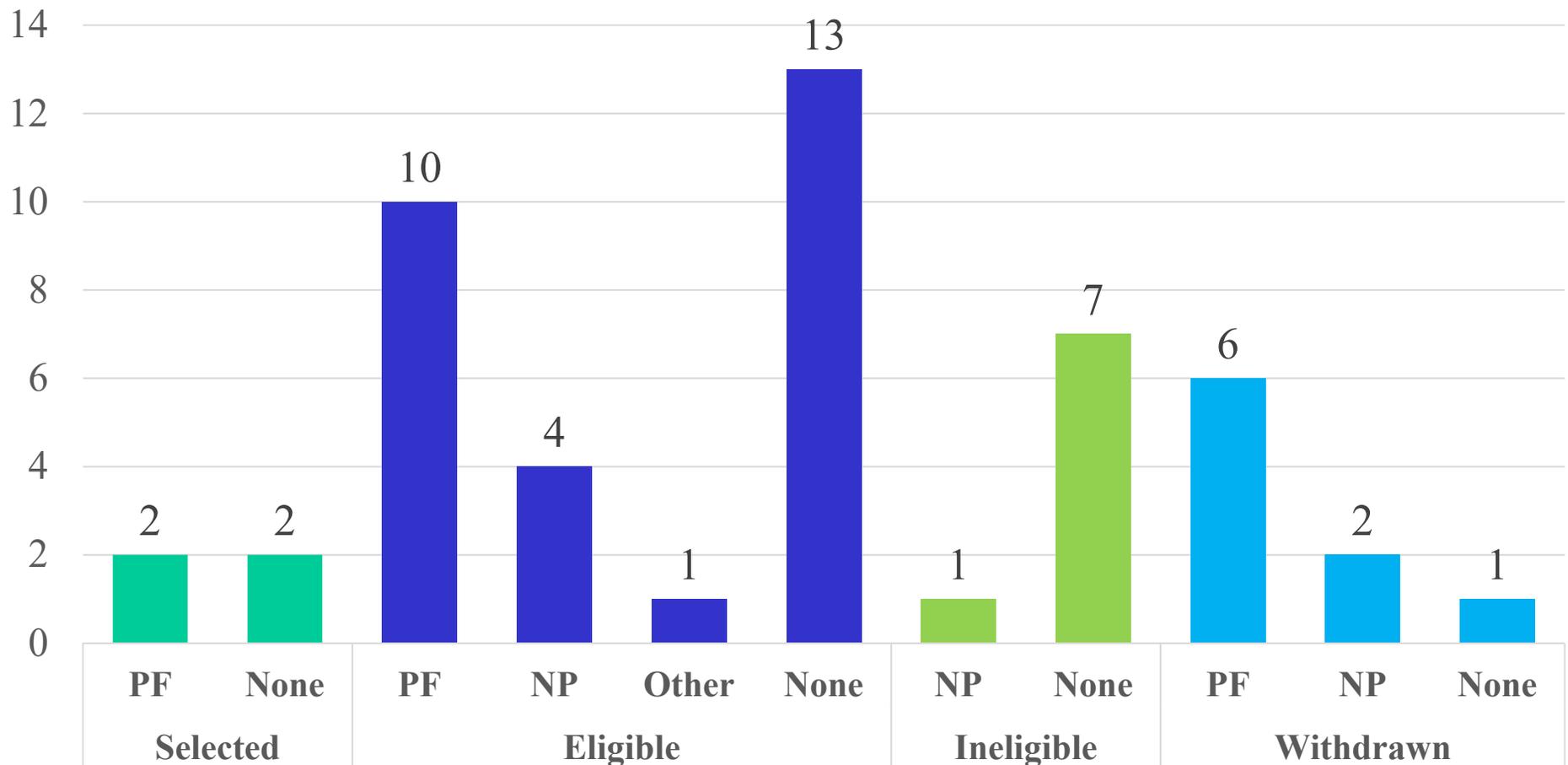


Low-Income Community Solar

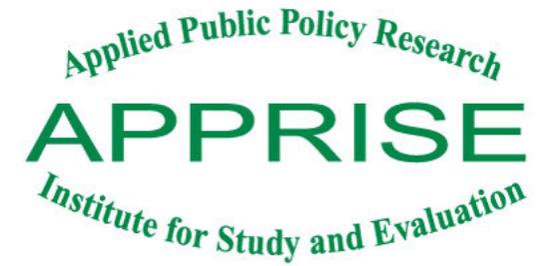


Community Solar Anchor Type

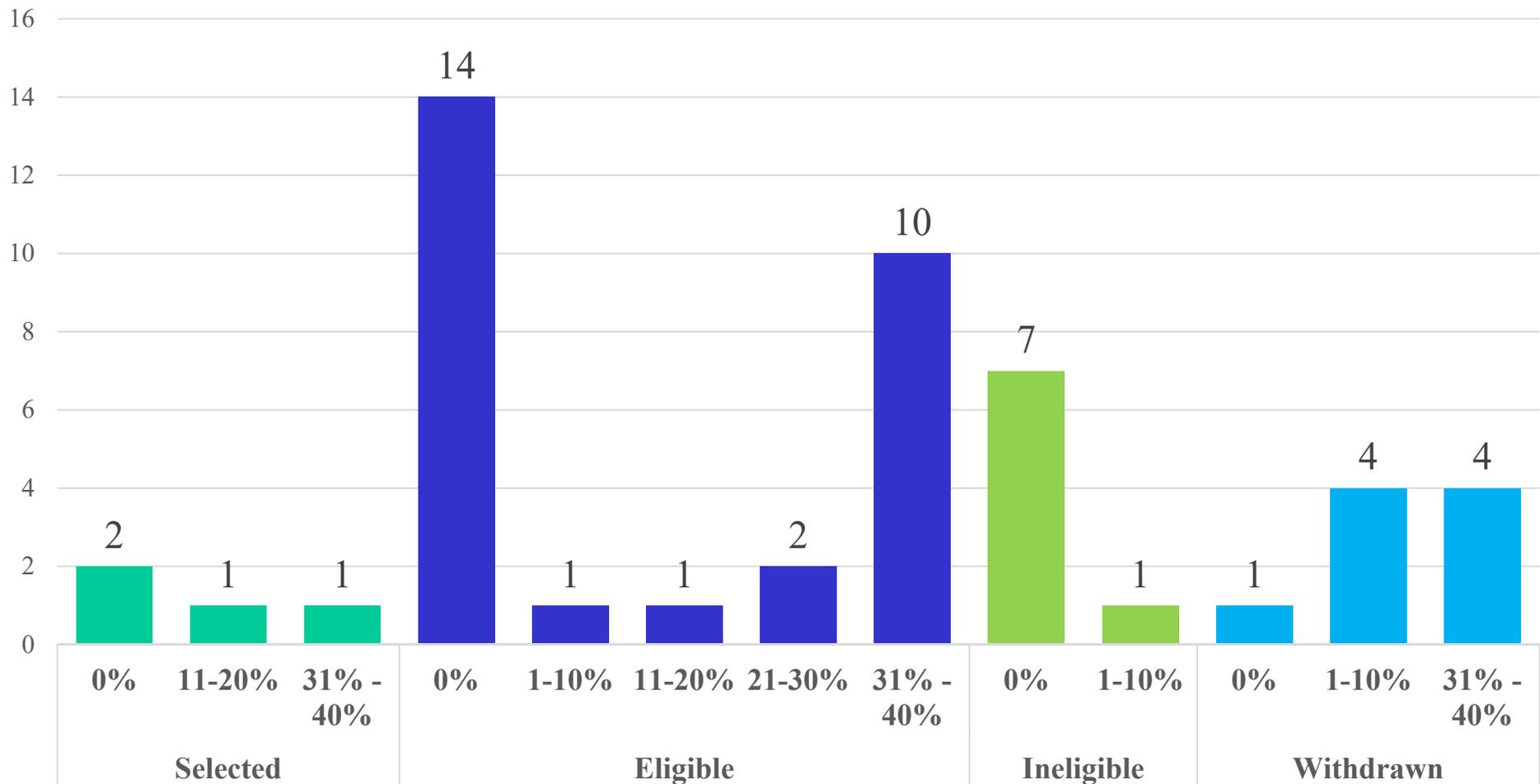
2018-2019 Community Solar Projects



Projected Anchor Share



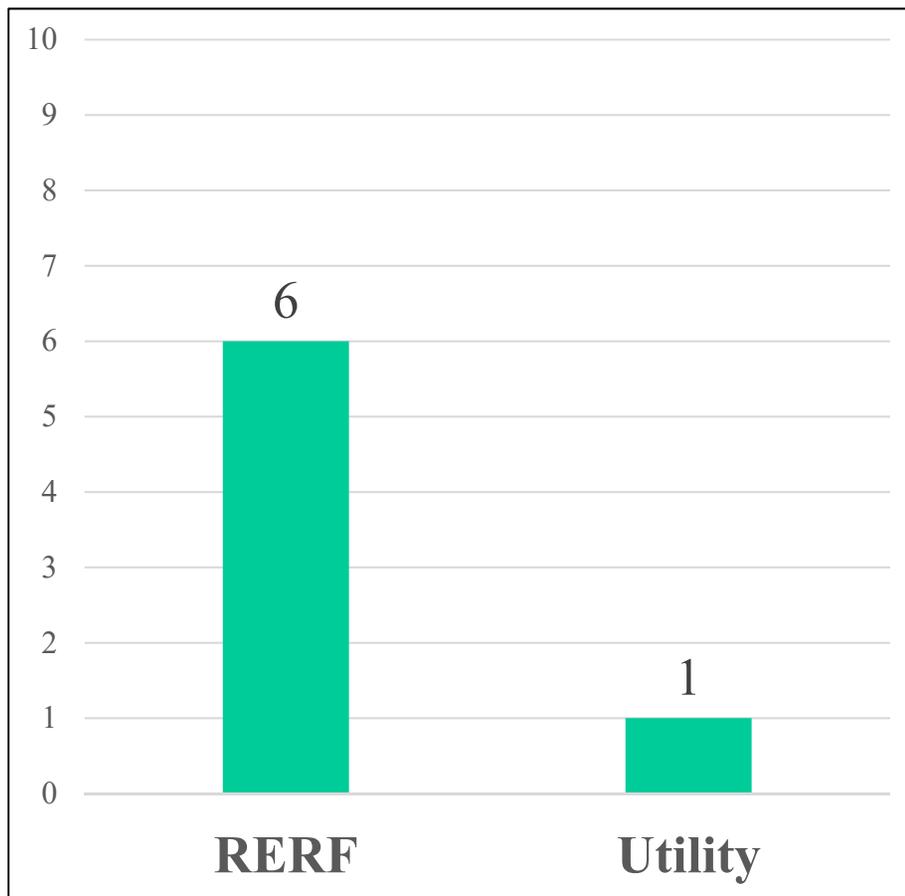
2018-2019 Community Solar Projects



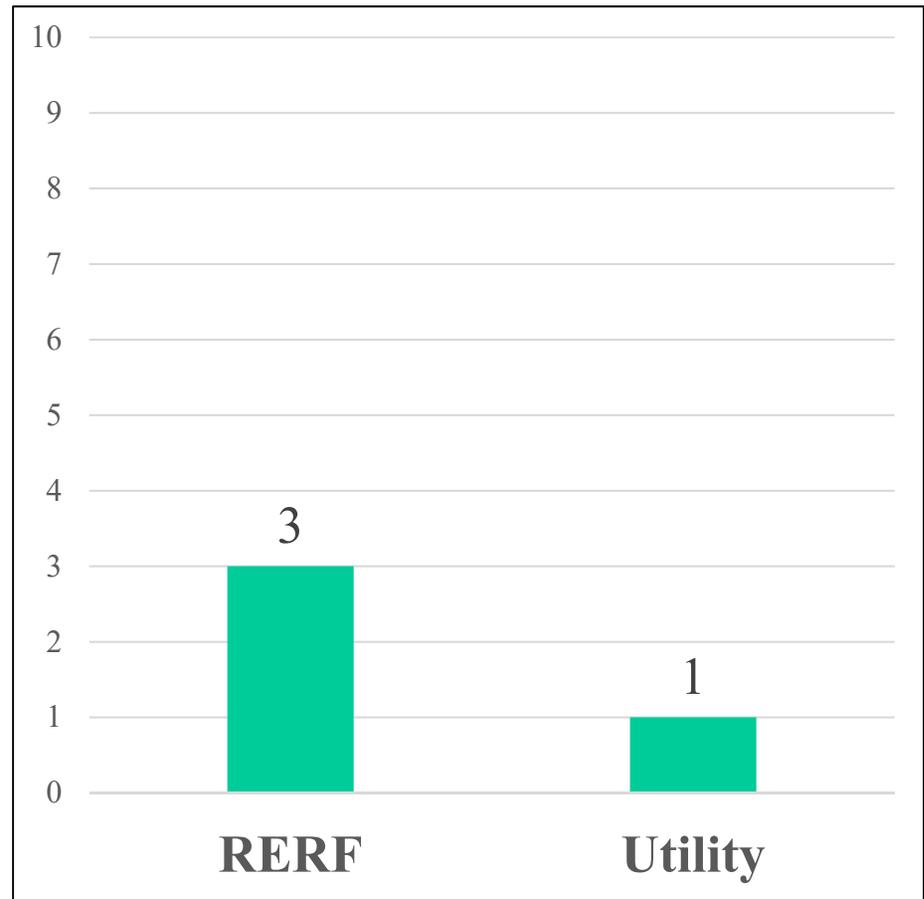
