

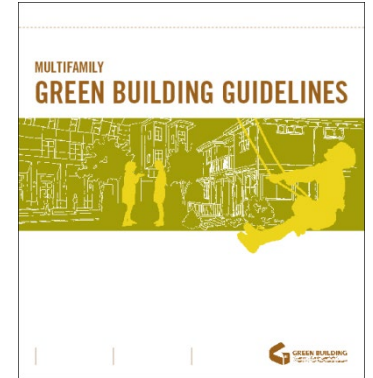
Accelerating Electrification of CA's Multifamily Buildings

Policy Considerations

June 8, 2022

Agency Built Environment & Multifamily Housing

- Green Building Grants to Non-profit Housing Program
- Partnership with Energy Foundation to develop Green Rating System for MF Retrofits
- DOE Better Buildings & CEC State Energy Program Multifamily Stimulus
 - Multifamily Home Energy Retrofit Coordinating Committee
- Bay Area Multifamily Building Enhancements (BAMBE)
 - BAMBE Clean Heating Pathway (Electrification)
 - BAMBE Healthy Homes Initiative with Alameda and Contra Costa County
- CEC Local Government Challenge Grant: Accelerating Electrification of MF Buildings
- Multifamily Electric Vehicle program with the BAAQMD
- Multifamily Financing with the Bay Area Regional Housing Finance Authority



Improving California's
Multifamily Buildings:
Opportunities and
Recommendations for Green
Retrofit & Rehab Programs

*Findings from the Multifamily Subcommittee
of the California Home Energy Retrofit
Coordinating Committee*



Final Report
April 11, 2011

Background

- **Funded by CEC Local Government Challenge Grant**
 - <https://www.stopwaste.org/accelerating-multifamily-building-upgrades>
- **Part 1 - Policy context & considerations, for policy makers**
- **Part 2 – Functional technical guidelines, for implementers**



Part 1 – The Value Proposition of Electrification in Multifamily Housing

- Existing Policy & Initiatives
- Factors Specific to MF
- Policy Considerations

Existing Policy & Initiatives

- SB 350, SB 1477, AB 3232, AB1232
- Few local ordinances for *MF existing buildings*, current electrification ordinances mostly focus on
 - No new gas for *new construction*
 - Electric Vehicle charging infrastructure for MF (~ 33 CA jurisdictions have policies)
 - [2019-adopted-reach-codes.pdf](#)
 - [Microsoft Word - Group B D33 Case Study 3 Reach Codes 9-28-20 \(calmac.org\)](#)

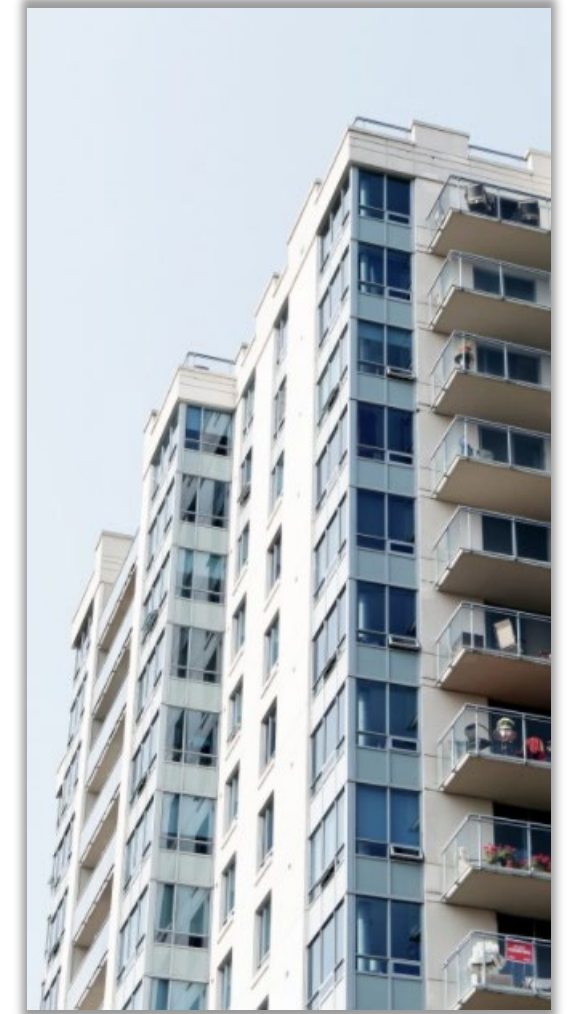


Factors Specific to MF

- MF housing is multifaceted, which varies the decision making process
 - Size and configuration
 - Ownership type
 - HVAC and DHW systems – central and unitary
 - Owner paid vs. tenant paid utilities
- Affordable housing has subsectors
 - Deed-restricted
 - NOAH



