

# Ocean View Residence



## Electrification Technical Assistance Program

### Request Description

A resident of unincorporated San Mateo County is building a new home with an ocean view and requested help understanding how to best design the all-electric building. He is interested in going all-electric both to meet the new San Mateo County Reach Code, and also due to his commitment to the environment.

After an initial intake call, the Technical Assistance Team determined that the homeowner is specifically interested in the following information:

- What type of space heating system?
- What type of water heating system?
- What design considerations are important?
- How to protect equipment from coastal air?
- How can equipment best integrate with operable walls and windows?
- Can a resident use a zoned mini-split system without looking at wall units?

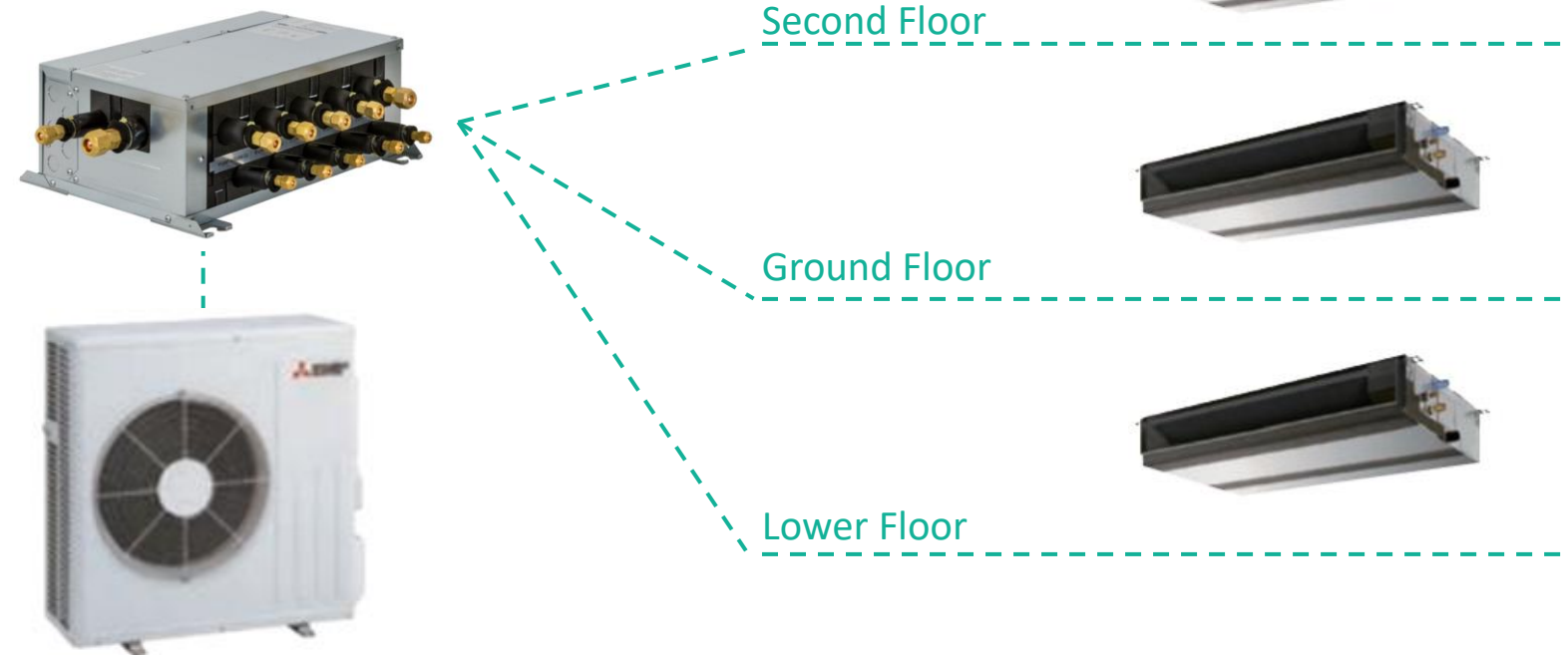
### Assistance Provided

**HVAC:** The Technical Assistance Team used EnergyPro to run an energy model and perform preliminary load sizing. While the Program does not act as designer of record, nor specify equipment, a preliminary model helped understand equipment options and sizing. The Team determined that a ducted mini-split system as shown to the right would be the best option, with a unit for each floor in the building.

**Water Heating:** After consulting with the architect, the team determined that an 80-gallon unitary heat pump water heater would be the most logical approach.

The team is continuing to assist the project with duct layout and outside airflow design concepts. The building is expected to go to permit in late summer 2021.

### Proposed HVAC Solution



Project Summary	
<b>Building systems of interest</b>	Space heating, water heating, space cooling
<b>Referral source</b>	Web / PCE customer
<b>Location</b>	Unincorporated San Mateo County
<b>Building occupancy type</b>	Single family residential
<b>Approximate square footage</b>	1,600
<b>Stage of project design</b>	Design development
<b>Question or issue description</b>	Electric HVAC design help for a new construction house
<b>Profession</b>	Building owner
<b>Project description</b>	New construction three-level home
<b>Program assistance provided</b>	HVAC and water heater selection guidance