



Business Planning 2016

BayREN

- A local government collaboration of the 9 Bay Area counties, representing 20% of California's population
- Focused on delivery of energy efficiency programs at the regional level, developing capacity and facilitating local jurisdictions ability to implement programs for their communities
- Numerous years of energy efficiency work through multiple Local, County, and Regional Organizations
- 3-years of Energy Efficiency Program Implementation in partnership with CPUC and PG&E (2013-15)

RENs Charge

The RENs, as directed by the CPUC, are designed to:

- Provide activities that **utilities cannot or do not intend** to undertake
- Pilot activities where there is **no current utility program offering**, and where there is **potential for scalability** to a broader geographic reach, and
- Pilot activities in **hard-to-reach markets**, whether or not there is a current utility program.

RENs Vision

- RENs are a critical part of the solution for the State's reliable and sustainable energy future that considers water, greenhouse gases, and resiliency.
- By uniting and coordinating multiple efforts at a regional level and delivering these integrated solutions, the RENs will help the State meet our aggressive goals related to climate change

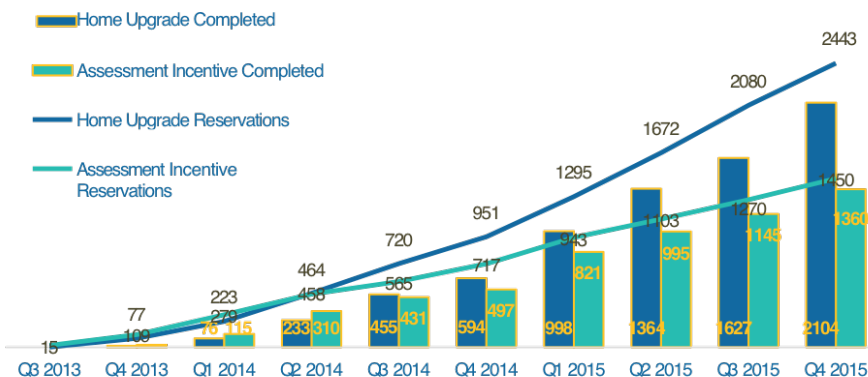
Some of the BayREN Successes

- Customers rated Home Upgrade Advisor and PAYS Programs **9 out of 10 for satisfaction** (OD EM&V)
- Successfully ramped up programs to **meet or exceed targets**
- Illustrate local government **capacity and viability as successful delivery channels**
- **Successful financing programs** that utilize private sector capital in the single family residential, multifamily residential, commercial and public sectors
- Codes and Standards enhancement programs aimed at **increasing code enforcement, compliance and reach code/ordinance development**

BayREN Impacts through 2015

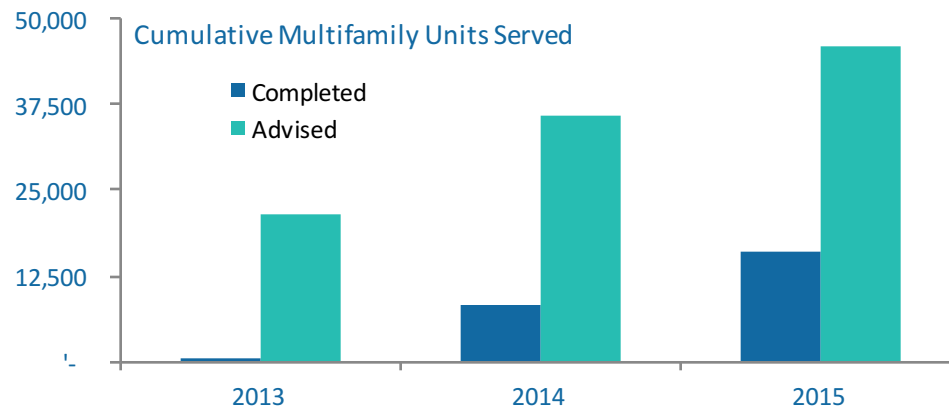
- Single Family
 - 2443 homes upgraded
 - 895 customers advised
 - 339 homes in pipeline