Funding Source

2018-2019 Selected Projects

Non-Profit/Public Facilities

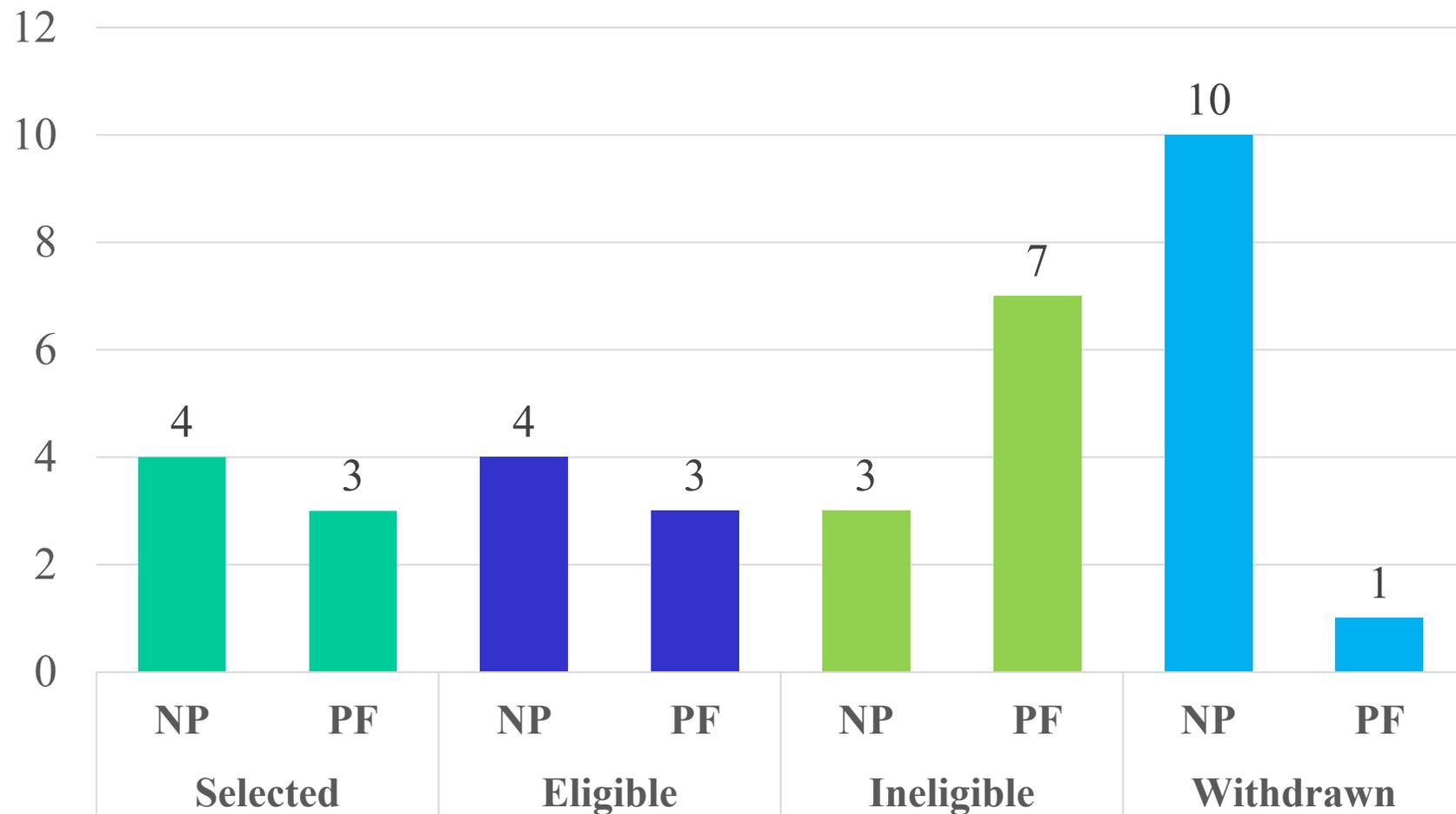


Low-Income Community Solar



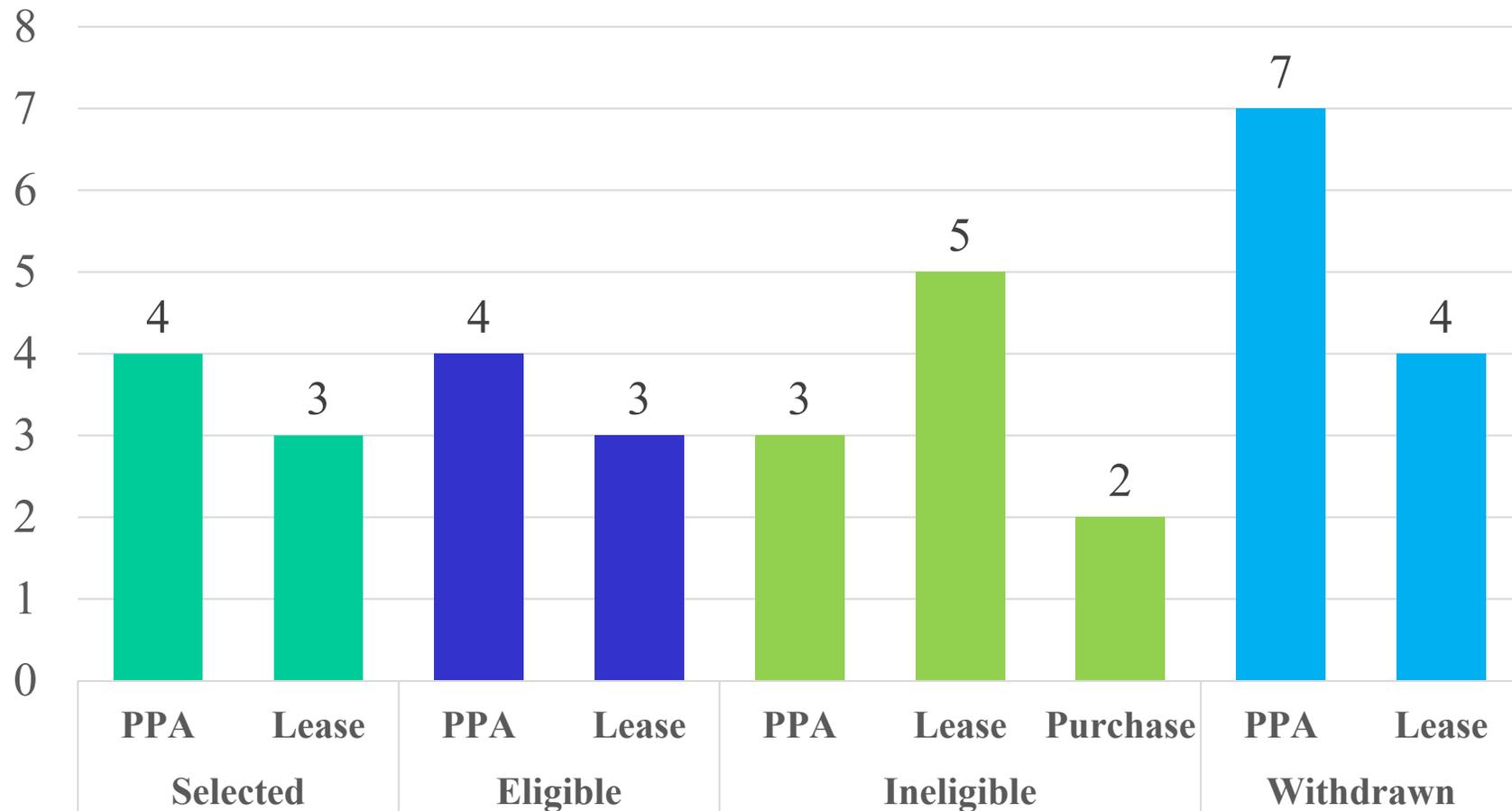
Non-Profit & Public Facility

2018-2019 Non-Profit & Public Facility Projects



Agreement Type

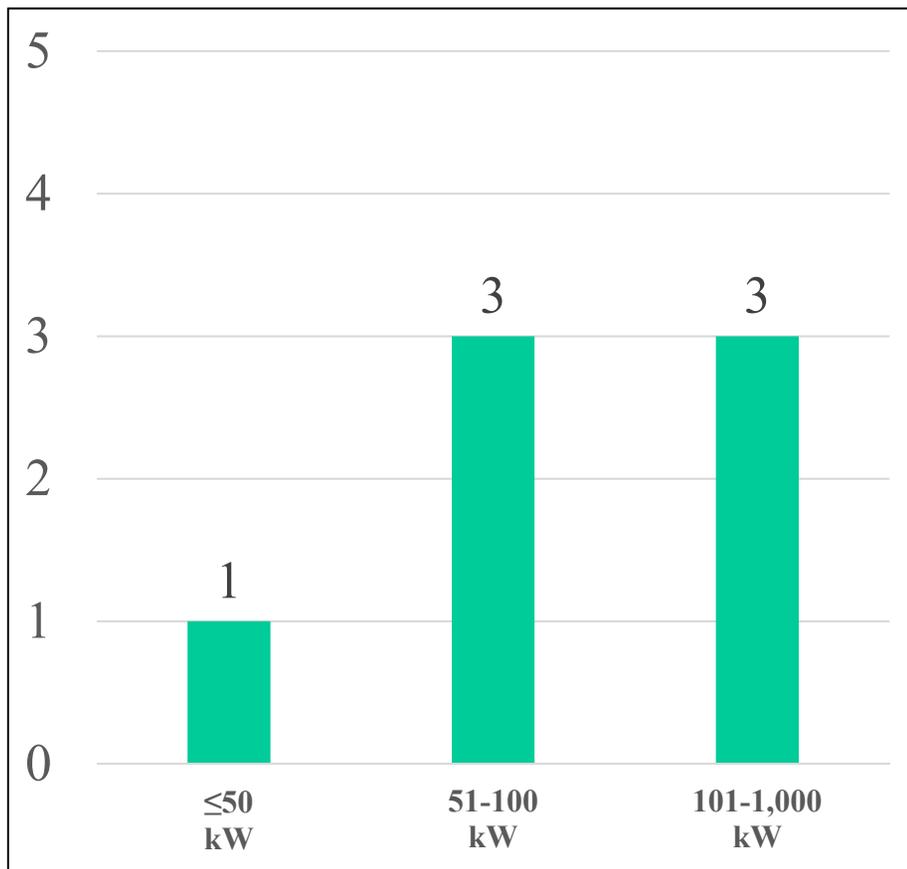
2018-2019 Non-Profit & Public Facility Projects



