

Frequently Asked Questions Regarding Proposed Reach Codes

Piedmont Amendments to the California Building & Energy Codes

The FAQs are sectioned into the following categories. To jump directly to a section, click on section title.

[New Housing Units](#)

[General Alterations](#)

[Roofing and Solar Panels](#)

[Furnace and Space Heating Systems](#)

[Kitchen and Bathroom Remodels](#)

[Landscape Improvements](#)

NEW HOUSING UNITS

Q: Why is it important for new housing units to be all-electric, with no natural gas supplied to the home?

A: In 2018, natural gas appliances in the buildings within Piedmont emitted 14,043 tons of CO₂e. This is approximately 40.89% of Piedmont's annual in-territory emissions and has remained essentially unchanged year-to-year since 2005. The City Council set a total in-territory emissions target of 9,336 tons of CO₂e for the year 2050. Even if we miraculously eliminated all emissions from all other sources in Piedmont, including vehicles, solid waste, and water transportation and treatment, we would still need to reduce emissions from natural gas appliances in buildings by 4,707 tons of CO₂e, a reduction of 33.52%, something we have been unable to achieve during the past fifteen years. If Piedmonters are serious about reducing emissions from our building stock, there is an argument to be made that we should reduce emissions whenever possible and avoid adding any new sources of natural gas emissions from buildings so that the Piedmont community has any hope of achieving its Climate Action Plan emissions reduction goals.

Q: I am planning on building a detached accessory dwelling unit (ADU) in our backyard. My mother is planning on living there. She is a great cook and loves her gas stove. Is it true that we can't install a gas stove in the ADU?

A: Yes. All new homes constructed in Piedmont, including new detached ADUs will be prohibited from having natural gas supplied to them. All the appliances, including the stove, will need to be electric. Many Piedmont residents have switched to induction (electric) stoves. They report great satisfaction with the performance of the appliances. Many cities in the Bay Area are requiring new buildings to be "all-electric" as well.

[Back to the top](#)

GENERAL ALTERATIONS

Q: Why isn't the City requiring these energy efficiency and electrification upgrades when a home is sold to a new owner?

A: The Reach Codes and other amendments to the building codes in the Ordinance apply only when a building permit is issued for a construction project. There are no building permits issued at the time of sale. Also Staff research has shown that work done by sellers in response to pre-sale requirements in other jurisdictions is not always of the highest quality. The Ordinance does require a Home Score Report or Energy Audit Report at the time of sale. Those reports will provide the new owner valuable information on the condition of the home as well as a roadmap for increasing the energy efficiency of the home when they are planning renovations.

Q: I am doing a \$10,000 alteration to my home, and I can't afford to significantly increase project costs. Will the Ordinance require an expensive additional expense?

A: No. Under the proposed Ordinance, a home renovation of less than \$25,000 would not be required to include an energy efficiency improvement. If the \$10,000 renovation involves replacing the electrical panel, the Ordinance would require the electrical panel to include space for future electrification (upfront cost \$400). If the renovation included a kitchen or laundry area remodel, the Ordinance would require electrical outlets to be installed in the kitchen/laundry area (upfront cost \$200). These are the only additional requirements for home renovations of less than \$25,000.

Q: I have owned my home for several decades. Over the years I have been very diligent about improving the energy efficiency and comfort of my home. I have insulated my attic. A few years ago, we had a high efficiency furnace installed and the ducts sealed. We don't have crawlspace. During the drought we installed low flow fixtures and toilets everywhere and put in a tankless water heater. I have switched all the light bulbs to LED. I would now like to do one last improvement so I can "age in place." I am going to be bumping out a little space on the ground floor bathroom to put in a shower. The contractor will do it for \$78,000. Do I have to tear out my fairly new furnace or water heater to put in heat pump units? Do I have to put in solar panels?

A: No. Your addition is less than 30% of the existing roof area, so you do not have to install solar panels. Since you have been so diligent about upgrading your home over the years, all the "low hanging fruit" of energy upgrades have already been implemented. Replacing your water heater or furnace isn't in the scope of work of your project. There is a section in the Building Code that allows the Building Official to take note of the circumstances of your project and exempt you from having to replace your furnace or water heater.

Q: I am upgrading my main electrical service panel from the current 100 amp service to 200 amp service. What do I have to do to meet the requirements of the amended electrical code?

A: The electrical load calculation your electrician will perform to make sure the service panel is adequate for your needs will have to include the loads for future electrical appliances such as stoves, furnaces and water heaters. The intent is to make sure your home is ready for electrification. It is fairly simple at this point to include that capacity so you can upgrade your appliances at a future date.

Q: Why did the City choose \$25,000 as the trigger point for the Energy Upgrade list? Doesn't that discourage people from getting permits for renovating their homes? Shouldn't it be \$50,000?

A: To determine the break off points for the upgrade categories under Section D of the Ordinance, Staff reviewed the breakdown of the stated Construction Values for projects issued a building permit in recent years. The breakdown is that about 80% of the projects are under \$25,000. 10% are between \$25,000 and \$50,000. 5% have a project cost between \$50,000 and \$100,000. The remaining 5% of projects are above \$100,000.