Projects Completed & Reserved



- Multifamily - BAMBE
 - 15,896 units upgraded
 - 46,600 units advised
 - 19,400 units in pipeline

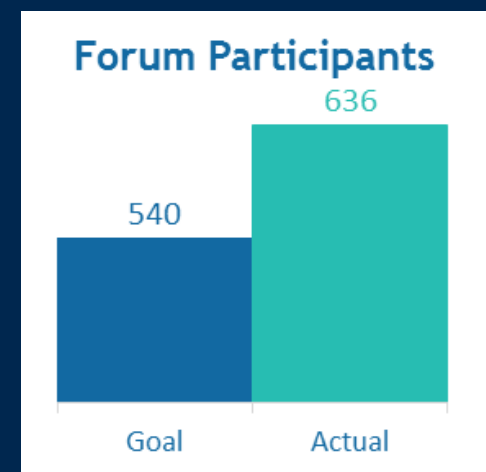
Cumulative Multifamily Units Served



BayREN Impacts through 2015

- Financing
 - Multifamily Capital Advance: 3 loans worth \$879,000, leveraging \$1.3 M private capital
 - PAYS On-Bill: projects at 3 municipal water agencies
 - Commercial PACE: 20 projects with “Project Finance Report” representing \$5.9M in value
 - Negotiated Agreement for Region
- Codes & Standards
 - Building professionals from 75+ communities engaged
 - Energy code training and best practice development
 - Best Practice Report on C&S

Codes & Standards



BayREN Strengths to Build Upon

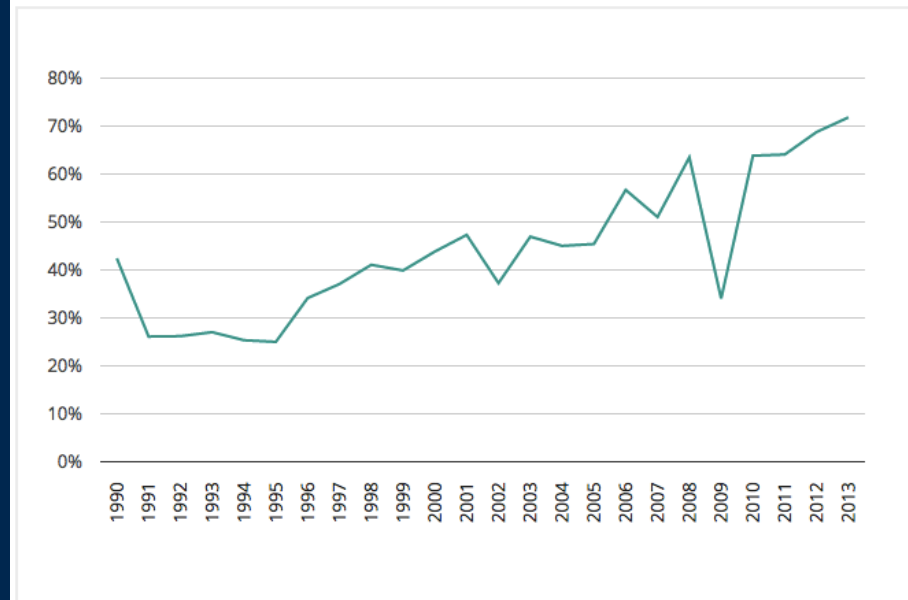
- Flexibility to incubate and innovate new program models for larger scale adoption
- Ability of local government to connect to community
 - Ability and desire to address hard-to-reach markets
 - Trusted advisor with technical expertise & local knowledge
 - Strong engagement with Communities
- Integrated approach to efficiency
 - Energy and water
 - GHG and climate action planning
 - Community development and resiliency

Bay Area Trends

- 7.4 million residents
 - Diverse population (24% Hispanic; 24% Asian)
 - 12.7% of population is over 65
- 2.8 Million Housing Units
 - Majority built before 1978
 - 45% is renter occupied
 - Strong growth in Multifamily

FIGURE 4.5

Multi-Family Units as a Proportion of All Permits Issued
Bay Area (1990-2013)