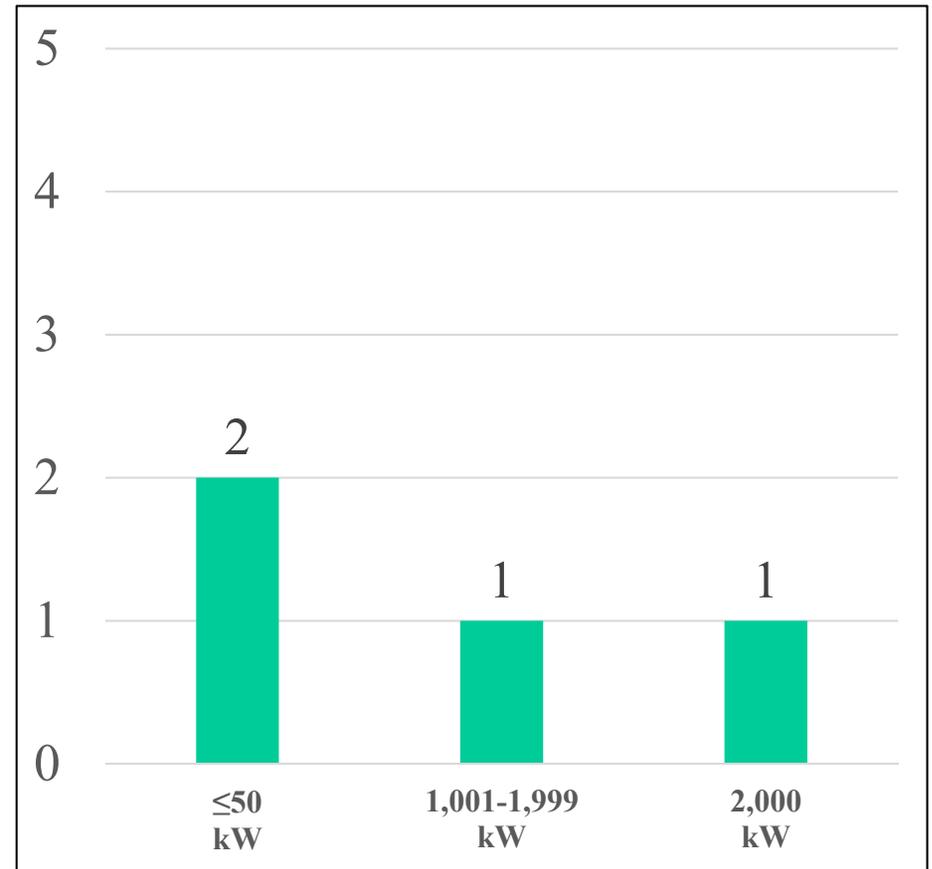
Project Size

2018-2019 Selected Projects

Non-Profit/Public Facilities



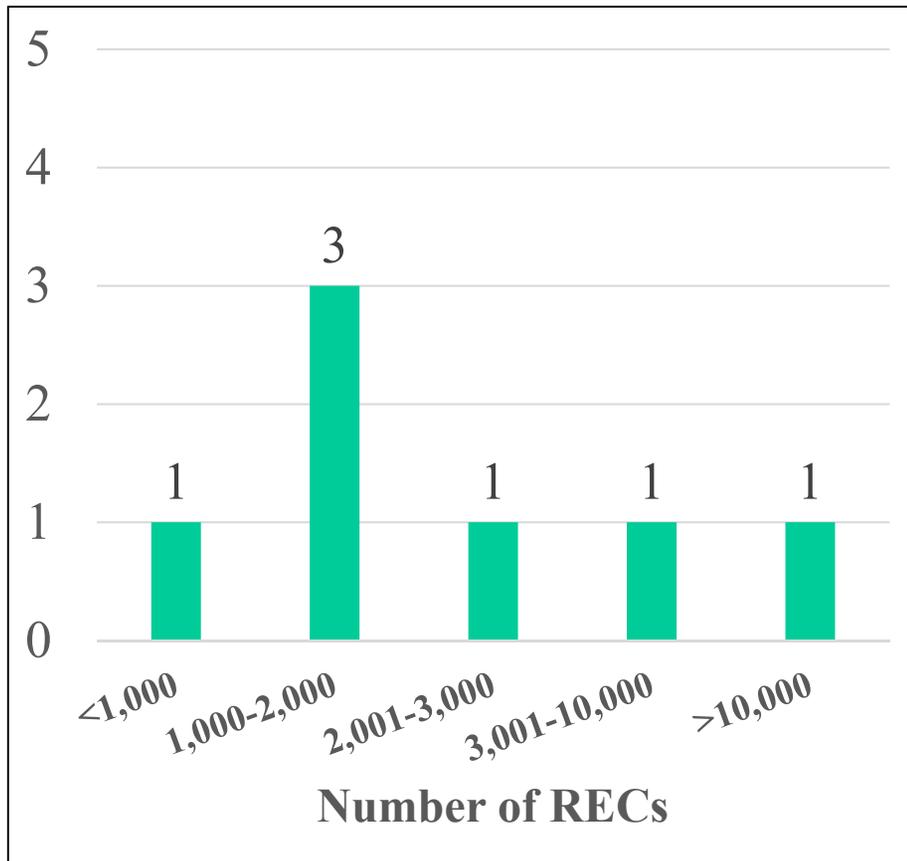
Low-Income Community Solar



Contracted RECs

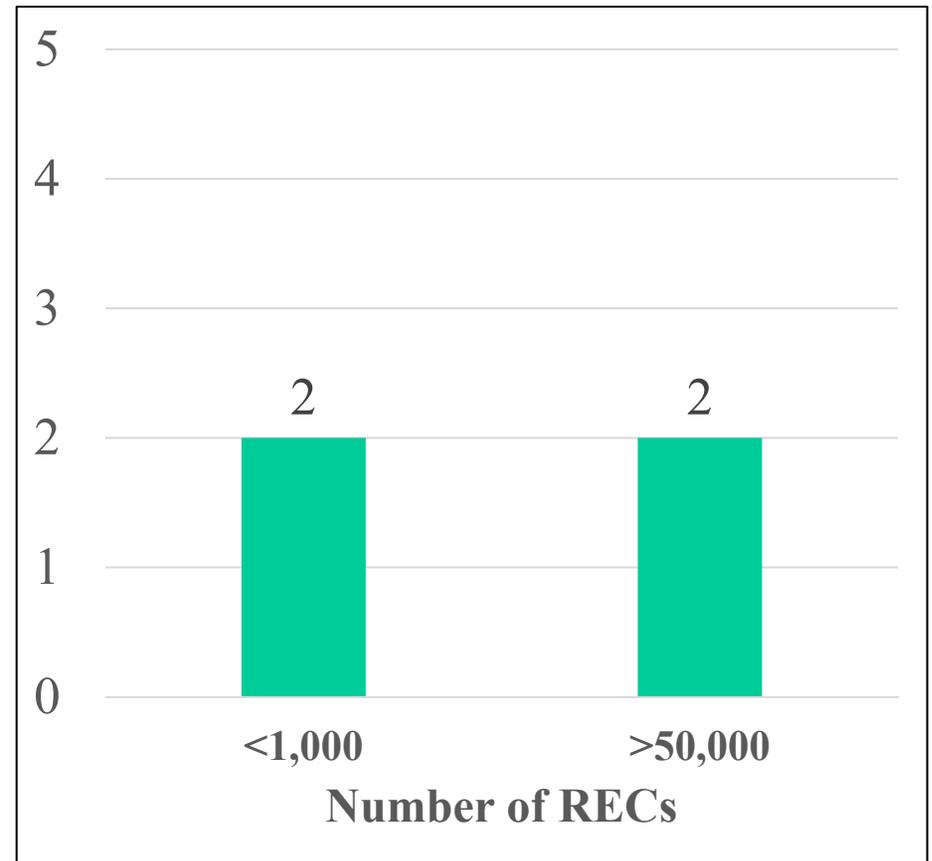
2018-2019 Selected Projects

Non-Profit/Public Facilities



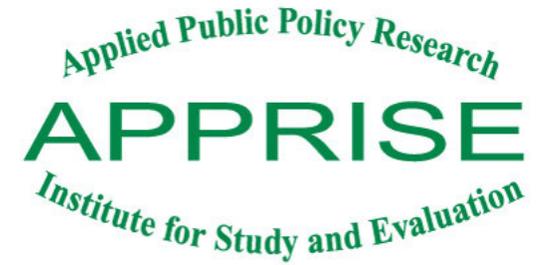
Mean # RECs = 3,932

Low-Income Community Solar



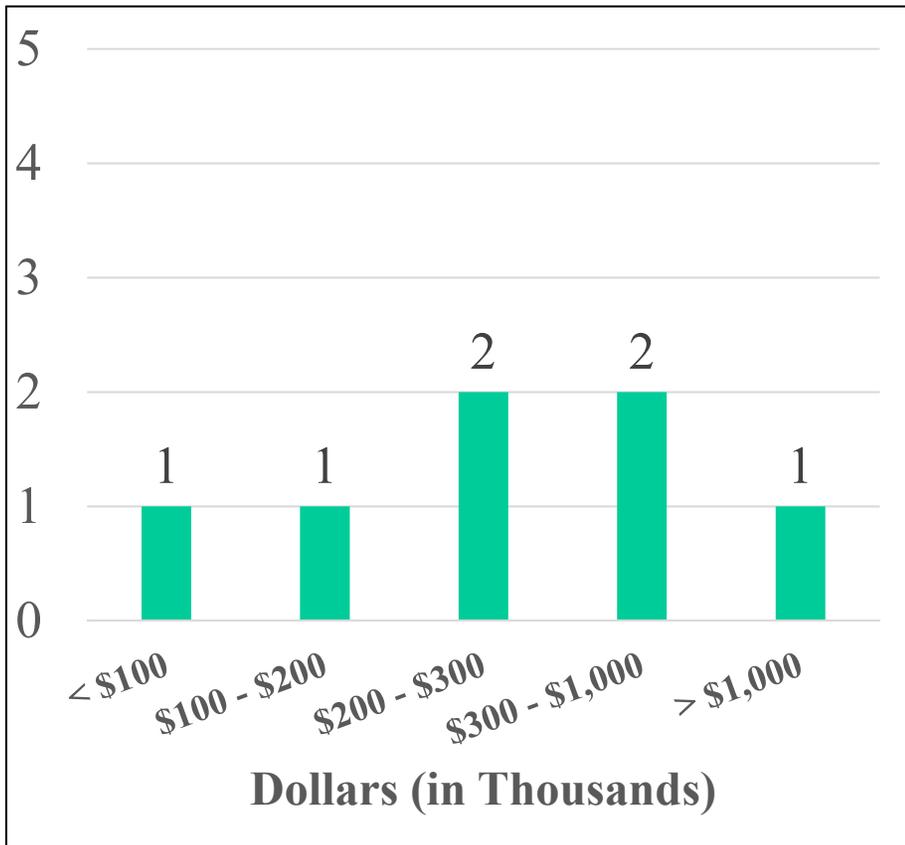
Mean # RECs = 27,450

REC Value



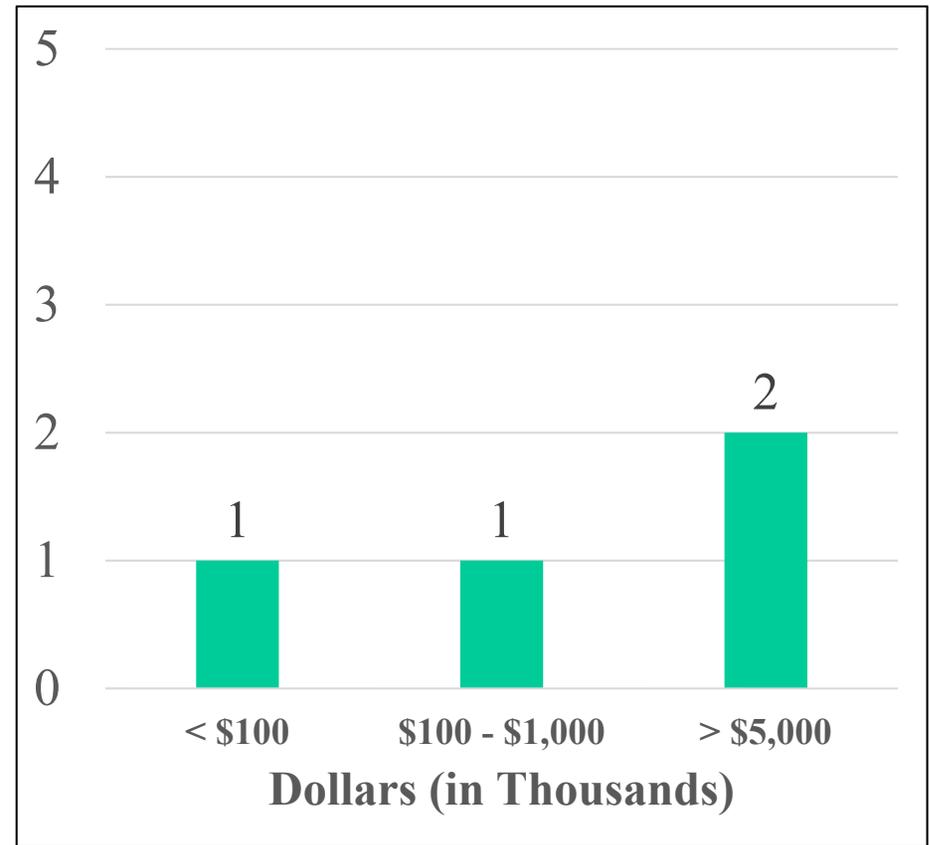
2018-2019 Selected Projects

Non-Profit/Public Facilities



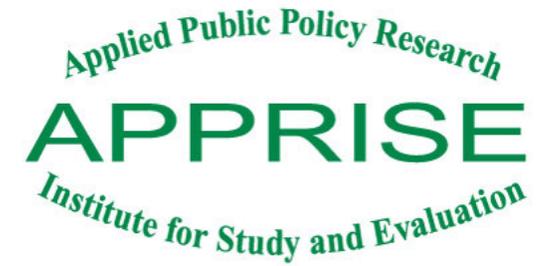
