

# Leveraging Energy Efficiency and Electrification Funding for Projects

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# Retrofits

- Building electrification is advancing
- Number of programs for electrification retrofits are increasing.
- Program cycles vary.
- There is not a one-size fits all for retrofits.



# Efficiency and Electrification Project Approaches

## In Progress

- In design or permitted?
- Gas Equipment specified?
- Opportunity and appetite for change
- Future proof opportunities

## Full Rehab

- 15 yr re-syndication
- Rehab
- New purchase
- Associated with other permitted SOW
- Cost effective

## Phased

- Evaluation in Year One
- Scopes of work balanced with capital investments over time

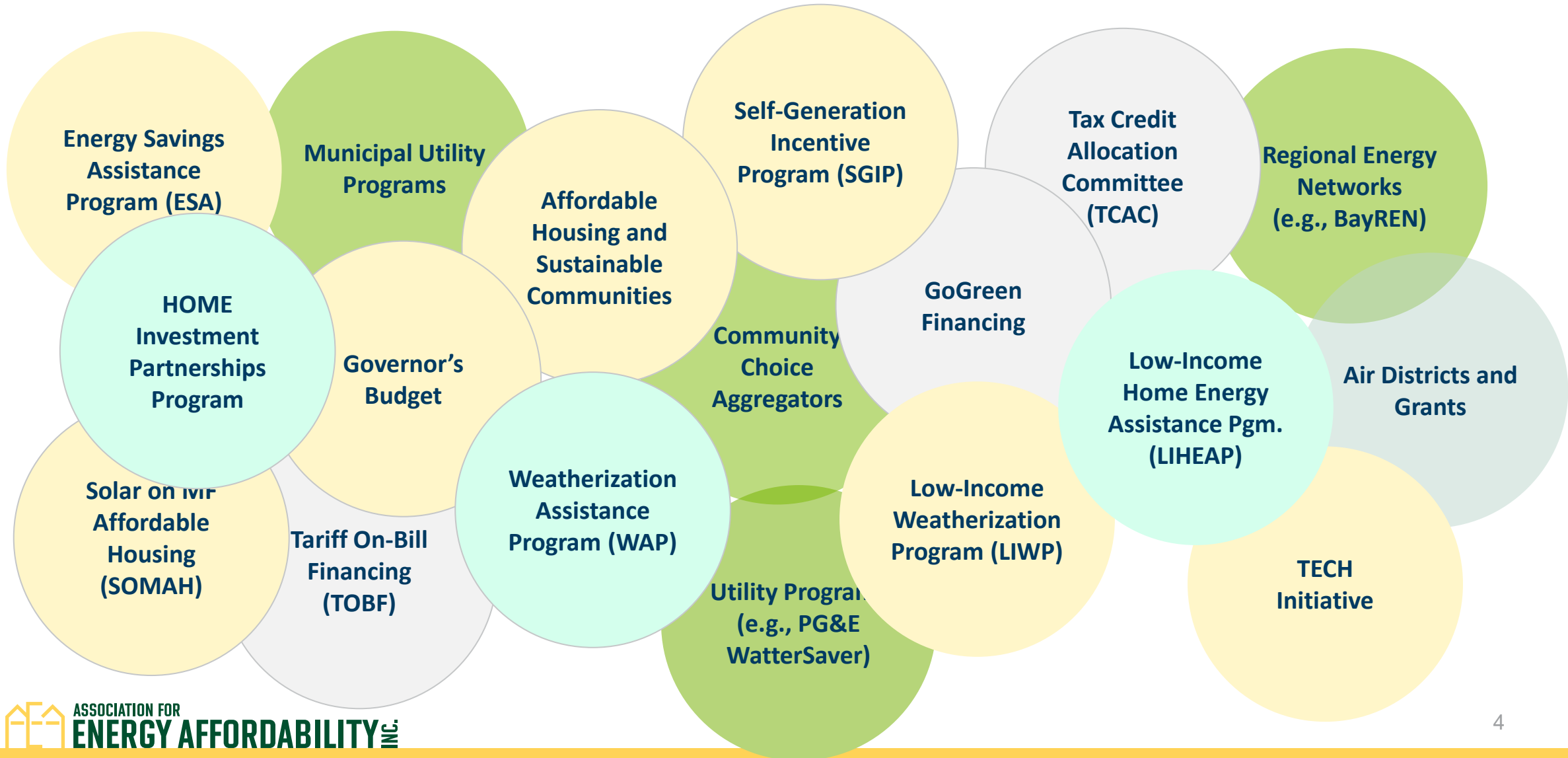
## Unit Turnover

- Evaluation in Year One
- Infrastructure in Year One
- Unit by unit at turnover

Reactive

Proactive

# Funding/Financing Programs in CA



# Program Types

## Building Type

- Multifamily
- Single family

## Income

- Low Income
- No Income restrictions

## Customer

- Owner
- Resident/Tenant

## Cost

- No cost
- Shared cost

## Geographic Targeting

- LI community
- DAC
- Service territory
- Statewide

## Technical Asst.

- Design
- Verification

## Metrics

- GHG emissions
- Energy savings

## Measure Type

- New Construction vs Retrofit
- Whole Building vs Unit level
- Comprehensive vs Individual Measures
- Different eligible measures (Energy efficiency, electrification, etc.)