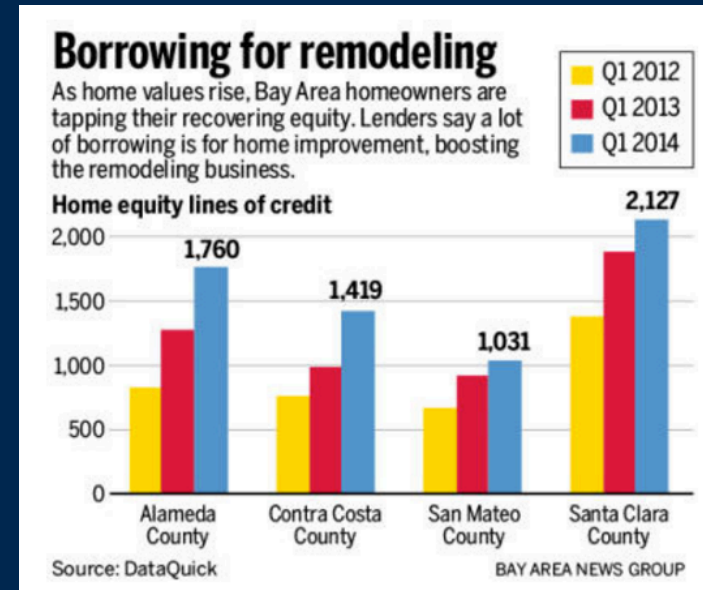


Source: ABAG from California Housing Foundation and Construction Industry Research Board data

[VIEW LARGER](#)

Bay Area Trends

- Bay Area economy is recovering
 - Volume of building activity has finally increased from 2008-2012
 - Increase in home remodeling loans (75% increase in applications over year)
 - Nationally 42% of improvement loans are for houses from 1970 or older
 - Increasing income disparity with low and middle wage groups not recovering as quickly



Energy Efficiency Program Trends

- Performance vs. prescriptive – a long-term view to Energy Efficiency
- Meet customers where they are
 - Harness trigger points – Remodels, Sale
 - Address multiple benefits and engage long term
 - Understand bundles and big projects may not be affordable
- Capture all opportunities for energy savings
 - Use data as an engagement tool (over 80% of homeowners have a SMART Meter)
 - Address behavior

Seeing Challenge as Opportunity

- Code as baseline needs a reality check
 - Ratepayer programs can't capture savings for existing homes and small business buildings that are below code
 - Compliance with energy code is low (HVAC permits pulled for less than 10% of jobs)
- ZNE can only be achieved by joining EE and Solar programs
- Energy savings from behavior change can be quantified and is substantial
- Real Estate/Mortgage valuation of EE measures must be quantified in a market-friendly way

Single Family Customers

- 1.5 million single family detached units in BayREN territory; 65% built before 1978
- BayREN opportunities within this market:
 - Over 40% of energy use is from appliances, electronics and lighting
 - Estimated that 75% of builders will be considered “green” and 60% incorporating green measures
 - Inconsistent quality and training for contractors
 - “Perfect information” does not drive changes in decisions or behavior

