



Local Governments Empowering Our Communities

Residential Energy Efficiency Incentive Programs: Supporting Local Governments

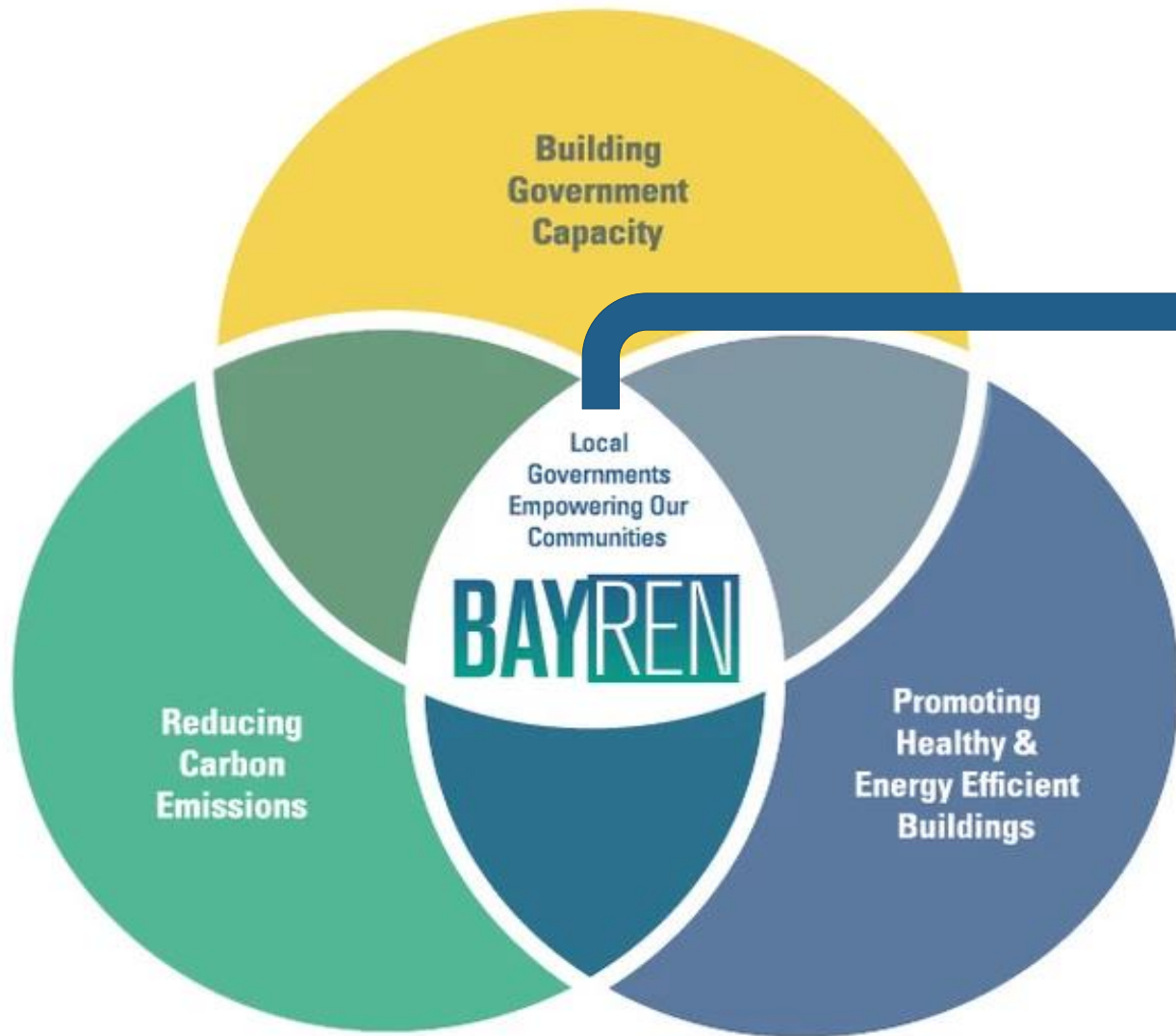
BayREN Codes & Standards Forum

September 18, 2019

Residential Programs in the Bay Area

Org.	Territory	Single Family	Multifamily
PG&E	Northern CA	<ul style="list-style-type: none"> Advanced Home Upgrade Energy Savings Assistance Plug Loads & Appliances Residential HVAC 	<ul style="list-style-type: none"> Multifamily Upgrade (MUP) Energy Savings Assistance (ESA) ESA Common Area Measures Multifamily EE Rebates
BayREN	9 Bay Area Counties	<ul style="list-style-type: none"> Home+ Home Energy Advisor Home Energy Score 	<ul style="list-style-type: none"> Bay Area MF Building Enhancements (BAMBE) Bay Area MF Capital Advance Program (BAMCAP)
MCE	Marin, Napa, & certain jurisdictions within Contra Costa & Solano Counties	<ul style="list-style-type: none"> Smart Thermostat Pilot Advanced Energy Rebuild 	<ul style="list-style-type: none"> Multifamily Program LIFT (Low-Income Families and Tenants)
SCP	Sonoma County (and Mendocino County)	<ul style="list-style-type: none"> Advanced Energy Rebuild 	
State and National Agencies	Statewide	<ul style="list-style-type: none"> Weatherization Assistance Program (WAP) 	<ul style="list-style-type: none"> LIWP (Low-Income Weatherization Program)
SVCE	Certain Jurisdictions within Santa Clara County	<ul style="list-style-type: none"> Heat Pump Water Heater Pilot (partially funded by BAAQMD grant) 	<ul style="list-style-type: none"> Heat Pump Water Heater Pilot (partially funded by BAAQMD grant)

Energy Efficiency - beyond conservation



- CO2 Emissions
- Resilience
- Health
- Equity
- Affordability
- Government Capacity

Bay Area Multifamily Building Enhancements

- Program impacts as of year-end 2018:

Since September 2013,

450+ participating properties
totalling over **31,000** units
have received over
\$23 million in rebates.