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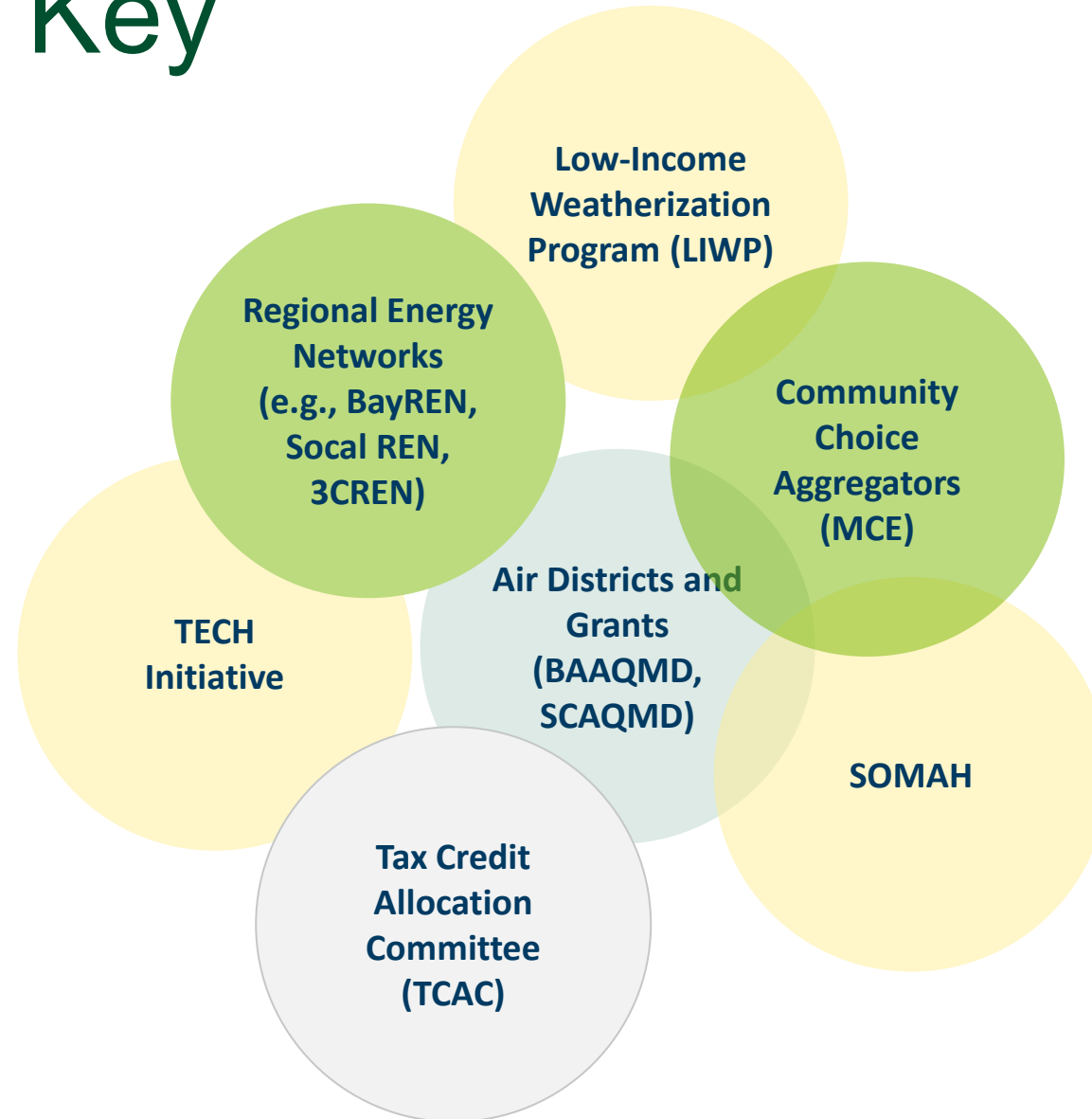
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