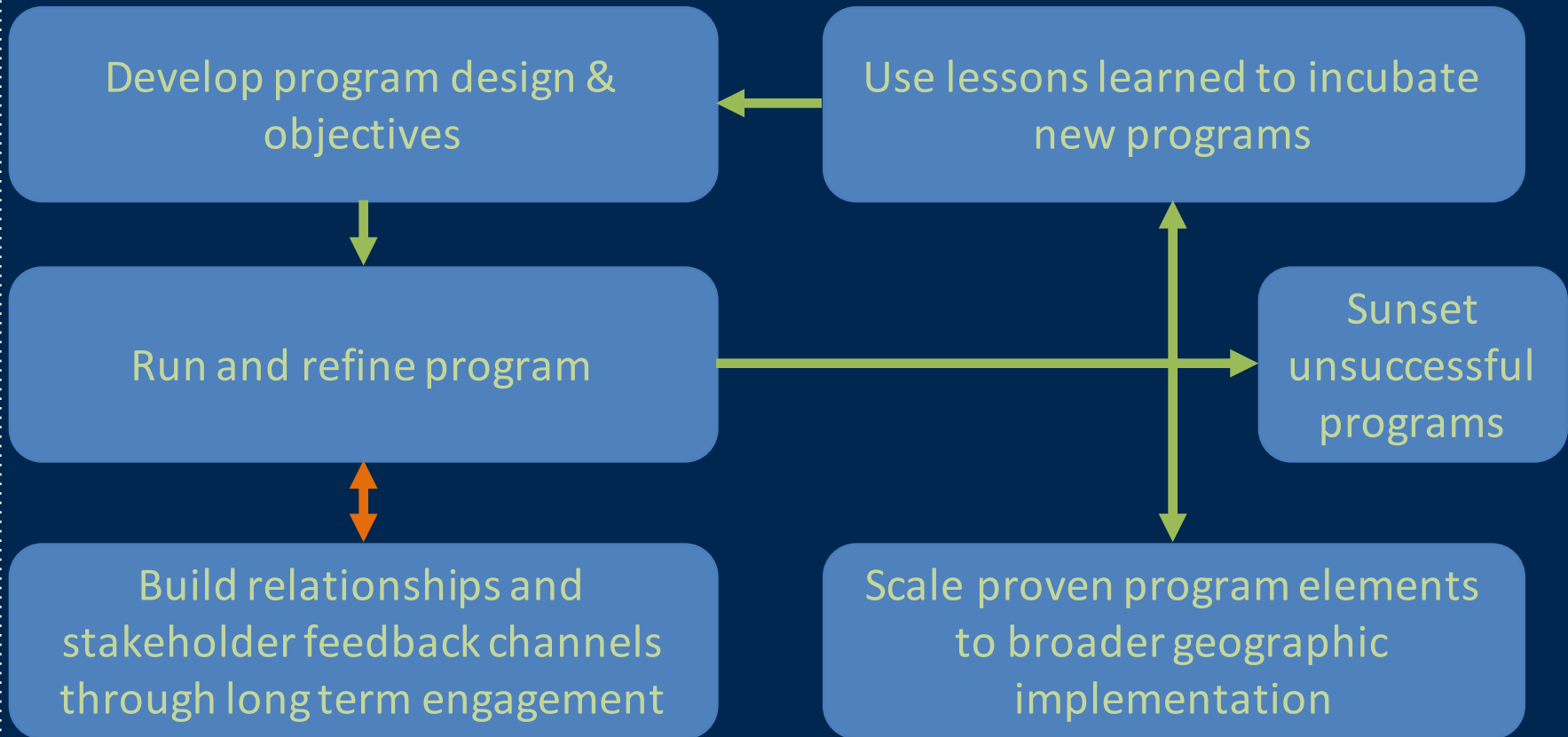
Multifamily Customers

- 700,000 multifamily units in BayREN territory
 - 25% of all residential units (and growing)
 - Energy use: space heating (22%)/water heating (39%)
- BayREN opportunities within this market:
 - Address subsector-specific needs (decision making in owner-occupied units, split incentive in rental units)
 - Support local government disclosure ordinances
 - Financing that works with industry practices
 - Increase access to data to inform upgrades and behavior
 - Long-term relationships to influence upgrades over time and at unit turnover, pursue ZNE and operational savings

