

Sustainable Affordable Housing Study

Tiger Team Presentation

August 5, 2025



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sustainability

Research Objective

- Understanding the Market Gap
 - 141,841 households below 80% AMI (2023)
 - Only 29,215 units restricted at that income range (2024)
- Highlight Real Examples of Sustainability, Energy Efficiency & Social Services in Affordable Housing
- Identify Key Trends & Features applicable to CCD
- Understand cost implications of sustainability & resilience
- Evaluate & Catalog available funding sources

Framework for Case Study Identification



Sustainability & Energy Efficiency

- Energy Efficiency
- Water Supply & Use
- Materials & Waste
- Natural Environment
- Water Quality



Social & Support Services

- Health & Wellness
- Family & Child Support
- Career & Education
- Food/Gardens
- Technology



Location, Type & Context

- Location
- Unit Types
- Unit Sizes
- 100% Affordable
- Mixed Rate
- Mixed Use
- Low Story Count

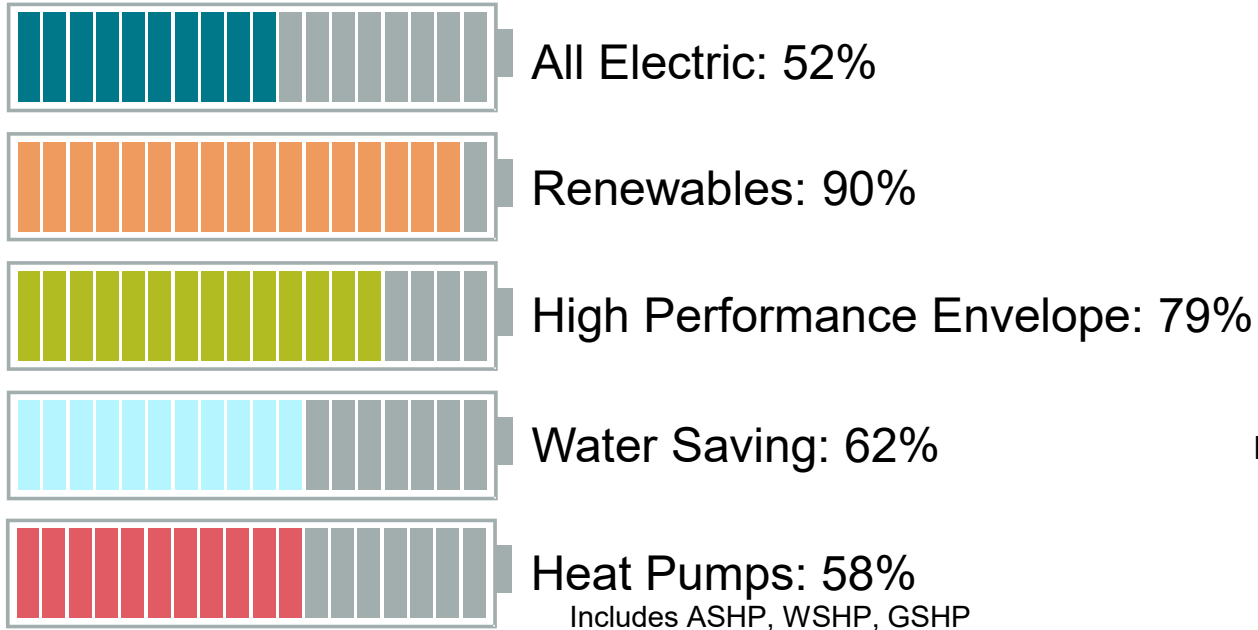
Research Summary

- Research Timeline: 4 weeks
 - May 2024
- Literature Reviewed: 6
- Case Studies Reviewed: 29
- Case Study Deep Dives: 10
- Los Vecinos
 - Chula Vista second largest City in San Diego County
 - Construction completed 2019