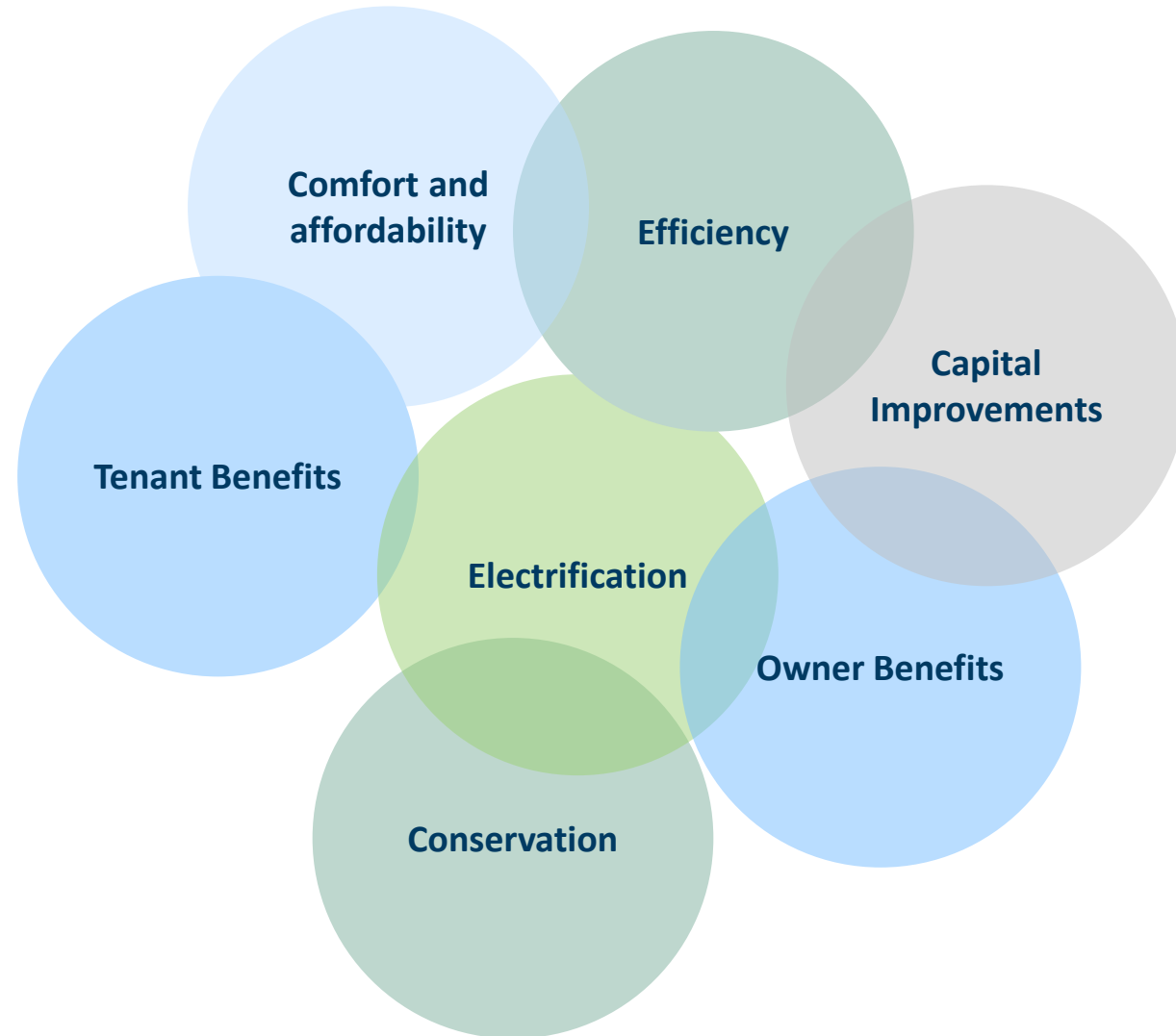
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# Layering is Key



