NEW YORK, NY
OCTOBER 27–29, 2021

gettingtozeroforum.org

October 28 – 10:45am-12:15pm
BREAKOUT STRATEGIES FOR
DECARBONIZING THE MULTIFAMILY SECTOR

PRESENTED BY:
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Cities in California with Zero Emissions Building Codes

7. Menlo Park 17. Pacifica 27. San Mateo County 37. Millbrae 47. Santa Barbara
RESIDENTIAL DOMESTIC HOT WATER (DHW) SYSTEM

Illustration Source:
Heat-Timer Corporation

ENERGY USAGE INTENSITY (EUI)

Illustration Source:
Building Enclosure Magazine
Case Study #1

Coliseum Connection
Oakland, CA

- New Construction
- 59 Units, Six Stories
- 10.5 EUI
- Decentralized Water System
- Grouped Electric Heat Pump water heaters
- smaller pex piping with zero recirc. Energy Recovery Ventilators
- Rooftop Photovoltaic Panels
- Estimated Occupancy Fall 2021

10/8/2021

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Case Study #1

Coliseum Connection
Oakland, CA

<table>
<thead>
<tr>
<th>Field Research Total Annual Residential Electricity Consumption (kWh) from CUAC (w/o Res DHW)</th>
<th>210,632</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Annual Residential Electricity Consumption (kWh) from CUAC (w/o Res DHW)</td>
<td>245,027</td>
</tr>
<tr>
<td>Total Annual Non-Residential Electricity Consumption (kWh) (Includes Res DHW)</td>
<td>150,934</td>
</tr>
<tr>
<td>Annual Whole Project Electricity Consumption (kWh)</td>
<td>395,961</td>
</tr>
<tr>
<td>Solar Offset Proposed (kwh per year)</td>
<td>150,000</td>
</tr>
<tr>
<td>Annual NET Whole Project Electricity Consumption (kWh)</td>
<td>245,961</td>
</tr>
<tr>
<td>Percentage Offset of Whole Project Electricity Consumption</td>
<td>38%</td>
</tr>
<tr>
<td>Energy Use Intensity (kBTU/Year/Square Foot)</td>
<td>10.5</td>
</tr>
</tbody>
</table>
Case Study #2

1710 Moorpark Ave
San Jose, CA

- New Construction
- 106 Studios, Four Stories
- All-Electric
- Centralized DHW
- Two large storage tanks in DHW Plant
- Heat pumps in units
- 101kW Photovoltaic system

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Case Study #3

1717 University Ave
Berkeley, CA

- New construction
- Dorm-style housing
- 17 units, Five stories, Group Housing
- All-electric
- DHW central plant
- Multiple condensing heater pumps
- Buffer storage tank
- Cascading Heat Pumps
- Electric baseboard radiators
- Resiliency process

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**Case Study #4**

**Palmilia By The Bay**  
**San Francisco, CA**

- New Construction
- Mixed-Use
- 224 Units, two four-Story buildings
- Smaller building for-sale condos
- One heat pump per unit
- Larger building rentals
- Centralized Water Heating System

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**Case Study #5**

**Boyd Street Apartments**  
**Santa Rosa, CA**

- New Construction
- 46 Units, Four Stories
- Individual heat pumps
- All-Electric
- In Construction
- Currently weatherproofing

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Case Study #6

2400 Filbert
Oakland, CA

- New Construction
- 87 Units, Three Stories
- Centralized Heat Pumps
- Main plant on garage level
- Energy Recovery Ventilators
- Innova Heat Pumps
- Roof Photovoltaic Panels
- Permit review

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Q & A

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