

Pathway to Zero Net Energy in Affordable Multifamily

Main Components ZNE Pathway

Project RealIZE

ZNE Group Exercise

- William Penn Building in San Francisco was built in 1908 as a 94 room hotel.
- The project began with a ZNE planning process involving two phases
 - Replacing equipment in poor or non-working condition, paid by leveraging local energy efficiency project funding, CDBG dollars, a NeighborWorks grant and tax credits.
 - Applied for and received a community development corporation grant of five million dollars over four years
- A Sustainable Chinatown Ecodistrict was created and helped build a network of contacts with similar aims in the area.
- Key to the project and all affordable housing was capital stacking, or relying on a variety of funding sources to each cover a portion of project costs. One key one to consider in all affordable housing is the Low-Income Housing Tax Credit (LIHTC) which comes at 4% and 9% cost deferred from the developer varieties, with the 4% being rather routine and more based on meeting overall requirements and the 9% done on a competitive basis and subject to funding availability
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- Have begun creating a program called RealIZE (Zero Energy) for off the shelf, minimally disruptive Zero Energy retrofits to existing multifamily buildings.
 - Program is based on the Dutch model called Energie Sprong which works to eliminate many of the programs with regulations, individualized engineering and contractor experience that can greatly expand project costs and timelines.
- Their retrofit bundle includes a number of core features that must be met to be successful
 - Affordable
 - Attractive
 - Ensures the energy performance
 - Can be delivered within one week
- Energie Sprong was able to reduce costs by 60% after three years of development through project experience and synergies worked out between the contracting, industrial and regulatory actors.
- In initial rough building analysis smaller and midsized multi-family buildings were modeled to show better investment potential for ZNE retrofits while generally the aggregate 20+ unit multi-family buildings showed poorer investment potential.

Questions

- What are some of the common barriers you are seeing for California or things that may be difficult to navigate?
 - Utility energy efficiency and incentive programs are very diffuse and difficult to completely identify and coordinate between utilities and localities.
- In my Bay Area municipality we're not sure there is a good number of 6-20 unit mid-sized multi-family properties that would offer the best investment potential and attract developers to potentially take this on. Are there enough 6-20 unit multi-family properties in my area and the bay as a whole to make this viable?
 - Still undertaking initial analysis around the bay. This is meant as a screening tool on the aggregate and each property will of course have to be looked at individually down the line.
- What is the current status of the William Penn project?
 - The final design phase is complete and the project is currently deciding on some value engineering and feature issues based on budget.
- Who takes the risk if the anticipated energy savings are not seen?
 - This element is not finalized. It could be run based more on an energy savings contract (ESC) model domestically, whereas in the Netherlands risk is placed on the contractor.

Existing Building Retrofit Exercise Model

- Participants were grouped to a few tables and given an example property and scenario to select an ideal Zero Net Energy Retrofit for.