Mean REC Value = \$394,945

Low-Income Community Solar



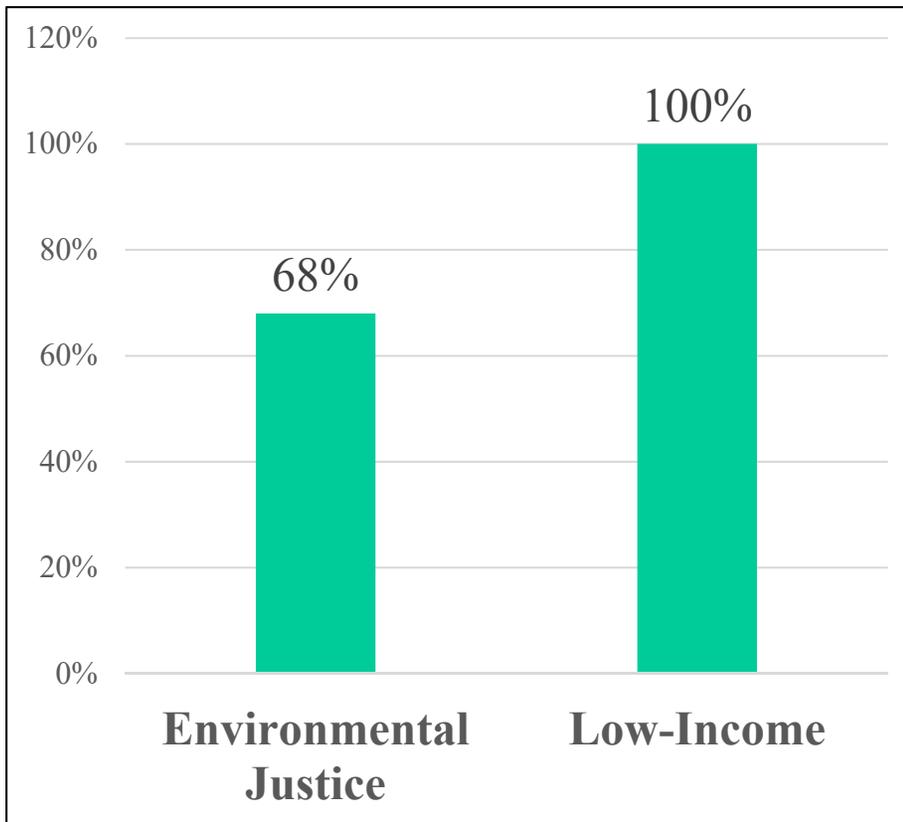
Mean REC Value = \$2,843,052

REC Funding in EJ & LI Communities

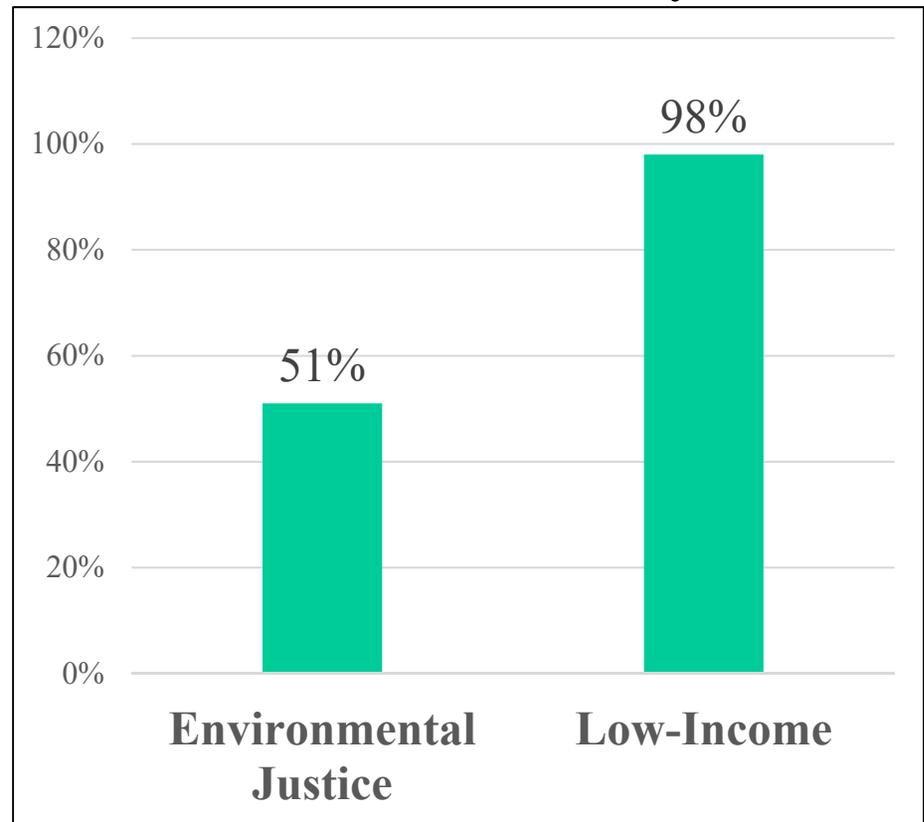


2018-2019 Selected Projects

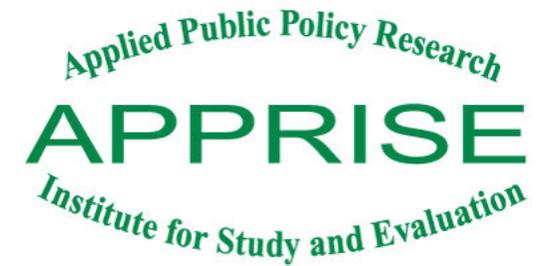
Non-Profit/Public Facilities



Low-Income Community Solar

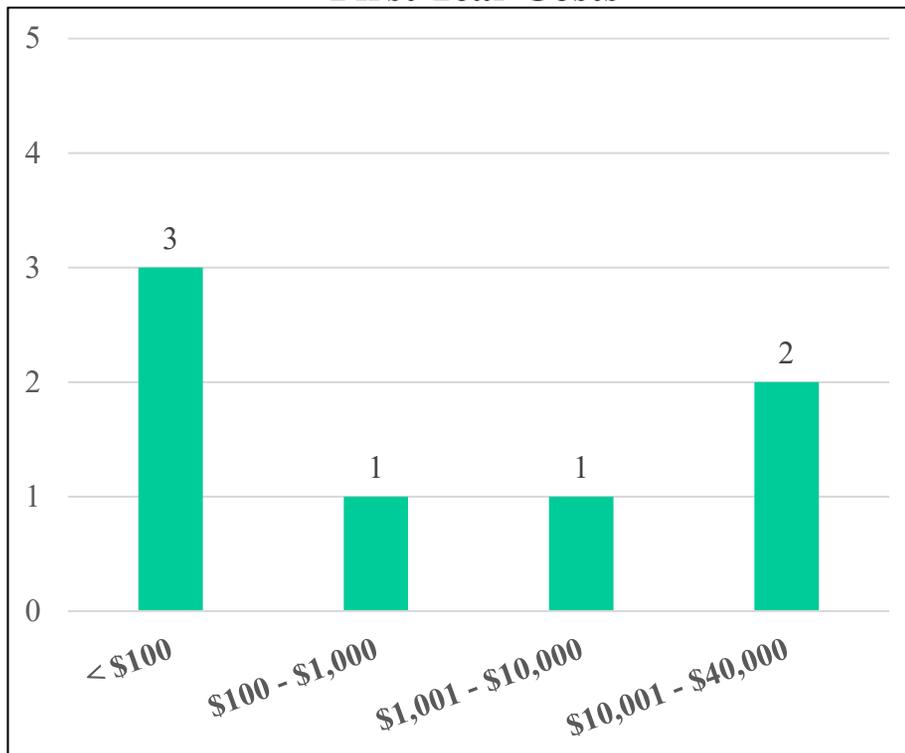


Project Costs & Savings

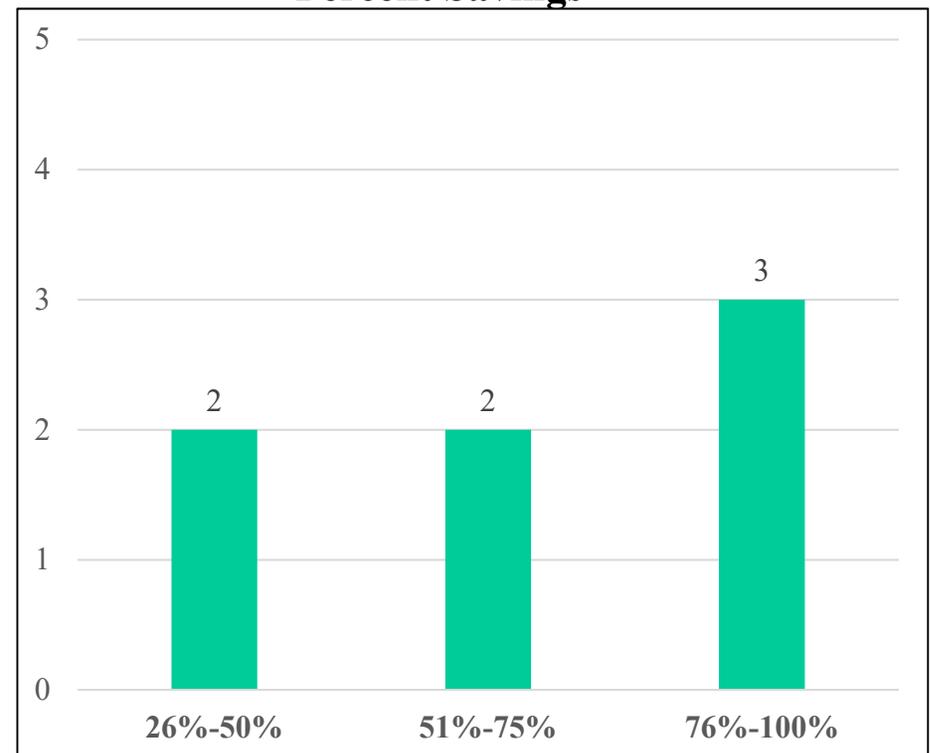


2018-2019 Selected Non-Profit & Public Facility Projects

First Year Costs

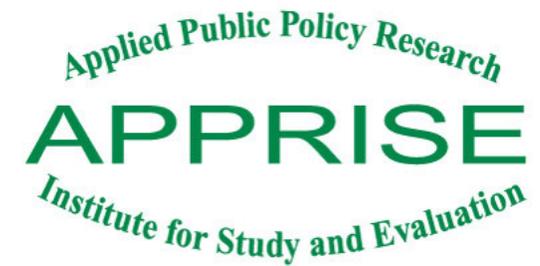


Percent Savings



Phase I Evaluation Stakeholder Outreach Design & Feedback

Stakeholder Outreach Overview



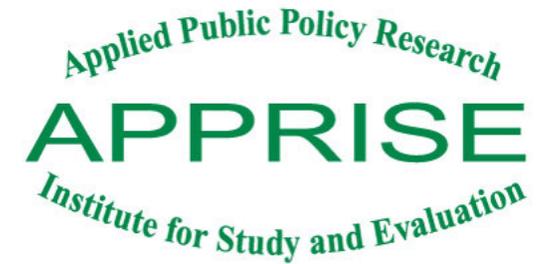
FEJA Objective

- Include interaction with stakeholders

Stakeholders

- Environmental Justice Communities
- Low-Income Households
- Affordable Housing Owners
- Job Training Organizations
- Job Trainees
- Community Organizations
- Non-Profit and Public Sector
- Solar Installers
- IL Commerce Commission
- Investor-Owned Electric Utilities

Stakeholder Feedback Solicitation



Many opportunities provided for feedback on webinars and posted materials.

