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ASSOCIATION FOR
ENERGY AFFORDABILITY INC.

Multifamily Decarbonization: Opportunities, Challenges, Lessons Learned

CEC Equitable Building Decarbonization
Program Workshop

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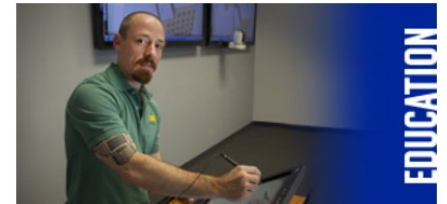


ASSOCIATION FOR ENERGY AFFORDABILITY INC.

Energy Efficiency is our Specialty, Affordable Housing is our Priority

The Association for Energy Affordability, Inc. is dedicated to achieving energy efficiency and decarbonization in new and existing buildings in order to foster and maintain affordable and healthy housing and communities, especially those of low-income. AEA representatives engage in a broad range of educational, technical, and construction management activities and services to promote this mission and develop the industry that advances and sustains it.

- Energy efficiency/Electrification program design and implementation
- Energy/Electrification research & demonstration projects
- Energy audits and green building design for new construction and existing buildings



Multifamily HVAC Electrification – Range of Types

- **A/C Already Existing?** Could be same form factor

- Split DX Heat Pump
- Packaged DX Heat Pump
- Packaged Terminal Heat Pump



- **No Existing A/C?** Less benefit from traditional types, can consider new equipment types

- Mini-Split Heat Pump
- High Performance Unitary Heat Pumps



Multifamily Water Heating Electrification

Heat Pump Water Heaters

- In-unit Residential
 - (~40% of buildings)
- Central Multifamily
 - (~60% of buildings)
- Dedicated Laundry
- Pool



Other Electrification Measure Opportunities

- Electric Cooking
- Electric Laundry Drying
- Electrical Capacity



Comprehensive Decarbonization: Electrification + Energy Efficiency

- **Reduce loads** to make equipment smaller, easier, and cheaper; minimize overall utility bills
- **High performance envelope and ventilation** systems
- **Efficient plumbing** fixtures and improved distribution systems
- **Efficient Lighting and Appliances** to reduce overall electricity consumption



Key Program Features

Many of the programmatic best practices from standard Energy Efficiency Programs also apply to Electrification

- Streamlined and Simple (as possible)
- Single Point of Contact/ “One-Stop-Shop”
- Flexible and Adaptable
- Strong Customer Support and Technical Assistance

It is critical to do these well given other challenges of electrification programs



Program Rebate Structures Best Practices

- Higher incentives for in-unit measures
- Balance higher incentives for greatest GHG/Energy savings with costs/complexity to do the work
- Higher incentives for affordable MF – lack of ownership reserves
- Layering incentives anywhere and everywhere possible!



Electrification Project Challenges

- Electrical Upgrades and Building Modifications
- Upfront cost
- Consumer and Contractor Knowledge
- System sizing (especially larger central systems)
- Range of options (many pros and cons)
- Programmatic measure eligibility



MF Market Potential

- Currently significant interest and demand from MF properties to electrify, but need cost assistance
- Programs such as LIWP and TECH currently have a waitlist of projects, as demand and need exceeds current funding levels
- Project and technical support needed
- Direct install could work well for repeatable and semi-standardized measures, but wide variety of building and upgrade types and project-specific situations may present challenges
- Some upgrade opportunities could scale easily, while others will need specialized support
- Breadth vs Depth?



Questions?



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