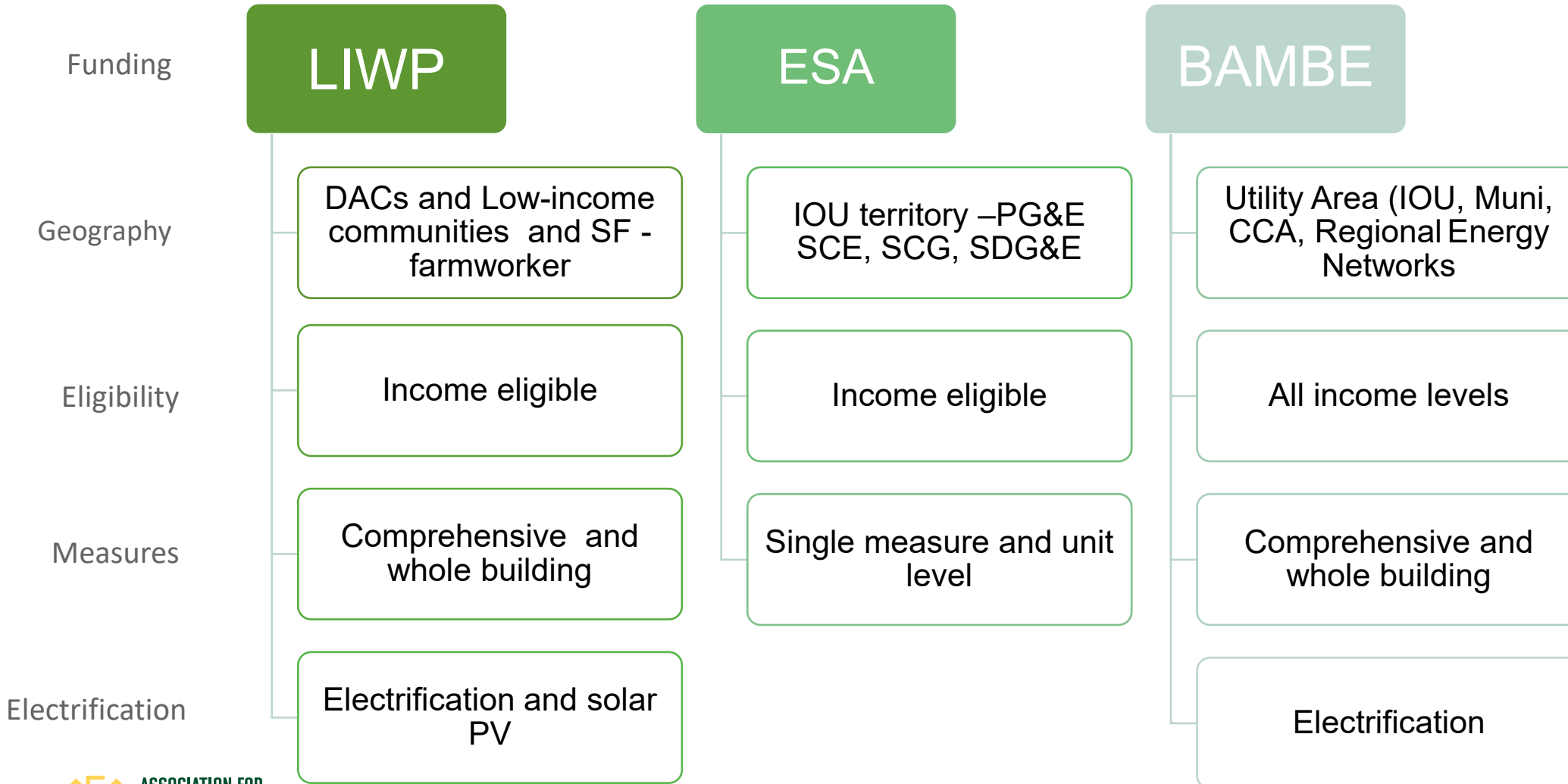


# Layering is Key





# Layering Program Considerations





High Rise Comprehensive



Low Rise Garden Style –  
Partial



Walk Up - Phased

# High Rise- Comprehensive

**120 units and 6 stories**

## Scope of Work

- High Efficiency Washing Machines
- Attic air sealing and insulation to R-38
- Central Heat Pump Water Heater
- Variable speed recirculation pump, riser imbalance repair
- Pipe Insulation
- Crossover repair
- Attic Insulation R-38
- Common Area Heat Pump Upgrade
- Thermaxx Steam Pipe Insulation

LIWP - Large Multifamily	\$123,570	Electrification and energy efficiency
BayREN (BAMBE)	\$232,700	Electrification and energy efficiency
TECH	\$142,800.00	Heat pumps
ESA CAM and ESA	\$178,900.00	Energy efficiency
Total Incentives	\$677,970	79%
Total Cost	\$855,006	
Owner Contribution	\$177,036	21%