**Long-Term Plan
(9/2017)**

**Stakeholder
Engagement
(11/2018)**

**Grassroots
Education
(12/2018)**

**Approved Vendor
Registration
(12/2018, 2/2019)**

**Environmental
Justice
Communities
(1/2019)**

**Third Party
Program
Evaluation
(1/2019)**

**Job Training
Requirements
(2/2019)**

**Eligibility and
Verification
(2/2019)**

**Quality Assurance
(3/2019)**

**REC Contract
(3/2019)**

**Project Selection
(4/2019)**

**Long-Term Plan
Update (6/2019)**

Stakeholder Outreach Research Methodology

16 In-Depth Telephone Interviews

More than half of the Interviews with ILSFA Working Group Members

Interviews Targeted

- ILSFA Working Group
 - Leaders
 - Non-Profit/Community Organizations
 - Solar/Energy Providers
- Non-Solar Commenters
- Solar Commenters

Interviews Conducted

- 4 Solar Companies
- 3 Solar Installers
- 3 Environmental Non-Profits
- 2 Energy Policy Experts
- 2 Solar Energy Consultants
- 2 Non-Solar Commenters

Stakeholder Outreach Participation

Feedback Opportunity

- Most common information source was email updates

Outreach Sufficiency

- 11 of 16 felt there was sufficient outreach

Potential Additional Actions To Solicit Feedback

- Meetings in EJ communities
- More meetings in Southern IL
- Reaching out to communities without projects
- More outreach to industry stakeholders

Most Interviewees had Participated

- Future interviews will include nonparticipants

Methods of Participation

- 15 attended ILSFA presentations
- 14 reviewed online content
- 14 provided written comments

Ongoing Feedback

- 14 said they would continue to provide feedback

Stakeholder Outreach

Views on Participation

Stakeholder Views on Participation

- There was sufficient participation (8)
- The ILSFA Program was open to ideas and feedback from stakeholders (10)
- The ILSFA Program responded appropriately to comments (12)

Comments

- Limited to those in renewable energy
- Some groups not well represented
 - Low-income focused non-profits
 - African Americans
 - Businesses outside Chicago
 - Businesses in EJ communities

Reported Barriers to Participation

- Pace of the program/rapid development cycle
- Limited timeline for comments
- Limited staff resources to respond
- Information only provided in English
- Overlapped with ABP submission dates
- Other non-solar projects competing for staff's attention
- Distance/ability to come to Chicago for meetings
- Complexity of information
- Concerns about confidentiality
- Technological barriers (poor audio, streaming quality)
- Need for access to ILSFA website

Stakeholder Outreach Feedback Response

Positive views on response and online comment posting

Feedback Impact

- 12 stated that their ideas were heard and taken into account
- 9 felt they had an impact on the development of the ILSFA Program
- 10 said they felt the program incorporated stakeholder comments where feasible and beneficial

Stakeholder Outreach

ILSFA Feedback

Distributed Generation

- Sub-program with greatest concerns
- Program complexity & consumer preparation
- Vendor upfront cost

Community Solar

- Support for 25% to EJs
- Higher costs in Chicago
- Few projects funded

Non-Profit & Public Facility

- Support for sub-program & increased funding
- Expand list of qualified entities
- Eligibility for NP/PF outside EJs that serve them

Community Solar Pilots

- Still in development – less feedback
- Reduce price focus, test innovative models
- Consider longer-term costs

Stakeholder Outreach

ILSFA Feedback

Environmental Justice

- Approve of definition
- Appropriate funding
- Useful ILSFA website lookup tool

Consumer Protections (AV view)

- Too much focus on consumer protections
- Not enough focus on business operations

Vendor Requirements (AV view)

- Marketing material approval not needed
- Structural requirements should apply after project is selected
- Finding job trainees may be challenging

Grassroots Education

- Some highly supported & some unaware

Program Materials

- ILSFA has effective materials
- Offer in more languages
- Modify for 8th grade reading level

Evaluation

- Measure participation, barriers, and serving challenged populations
- Assess demographic and geographic equity
- Assess WMBE firm participation
- Measure participant satisfaction
- Allow sufficient time for development before assessing

Phase I Evaluation Grassroots Education Design & Feedback

Grassroots Education Overview

Hard to Reach Communities

- Seniors, very low-income, rural, language barriers

FEJA Recognized the Challenge

- Up to 5% of ILSFA funding for Grassroots Education

Grassroots Educators

- 11 community agencies selected via RFP process

Target Issues and Priority Groups

Participant
Benefits

Job Training

EJ, geographically
diverse, & hard to
reach communities

Community
engagement,
strategies and
tactics

General energy
and solar
education

Deferred
maintenance and
solar readiness

Grassroots Education Research Methodology

11 In-Depth Telephone Interviews

Grassroots Educators

- 1.Chicago Bungalow Association
- 2.C.E.F.S. Economic Opportunity Corporation
- 3.The Chicago Jobs Council
- 4.Community Organizing and Family Issues
- 5.Ecology Action Center
- 6.Embarras River Basis Agency
- 7.Faith in Place
- 8.People for Community Recovery
- 9.Pilsen Environmental Rights and Reform Organization
- 10.Prairie Rivers Network
- 11.Sustain Rockford

Grassroots Educator Characteristics

Target Populations

- Low-income populations (5)
- Environmental Justice communities (3)
- Households with children under six (2)
- Resident associations (2)
- Elderly and disabled populations (1)
- Job seekers who are marginalized in the labor market (1)
- Any individual who qualifies for the ILSFA Program (1)

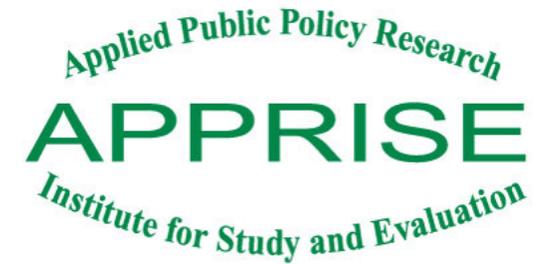
Outreach Methods

- Peer-to-peer with canvassing by community ambassadors
- Train the trainer – training other CBOs
- Videos
- Outreach offices in many counties

Focus Areas

- Cost savings (10)
- Solar accessibility due to ILSFA (6)
- Solar energy basics and utility bill impacts (3)
- Job opportunities (1)

Grassroots Educator Feedback



Barriers

- Lack of solar readiness (4)
- Skepticism about ILSFA's benefits (4)
- Lack of energy and solar understanding (3)
- Confusion with other solar programs (2)
- Lack of AVs in service area (2)

Solutions

- Referrals to other programs
- Participant testimonials
- Education from Elevate and Approved Vendors

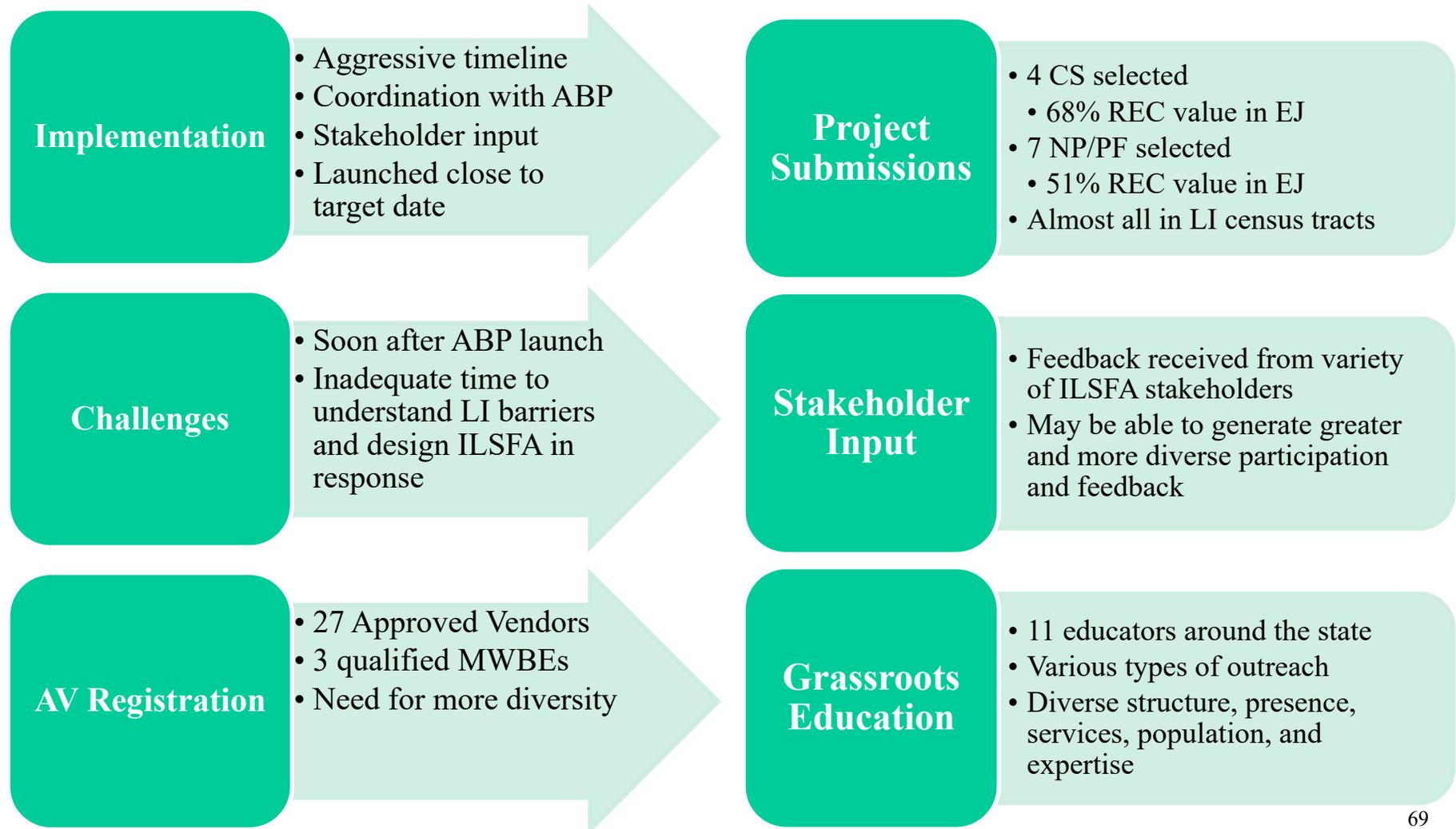
Metrics

- Event attendance and interest in participation
- Follow-up survey measurement of knowledge and interest
- Outreach participant demographics including EJ community location

Phase I Evaluation Findings & Recommendations

Phase I Evaluation

Key Findings



Phase I Evaluation Recommendations

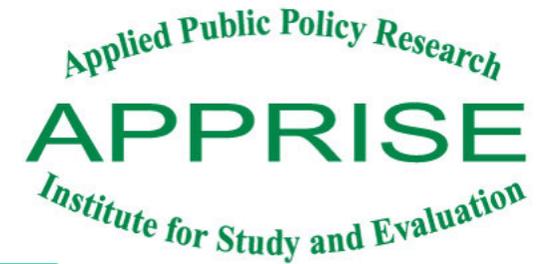
ILSFA Design

- Consider ILSFA a work in progress.
- Remain open to modifications as ILSFA evolves and additional data become available.