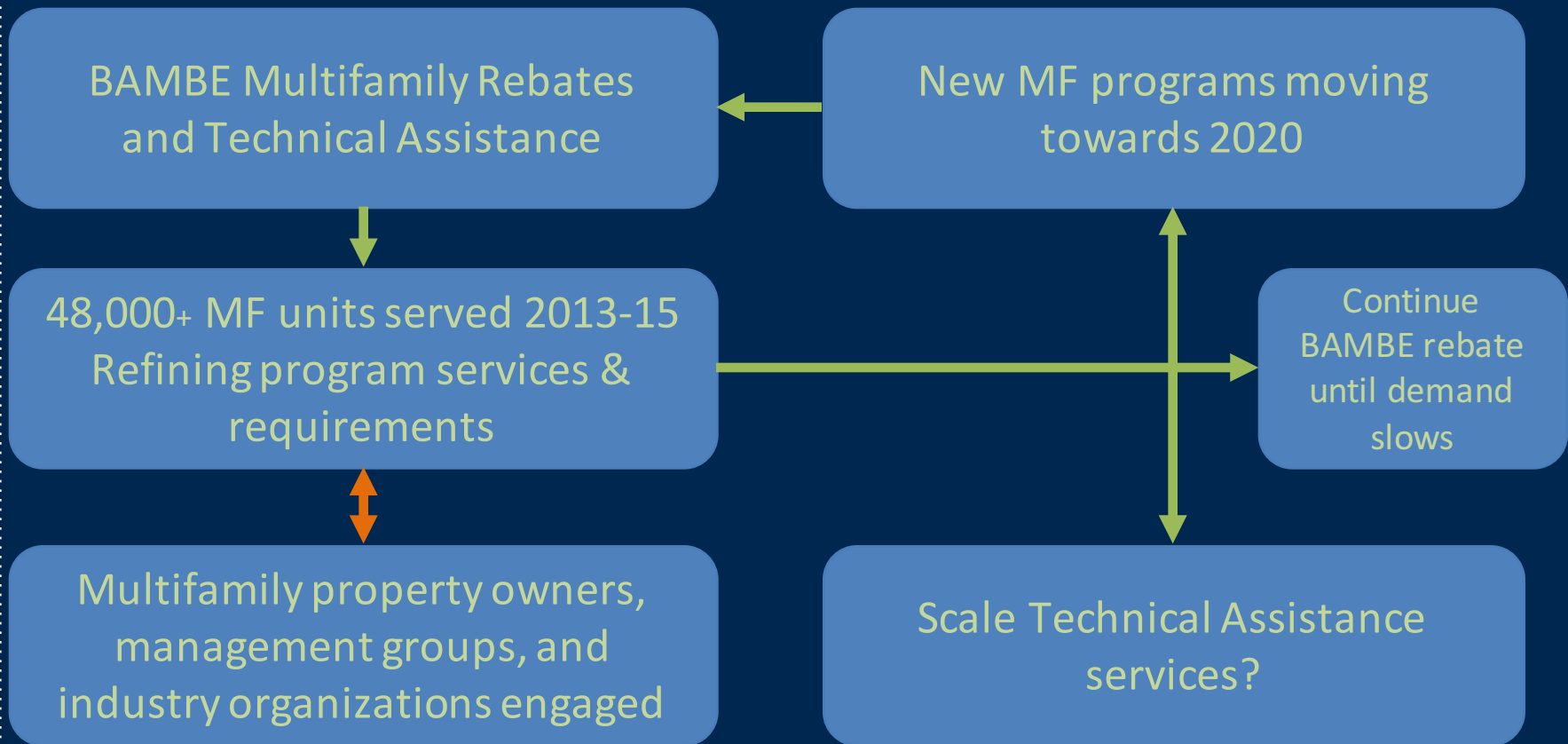
Small/Medium Commercial Customers

- 2 million sq ft of commercial floor stock in PG&E electric territory
 - Assume 200,000 buildings and ~600,000 utility customers
 - Significant percentage of this is in BayREN Territory
 - High potential for energy savings (lighting, roof, HVAC)
- BayREN opportunities in this market:
 - Drive demand for energy saving measures through education
 - Address split incentive (property owners/tenants and managers)
 - Financing with short-term payback & no-to-little impact on net operating costs
 - Increase access to data to inform upgrades and behavior