Design	Sustainability	Social Services
- Abandoned motel was replaced by development - Materials with high recycled content - 50% of construction debris was recycled	- 93-kW rooftop photovoltaic system - On-demand tankless hot water heaters - Hydronic space heating - Upgraded envelope insulation - Permeable concrete traps and filter	- Public Art Program - Bilingual LEED training - Simple Green Living in a Small Space: Ongoing educational program for children and adults - Extensive onsite recycling program - Water sub-metering

Initial Findings – Sustainability/Social

SUSTAINABLE DESIGN FEATURES¹



5 Projects with water reuse

 **brendle** GROUP

28% PHIUS+ Projects



20 Transit-oriented case studies



48% with 3+ bedroom options

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¹ 29 case studies reviewed

Initial Findings – Cost & Financial

COST OF CONSTRUCTION

Case Study¹
Average cost:

\$299/SF

Colorado
Average cost:

\$410/SF



37% HIGHER than national avg

Case Study^{1,2}
Average cost:

\$308k

Colorado
Average cost:

\$434k



41% HIGHER per unit cost

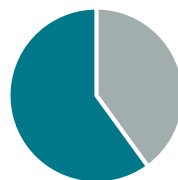


74 financial opportunities

13+ Programs for funding sustainability/energy

1-11% Green Building Cost Premium

6.3 Average # of Finance Programs Stacked



Max available IRA Funding for qualified projects: 60%

Shifts in federal funding may impact available incentives, with some housing development resources potentially reduced or no longer available. Note: Always verify which programs and funding levels are in effect at the time of project.



¹Average derived from 8 sampled case studies with detailed cost information in our research.

²National information from [GAO](#) puts this cost at \$280K/unit in 2024 dollars (adjusted for inflation). GAO sample was not specifically for sustainable/high-performance projects.

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Key Trends

- Passive House Certification or Design Guideline
- All Electric/Net Zero/Net Zero Ready
- Unit Size Variance
- Enhanced Accessibility/Disability-Forward Design
- Co-locating Housing, Food Access & Healthcare Services
- Non-Profit Partnerships for Support Services

Inflation Reduction Act: Direct Pay Provision for Tax Exempt Entities

Prior to the IRA

Solar projects are eligible for an Investment Tax Credit (ITC) of 26%

Allows individuals and businesses to deduct a certain percentage of investment costs from their taxes.

Public Sector and non-profits don't pay taxes, and cannot monetize the ITC without a third-party investor

After passage of the IRA (starting 2023) - Title 26, USC §48. Energy credit

Tax exempt entities can elect to receive a **cash payment** from the federal government equal to the ITC value

Select Eligible “Energy Property” §48(a)(3)(A)

Solar, battery storage, and associated control systems

(i) Solar; (ix) energy storage technology; (xi) microgrid controllers*

**The cost of roof replacements (white membrane TPO) may be included as a solar-related expense.*

Also, Thermal Energy Storage

Ground Source Heat Pumps

(vii) equipment which uses the ground or ground water as a thermal energy source to heat a structure or as a thermal energy sink to cool a structure, but only with respect to property the construction of which begins before January 1, 2035

Direct Pay Tax Credit Value

30% base credit value **5MW cap**

(if certain system sizing, American Made and labor requirements are met)

American Made & apprenticeship requirements are tied together

Up to 20% “Low-income Bonuses” (Solar Only)

10% bonus for projects in a “low-income community”

OR

20% bonus credit for projects where at least 50% of the “financial benefits” of the electricity produced are provided to low-income households



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Recommendations

- Create design guidelines that set up projects for IRA & other energy efficiency funding using Passive House as a design guide.
- Maximize local rebate & design assistance programs.
- Focus on lowest cost of operation, not first cost.
- Prefabrication can help lower first cost and improve overall quality of construction and speed to market.
- Incentivize private developers to use design guidelines and provide resilience & support services.
- Strategically locate projects in areas that maximize available IRA credits.
- Partner with other service organizations (food banks, healthcare) and co-locate facilities to access additional funding options.

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