Materials & Website

- Information Complexity: Review and test materials with target audiences for reading level and usability.
 - Customer disclosure noted specifically.
- Participant Testimonials: Consider use in materials, website, and presentations to help potential participants overcome skepticism and fears.
- ILSFA Website: Re-organize for easier navigation, summarize AV and consumer participation steps, and provide timeline of upcoming deadlines.

Phase I Evaluation Recommendations



Stakeholder Participation Level and Diversity

- Increase response time for comments.
- Encourage ILSFA Working Group members to comment individually.
- Conduct proactive outreach to additional organizations and firms.
- Provide non-web-based opportunities for participation.
- Encourage geographic diversity with meetings in other areas of the state.
- Create presentations in Spanish and other common languages.
- Continue posting comments and responses on ILSFA website.

Approved Vendors Geographic, Size, & MWBE Diversity

- Consider AV diversity as a point area in the project diversity scoring.
- Provide outreach and education about the ILSFA to potential vendors.
- Conduct research with nonparticipating providers to understand support needed.
- Consider financing or other support to assist small businesses, perhaps with a requirement to provide DG installations in underserved areas of the state.

Phase I Evaluation Recommendations

Grassroots Education

- Continue and expand to overcome lack of awareness, skepticism, and confusion.

Participant Screening

- Coordinate with low-income energy efficiency contractors to assess low-income homes for barriers and develop list of eligible households.
- Request permission from energy efficiency participants to share information with ILSFA.
- Coordinate with job training programs to visit energy efficiency jobs and conduct solar assessments.

Phase I Evaluation Recommendations

Energy Efficiency and Home Repairs

- Encourage AVs to have customers participate in utility energy efficiency programs prior to solar installations.
- ILSFA should work with utility programs to prioritize customers approved for solar installations to have energy efficiency work done first.
- Work with weatherization and remediation programs to determine if additional funds can be made available for home and roof repairs for potential solar participants.
- Habitat for Humanity is a potential source of funding and ILSFA should assess coordination opportunities.

Job Training

- Consider whether support is needed to help individuals overcome barriers to participation in job training programs.

Data Collection

- Continue to assess ILSFA database plans to ensure data will be sufficient to meet FEJA and IPA reporting and evaluation requirements.

PHASE II EVALUATION OCTOBER 2019 – JUNE 2021

Phase II Evaluation Overview

October 2019 – June 2021 Reporting

- 2/2020, 6/2020, 12/2020, 6/2021

Provide Ongoing Feedback

- As ILSFA is implemented
- As data become available

Qualitative and Quantitative Indicators

- Projects, capacity installed, cost per kWh
- Jobs impact
- Participant impact – savings, energy burden
- Non-energy impacts – economic, environmental, electric distribution system, community awareness
- Barriers, challenges, and satisfaction
- Program administrator performance

Phase II Evaluation Components

Statutory-Required Metrics

- # of projects installed
- Total installed kW
- Average cost per kW
- # of jobs & opportunities
- Economic, social, & environmental benefits
- Total administrative costs

Evaluated By

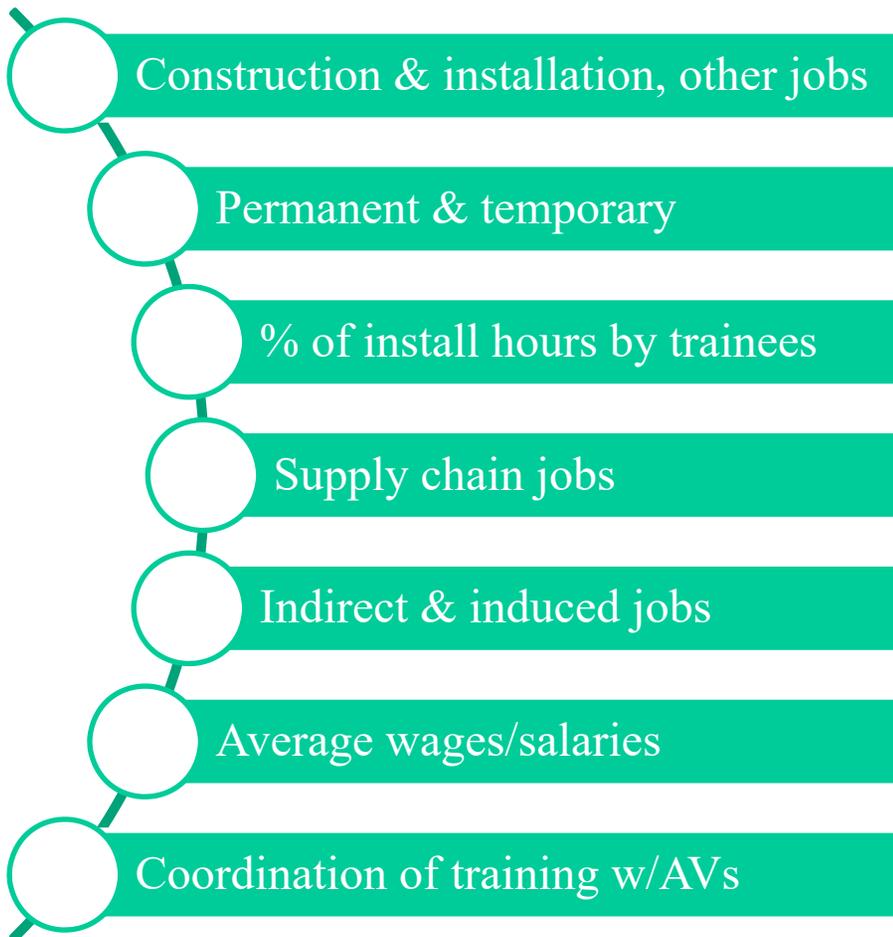
- Overall & Sub-Program
- DG & CS: Owner/Renter
- Business Model: Purchase, Lease, Power Purchase Agreement
- Geographic Regions, including
 - EJ, LI, urbanity
- Other socioeconomic & demographic characteristics

Additional Performance Metrics

- Incentive \$ awarded
- Total average \$ per expected kWh
- Housing barriers preventing DG participation
- % projects incomplete & reasons
- AV satisfaction & complaints
- Average savings by business model

Phase II Evaluation Components

Jobs and Job Opportunities



Economic, Social, & Environmental Benefits



Phase II Evaluation Components

Program Administrator Assessment

- Development and implementation of the ILSFA
- Outreach success
 - Community groups
 - Stakeholder engagement
- Approved Vendors
 - Education
 - Work with challenged AVs to bring them into compliance
 - AV feedback on experience with program administrator
- Grassroots education
- Coordination with job training and solar opportunities

Phase II Evaluation Activities

Qualitative Research

Document Review

In-Depth Interviews

- IL Power Agency Interviews
- Program Admin Interviews
- Stakeholder Interviews
- Grassroots Educator Interviews
- Approved Vendor Interviews
- Electric Utility Interviews
- Job Trainee Interviews
- Participant In-Depth Interviews

Quantitative Research

Surveys

- Approved Vendor Online Survey
- Participant Telephone Survey

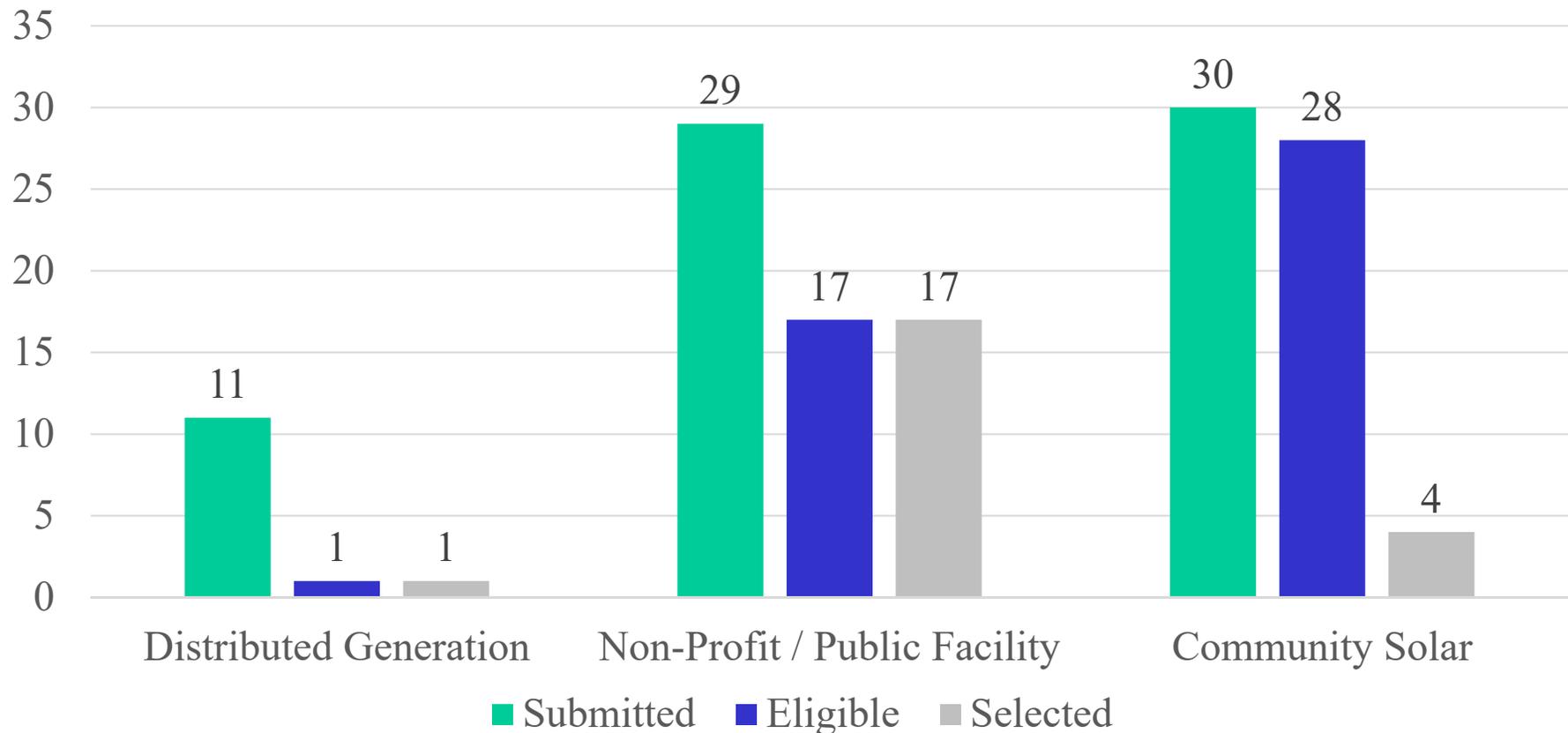
Program Data Analysis

- Approved Vendor registrations
- Project applications
- Projects selected
- Income verification forms
- Job training reports
- Annual Approved Vendor reports