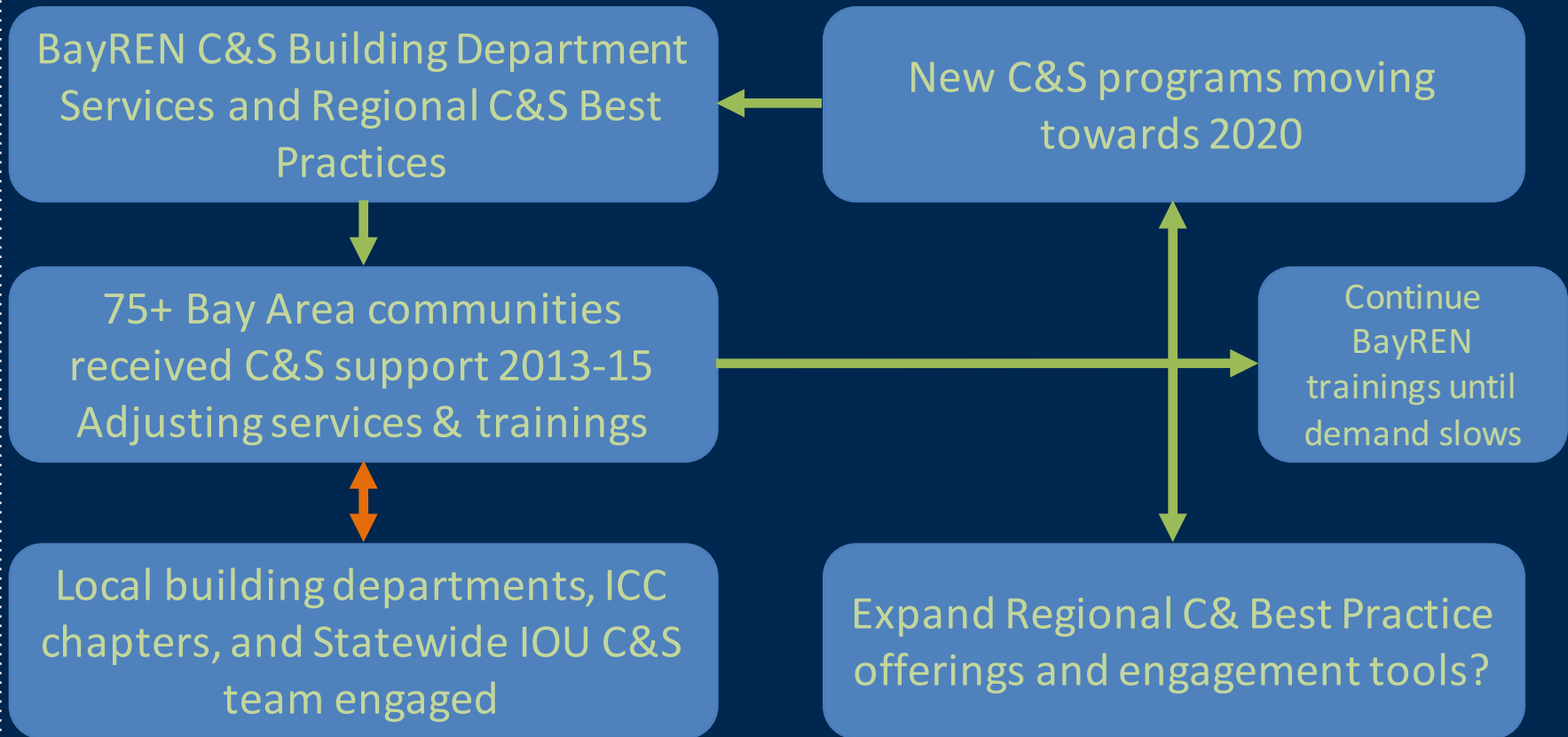
BayREN's Approach to EE Programs



BayREN's Approach: MF as Example



BayREN's Approach: C&S as Example



2016 forward: Provide Excellent Service

Residential Programs

Single Family

- Home Upgrade Rebates
- Home Upgrade Advisor

Multifamily

- BAMBE Bundled Rebates
- Technical Assistance
- BAMCAP Financing

Commercial Programs

- Commercial PACE

Cross-Cutting Programs

- Codes & Standards

- PAYS / On-Bill Water Pilots

2017-18: Grow Existing Services

Residential Programs

Single Family

Home Upgrade Rebates

Home Upgrade Advisor

Resilient Home

Multifamily

BAMBE Bundled Rebates

Technical Assistance

BAMCAP Financing

Municipal Programs

Turnkey Project Delivery

Commercial Programs

Commercial PACE

Small/Med Commercial Advising

Cross-Cutting Programs

Codes & Standards

On-Bill Water Utility Partnerships

Green Labeling

PACE Marketplace

The Sustainable, Resilient Home

Finance solutions for a smart and safe home

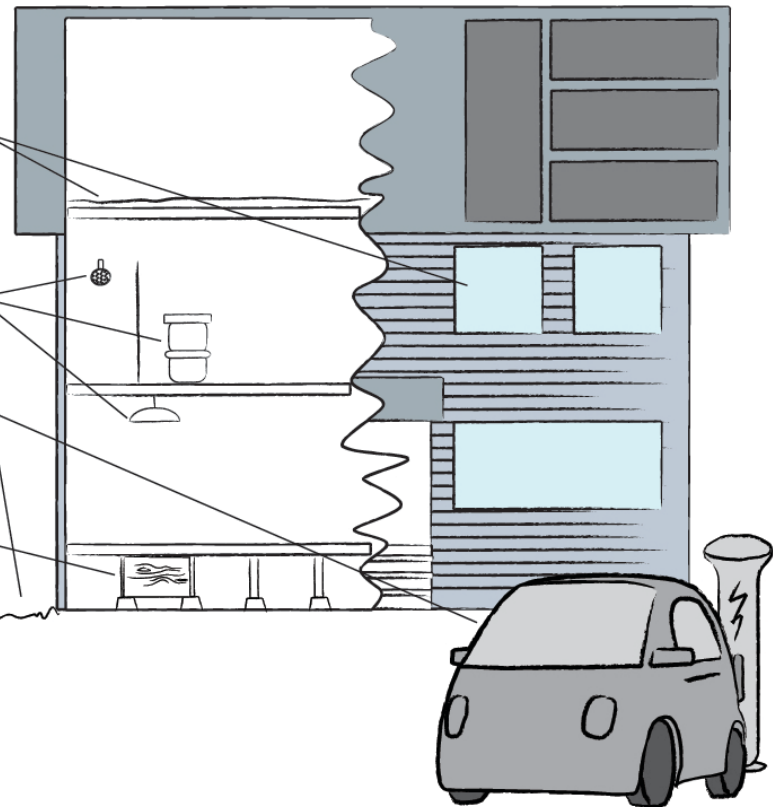
Goal - A smart home.
Invest in water and energy conservation strategies to improve efficiency, and reduce utility bills.

Goal - A safe home. Invest in seismic upgrades to prevent injury in future earthquakes, and reduce costly building damage.

Available Finance Strategies

- \$ Home Upgrade