Trishia Caguat and Kathy Lawton of the City of Suisun City



Opportunities to leverage for MF upgrade installations

Trigger Event	Scope of Upgrade
Tune-up/ Spruce-up	Ongoing maintenance of mechanical equipment or lower cost, easier-to-implement measures that spruce up a property at time of sale or purchase such as servicing mechanical equipment, repainting common areas, or landscape & irrigation improvements.
Replacement	Replacement of specific central or individual equipment that is broken or aging, including water heaters, boilers, furnaces, air conditioners, appliances, lighting and irrigation systems.
Unit turnover	Unit-specific improvements made when occupants vacate. Common as standard building maintenance upon vacancy to undertake painting, carpet replacement, address moisture intrusion and other minor repairs, appliance replacement, and accessibility improvements.
Retrofit	Usually more limited in scope than a whole-building rehab, retrofits typically consist of a package of coordinated improvements designed to achieve a specific goal, such as seismic safety or energy efficiency.
Rehab	Building-wide overhaul may include remodeling common areas, upgrading structural elements, installing new electrical, plumbing and mechanical equipment, and more.

Coordinate incentive offerings across a multitude of funding sources

- MF Property owners utilize various sources of funding to undertake property enhancements
 - Policies need to align with funding requirements in order to successfully implement upgrades
- Federal Programs & Affordable Housing Finance
 - Weatherization Assistance
 - HUD Green Retrofit, Neighborhood stabilization, various others
 - 2021 Federal Infrastructure Bill
 - Community Development Block Grants
 - TCAC/CDLAC/HCD/CalHFA (LIHTC/Bond Financing)
 - LISC, Enterprise, LIIF, National Housing Trust
- Utility Programs
 - Energy Efficiency, Fuel Substitution, solar, low income

Policy Considerations

1. Incentivize electrical infrastructure upgrades
2. Offset capacity increases with EE gains
3. Take into account non-energy benefits
4. Continue to address improvement of in-unit spaces
5. Coordinate incentive offerings across multitude of funding sources



CALIFORNIA LOW INCOME WEATHERIZATION PROGRAM
FOR MULTIFAMILY PROPERTIES



Policy Consideration #3- Non-Energy Benefits

- Improved air quality & safety
- Increased resiliency & effectiveness of photovoltaic power & storage/battery systems
- More accessible electric vehicle charging
- Effects on equity & jobs
- Added cooling & **POTENTIAL ENERGY COST SAVINGS**

POTENTIAL Energy Cost Savings

- Utility bills will not necessarily decrease
- Consider who is paying the bill, equity issues
- Growing data/analysis on bill impacts
- Varies by
 - Existing utility mix of gas vs electric end uses
 - Uncertainty of gas & electric rate escalations
 - Time of Use (TOU) rates
 - Optimization of load shifting opportunities
 - Pairing with Photovoltaic Energy Generation & on-site storage

Improved Air Quality & Safety

- **Removing combustion appliances from interior spaces reduces opportunity for gas to accumulate indoors**
 - Gas cooking appliances have been linked to increased rate of asthma in children. A UCLA study found that if all residential gas appliances were converted to electric, monetized health benefits would be \$3.5 billion per year
 - Combustion appliances can be dangerous, and combustion appliance safety testing is costly [MF HERCC COMBUSTION SAFETY TESTING PROTOCOLS \(stopwaste.org\)](https://stopwaste.org/2018/06/14/mf-hercc-combustion-safety-testing-protocols/)
 - ADDED cooling, while an additional load, is achieved by replacing furnaces with heat-pumps. This can improve comfort in areas where temperatures continue to rise.

Increased Resiliency

- **Electrification paired with PV & battery storage allows for:**
 - Resilience to increasingly frequent power outages & shutoffs (if the system is capable of “islanding” from the grid)
 - Reduced electric utility bill charges during peaks in TOU rates
 - A hedge against electric utility rate escalation

More Accessible electric vehicle charging

- 33 local jurisdictions have MF EV charging reach codes
- Electric vehicle (EV) market share has steadily increased in recent years, from 1.9% in 2016 to 5.8% in 2020
- Executive order to phase out sales of internal combustion cars by 2035 (Office of Governor Gavin Newsom, 2020)
- California's Civil Code § 1947.6(a) requires EV stations to be installed at the request and payment of tenants

Effects on Equity & Jobs

- **Electrification can benefit low-income Californians by**
 - Making their homes healthier, more comfortable, more resilient & less costly
 - Providing good jobs for contractors, especially if coordinated with workforce development efforts in marginalized communities

Thank You!



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Reference Documents:

- <https://www.stopwaste.org/accelerating-multifamily-building-upgrades>
- [2019-adopted-reach-codes.pdf](#)
- <https://www.stopwaste.org/resource/mf-hercc-reports>
- [Microsoft Word - MF HERCC Multifamily Program Design Recommendations Final 04112022 \(netdna-ssl.com\)](#)