Phase II Evaluation Projects Submission



2019-2020 Projects Submitted and Selected



Project data as of December 5, 2019.

Phase II Evaluation

Economic Impacts

Direct Effects		Indirect Effects		Induced Effects
Jobs and output created from the initial investment in the program.	+	Jobs and output in industries that supply goods and services to the program.	+	Jobs and the output created when the individuals who are directly and indirectly affected by the program spend their earnings.
<u>Examples:</u> installer salaries, panel purchases.		<u>Examples:</u> office supplies purchased by Approved Vendors.		<u>Examples:</u> consumer goods purchased by installers.

Phase II Evaluation

Economic Impacts



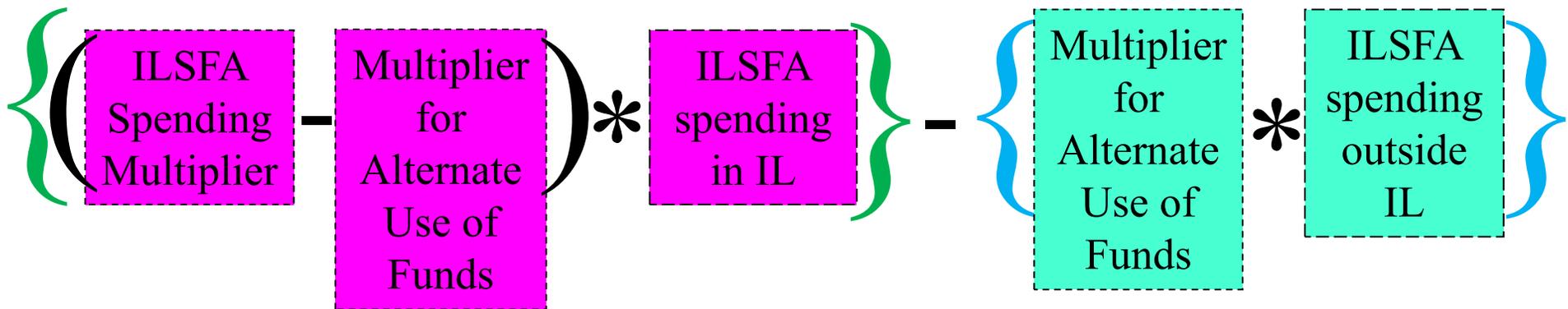
$$\text{multiplier} = \frac{\text{direct effects} + \text{indirect effects} + \text{induced effects}}{\text{direct effects}}$$

Example:

- Program expenditures (direct effects): \$10 million
- Indirect effects: \$500,000
- Induced effects: \$1 million
- Multiplier = 1.15

Phase II Evaluation Economic Impacts

Economic Benefit from ILSFA Expenditures



ILSFA spending - greater economic impact than retail.

ILSFA spending outside Illinois will not impact Illinois' economy.

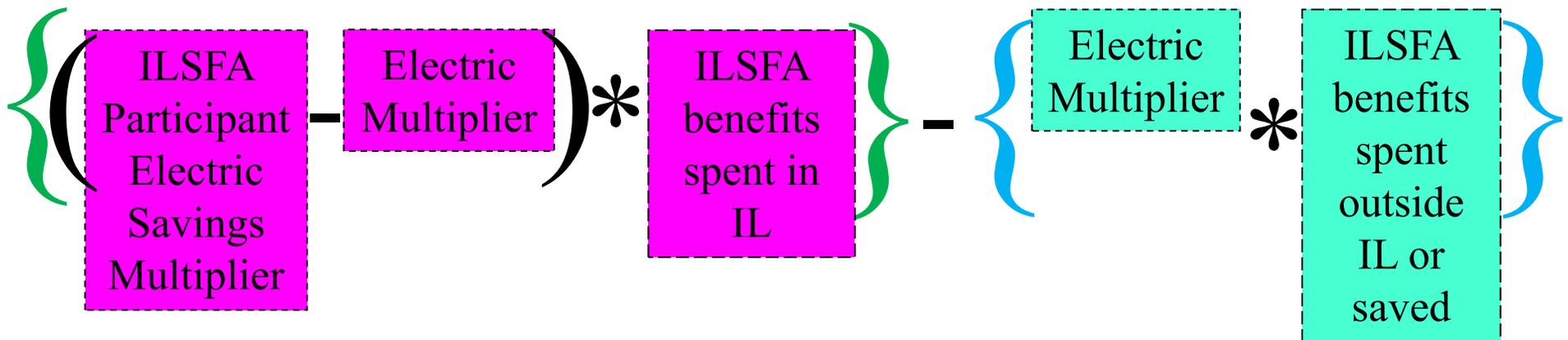
- ILSFA Funding**
- RERF: Alternative Retail Electric Supplier Payments
 - Utility Funding

- Alternative Use of ILSFA Funds**
- Retail spending
 - Saving

Phase II Evaluation

Economic Impacts

Economic Benefit from Reduced Electric Spending

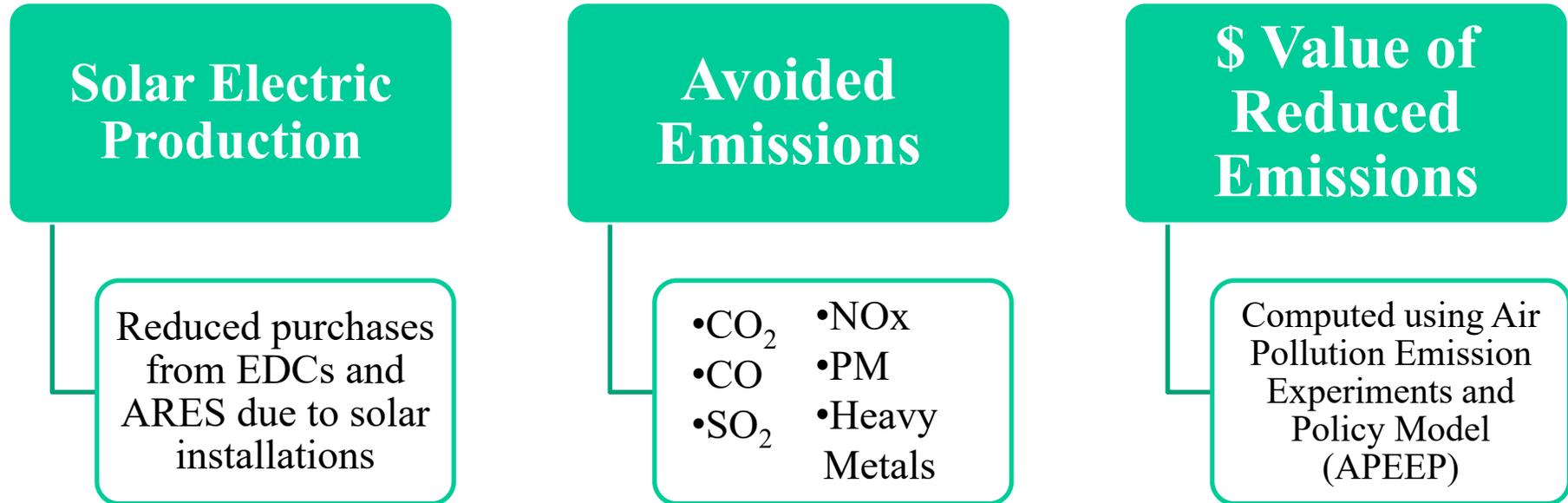


ILSFA participants will save money on electric bills. The spending on retail goods will have a greater impact on the economy than the spending on electricity.

ILSFA benefits that are saved or spent outside Illinois will not impact Illinois' economy.

Phase II Evaluation

Environmental Benefits

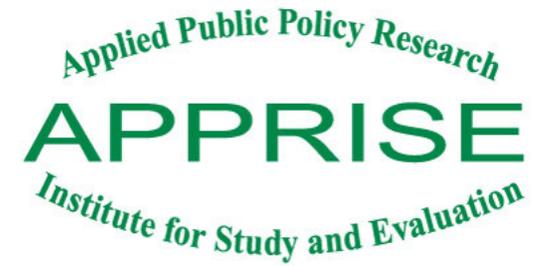


Generation Resource Mix (percent)*										
Coal	Oil	Gas	Other Fossil	Nuclear	Hydro	Biomass	Wind	Solar	Geo-thermal	Other
31.7%	0.0%	9.3%	0.1%	52.6%	0.1%	0.2%	5.7%	0.0%	0.0%	0.2%

Total Output Emission Rates (lb/MWh)							
CO ₂	CH ₄	N ₂ O	CO ₂ e	Annual NO _x	Ozone Season NO _x	SO ₂	
811.3	0.048	0.012	816.0	0.4	0.4	1.0	

Source: <https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid>.

DISCUSSION



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