- \$ Advanced Home Upgrade
- \$ BayREN Multifamily Capital
- \$ BayREN Bay Area Multifamily Building Enhancements (BAMBE)
- \$ PAYS (electric & water)
- \$ Landscape Incentives
- \$ BAAQMD Bay Area PEV Ready
- \$ Property Assessed Clean Energy & Seismic Retrofit Loans (PACE)
- \$ CEA Brace & Bolt

\$ Loan financing
\$ Incentive funds



2019-26: Evolve and Integrate Services

- Explore program options to address
 - Performance/achieved energy savings
 - Behavior & existing conditions
 - Multiple benefits delivered by EE projects
- Improve program capacity to integrate and harness:
 - Financing and real estate/mortgage valuation
 - Long term customer engagement
 - ZNE and water efficiency requirements
- Develop program designs intended to fully leverage:
 - Data, labeling, and disclosure mechanisms
 - The increased presence of CCAs
- Sunset programs that are unsuccessful or fully penetrate the Bay Area market

How to Increase BayREN Impact

- Long term commitment to REN programs
- Continued experience and consistent presence in market increases stakeholder buy-in and support
- Balancing resource and non-resource programs in collaboration with other PAs improves services for all
- Increased funding allows more robust program capacity
- Expand partnerships with other Local Government agencies to leverage opportunities