Participants have saved over

- **12.8 million kWh**
- **936,000 therms**
= **14,000 metric tons of CO₂**

Meanwhile...

- Housing affordability becomes a major problem
- Wealth gap grows
- Impacts of climate change manifesting

And!

- Business plan approval
- Arrival of CCAs

Resilience

Pilot in Sonoma County

BAMBE & Resilience

BAMBE Resilience Pilot in Sonoma County:

- Resilience audits conducted on **5 properties** enrolled in BAMBE
- Identifying synergies between EE & resilience audits

TOP HAZARD CONCERNS FOR PILOT SITES



Extreme heat



Power disruption



Air pollution
(from wildfires)

Common Recommendations

- Permanent emergency back-up power generators
 - For properties considering solar, solar + storage systems with islanding capabilities are recommended
- Enhance and communicate emergency and evacuation procedures
- Identify a means for providing a safe room or shelter on site
- Improve the envelope of the building

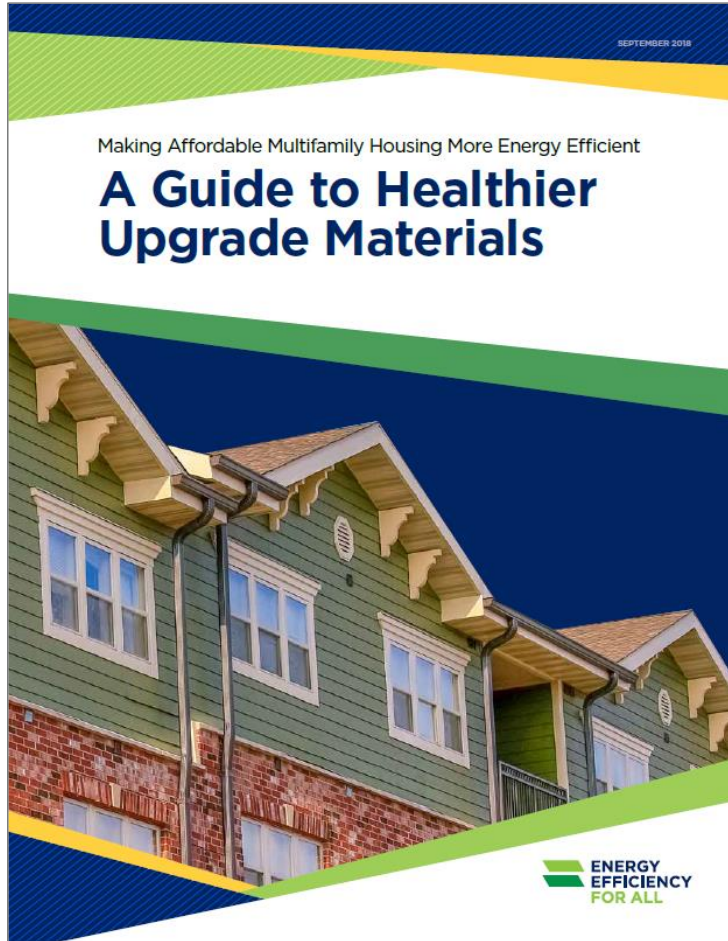
Energy Efficiency and Resilience – Synergies

Resilience Benefit	Attic, Floor, Wall Insulation & Air Sealing	Title 24 Compliant Windows	LED Lighting w/ Emergency Backup	High Efficiency Water Heating	Recirculation Pump Controls	High Efficiency HVAC	Duct Sealing
Protection from extreme weather	X	X				X	X
Enhanced visibility & safety during power outage			X				
Reduced energy load when back up generation is needed	X	X	X	X	X	X	X
Improvement of Indoor Air Quality	X	X				X	X

Resident Health

Improving Measure Specifications

BAMBE and Health



Program Changes Made

- Minimum performance specifications updated to include healthier:
 - Insulation
 - Domestic hot water heaters
 - Ducted HVAC filters
 - Outdoor lighting

Expanding Local Government Capacity

Ordinance Compliance

Berkeley's Building Energy Saving Ordinance (BESO)

- Effective July 2018 for Multifamily buildings (5+ units, and 50k+ sq ft)
- Requires either an energy assessment, or completing an energy upgrade
- Enrolling in **BAMBE** will exempt building from the first cycle of assessments
- Energy Star's Portfolio Manager Benchmarking is required for large buildings
- Scores of 80+ exempt the building (*must be verified by an assessor or the City*)
- Exemptions for substantial renovation or new construction
- Buildings 25k –49K will begin July 2019

Carbon Emissions Reduction

Bay Area Air Quality Management
District Heat Pump Pilot

BAMBE and CO2 Reduction

Heat Pump Rebates from the Bay Area Air Quality Management District

BAAQMD adders	Rebate	Per
In-Unit HPWH	\$ 1,000	each
In-Unit Heat Pump HVAC	\$ 1,000	each
Laundry HPWH	\$ 1,000	each
Pool HPWH	\$ 1,500	each
Central HPWH (per 2-30 apts served)	\$ 800*	per apt served
Central HPWH (each unit>30)	\$ 600*	per apt served
Central HPWH (each unit >60)	\$ 400*	per apt served
Central HPWH (each unit >90)	\$ 200*	Per apt served

Making EE Programs Work for Local Govs

Aligning goals through:

- Coordination
- Layering and integration
- Marketing and outreach
- Key performance indicators



Many thanks

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