**Incentive Programs: LIWP    BayREN    ESA    ESA CAM    TECH Multifamily**

# Garden Style – Partial

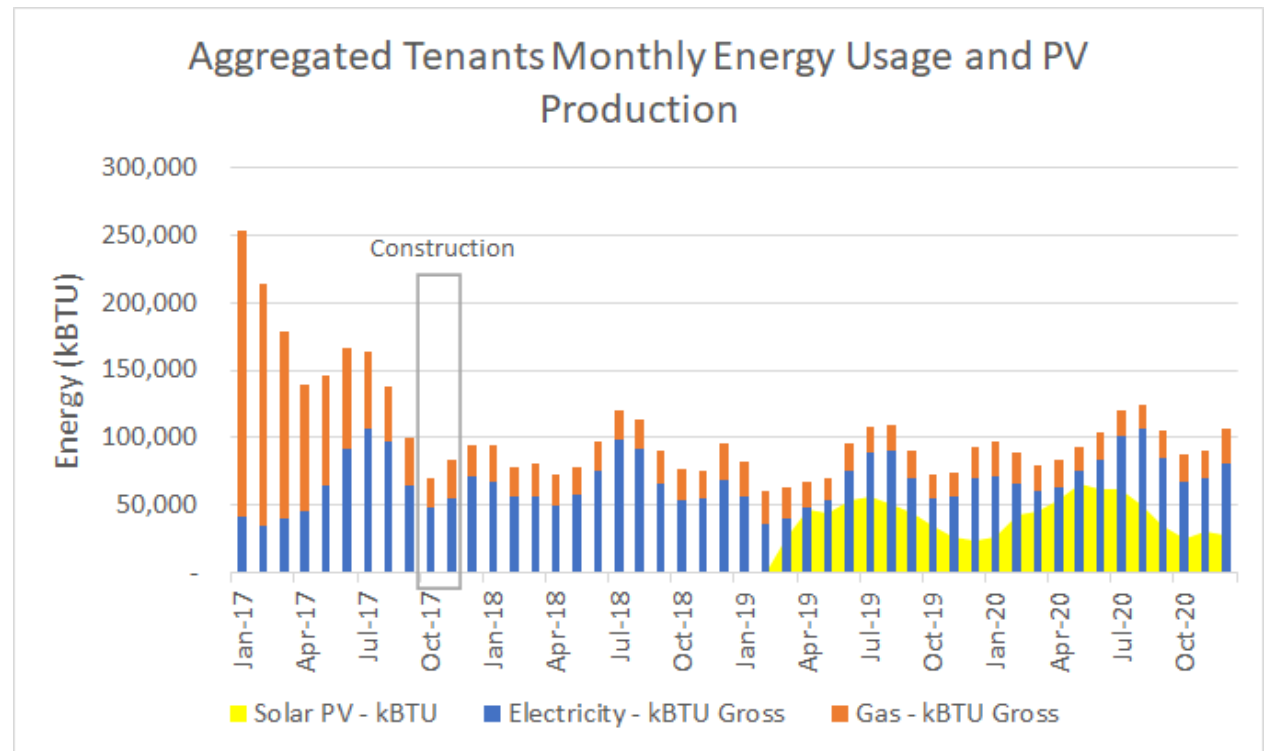
**36 units and 2 stories**

## Scope of Work

- Double pane windows
- Unitary Heat Pump Water Heater
- Variable speed inverter-driven heat pump
- Arroseal ductwork to <6%
- New LED lighting
- Low flow water fixtures
- Gas stoves remained
- Next steps: address electrical infrastructure and gas stove

**Incentive Programs: TCAC LIWP**

- Tenant kWh Savings: **-12%**
- Tenant Therm Savings: **77%**
- Tenant BTU Savings: **44%**
- Tenant Utility Cost Savings (pre-solar PV offset): **18%**



# Walk up – Phased

## 9 units and 2 stories Scope of Work

### Phase one: Completed 2018 (est)

- Install solar panels and change out sub panels

### Phase two: Completed October 2021

- Replace gas heaters with Package Terminal Heat Pumps (PTHPs)
- Replace incandescent/CFL light fixtures with LED light fixtures
- Install blown in cellulose attic and wall insulation

### Phase three: Completed June 2022

- Replace 100G gas water heater with 238G heat pump water heater
- Wall insulation
- Low flow showerheads

Phase Two		
