



Item 14: The Next EPIC Challenge: Reimagining Affordable Mixed-Use Development in a Carbon-Constrained Future – GFO-20-305

March 13, 2024 Business Meeting

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Benefits to Californians

- Demonstrate an economical pathway to decarbonized high-density mixed-use developments
- Increase value proposition of grid-interactive technologies
- Replicable, affordable, zero-emission mixed-use developments



Background

Climate Change



Housing Affordability



Building Decarbonization





The Next EPIC Challenge

Design-build competition for a mixed-use development incorporating:

- Cutting-edge clean energy technologies
- Innovative tools for planning, design, and construction practices
- Affordability and equity
- Resistance to climate change impacts and extreme weather





Siting Requirements

- Mixed-use
- 50+ housing units
 - 20%+ affordable housing units
 - 10%+ for low-income households
- Minimum density of 30 residential units per acre





Design Requirements

- All-electric end-uses
- Islandable with peak load met via on-site generation, storage, and load management
- DER assets interoperable with aggregation platforms
- 20%+ of parking spaces with EV-charging stations responsive to grid- and building-signals



Source: Generated by DALL.E.3



Two-Phase Approach

Project Group	Number of Awards - Design Phase	Number of Awards - Build Phase
Bay Area Region	3	1
Central Valley / Northern California	3	1
Los Angeles Region	3	1
Imperial Valley, Inland Empire, and San Diego County	3	1
Total Number of Awards	12	4
Total Maximum Amount of Funding	\$12 million	\$36 million



14(a) Mutual Housing California

Mutual Housing at Fairview Terrace

- \$9M
- 76-unit permanently affordable housing, in-fill development for seniors in Stockton
- Grid-interactive technologies unified by building management system controller
- Provide resiliency and reduce electricity bills by 85%



Source: Mutual Housing California; rendered image.



14(b) Electric Power Research Institute

Minimal Unidirectional Zero-Net Energy Community through a Stand-by Grid Connection

- \$8M
- 131-unit affordable housing development with commercial spaces in Petaluma.
- "Stand by" unidirectional grid connection avoids interconnection barriers; will operate "off-grid" 95% of the year.
- Tenants never to spend more than 30% of monthly income on rent and utilities.



Source: Electric Power Research Institute; rendered image.



Staff Recommendation

- Adopt staff's findings that these projects are exempt from CEQA
- Approve grant agreements