Total Cost	\$42,011	Electrification and energy efficiency
BAMBE	\$15,750	Electrification and energy efficiency
Owner Cost	\$26,261	62%
Phase Three		
Total Cost	\$38,769	
BAMBE	\$13,950	Electrification and energy efficiency
TECH	\$16,200	Heat pumps
Owner Cost	\$8,619	22%

Incentive Programs: TECH

BAMBE

# Trainings to Support Industry

- Whole Building Science - on demand
- Multifamily Electrification 101
  - June 16th 10:00am – 11:30am
  - September 15th 10:am – 11:30am
- MF Retrofits and Electrical Assessments
  - June 17th
- MF Retrofits for Property Owners
  - June 23rd
- HPWH Design and Install
  - July 13th

Register here: <https://aea.us.org/tech-electrification-knowledge-hub/>

WELCOME TO THE ELECTRIFICATION KNOWLEDGE HUB!  
YOUR JOURNEY TO BUILD A SUSTAINABLE FUTURE BEGINS HERE



# Efficiency and Electrification Retrofits Are Possible

- Reduce loads to make equipment smaller, easier, and cheaper
- Smaller renewable energy systems to offset overall energy use
- Comprehensive scope cost offset by layering programs
- Leverage multiple programs
- Increase your knowledge level
- Be creative in approach!





# Thank You!

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