The \$25,000 value excludes most repair type projects such as roof replacements, furnace replacements, simple bathroom renovations and electrical rewiring, while requiring the largest 20% of renovation projects per year to incorporate a home energy efficiency measures. This is approximately the percentage of renovation projects that must reduce energy use in order for the Piedmont community to make significant progress towards Piedmont's Climate Action Plan 2.0 greenhouse gas emissions reduction goals. Raising the exclusion level to \$50,000 would reduce the number of projects affected by the Ordinance in half, to just 10% of renovation projects. Thus, a \$50,000 threshold would make it unlikely that Piedmont would achieve its emissions reduction goals.

2019 Building Permits:	Percentage of total permits
737 – less than \$25,000 Construction Value	78%
101 – \$25,000 to \$50,000 Construction Value	11%
57 – \$50,000 to \$100,000 Construction Value	6%
<u>48</u> – more than \$100,000 Construction Value	5%
943	

Q: I am going to do an extensive renovation of my 1920's home. We are renovating the kitchen, moving the laundry upstairs, creating a playroom in the basement and renovating the bathrooms. Do I have to take out all my gas appliances and go "all electric"?

A: No. Although it would certainly be a great opportunity to reduce your greenhouse gas emissions by upgrading all your appliances to electric models and purchasing 100% carbon free electricity from East Bay Community Energy, the new Ordinance does not require you to do so. The Ordinance does have provisions that make your home ready for conversion to electric appliances. If you upgrade the electric service panel, it must be sized to accommodate new electric appliances. Also your renovated kitchen and laundry room must have electrical outlets installed for a future electric dryer and stove.

[Back to the top](#)

ROOFING AND SOLAR PANELS

Q: I am going to be replacing the composition shingle roof on my home. The contractor says it is going to cost \$18,000. Do I have to install solar panels on my roof?

A: No. Under the Ordinance the only renovation projects that are required to install solar panels are projects that add a second story to the house or have an addition to the house with 30% more roof area.

Q: I am going to be taking the Spanish tiles off of my roof, installing new underlayment and reinstalling the tiles. The contractor has given me an estimate of \$87,000. Do I have to install solar panels on my roof?

A: No, Under the Ordinance the only renovation projects that are required to install solar panels are projects that add a second story to the house or have an addition to the house with 30% more roof area. Since your project value is more than \$25,000, you will have to do one of the upgrades on the list of items in the Energy Upgrade section of the Ordinance.

Q: I am adding a second story master suite. I have some wonderful redwood trees that shade my home and make it impractical to put solar panels on the roof. What are my options?

A: The new Ordinance incorporates the existing section of the California Energy Code for solar panels on new homes. That section has an exemption for shading from trees, neighboring buildings, etc. If you submit information from a licensed solar contractor indicating there is too much shade to make the solar system practical, you will be exempted from the solar panel requirement by the Building Official.

Q: Now that we are all working and schooling from home, we need more space! I am planning on adding an 800 square foot family room/home office onto the rear of our home. The current roof area of our two story home is about 1500 square feet. Will we need to install solar panels?

A: Yes. The Ordinance requires additions that are adding more than 30% of the roof area to install solar panels. The Ordinance extends the provisions of the California Energy Code requiring solar panels on new homes to larger additions. There is a formula in the code for sizing the system.

[Back to the top](#)

FURNACE AND SPACE HEATING SYSTEMS

Q: My old natural gas furnace stopped working last night. I have a contractor coming to install a new one next week. Do I have to install an electric heat pump furnace?

A: No. Most furnace replacements are less than \$10,000. Your project would be exempt from the energy upgrade requirements of the Ordinance. If your furnace replacement happened to be for a cost greater than \$25,000, there are several other options on the list in the Energy Upgrade section of the Ordinance other than installing a heat pump furnace.

Q: My 100-year-old house is heated by a boiler/circulating hot water system that is powered by natural gas. Do I have to install an electric heat pump furnace if I have a renovation that costs more than \$25,000?

A: No. The ordinance has several options for energy efficiency upgrades in addition to installing a heat pump furnace that apply to projects with a value of \$25,000 or more. When you have decided on the type and scope of your project, you and/or your design professional can have a discussion with the Planning and Building Department staff regarding which of the options would work best for your home.

Q: My house is constructed with a concrete foundation imbedded with copper piping providing warm floors for radiant heat throughout the house, fed by a natural gas boiler system that also provides hot water to the kitchen and bathrooms. If we want to add on a bedroom to the rear of the house, will we need to abandon the radiant heating and boiler and install an electric heat pump furnace and run vents throughout the house?

A: No. Your existing heating system does not lend itself to conversion to a heat pump. The ordinance has several options for energy efficiency upgrades other than the installation of a heat pump furnace that apply to projects with a value of \$100,000 or more. You and/or your design professional can have a discussion with the Planning and Building Department staff regarding which of the options would work best for your home. If your addition's roof area is adding more than 30% of the existing roof, you will need to install solar panels as a part of the project.

Q: We are going to be developing our basement/crawlspace area into a family room with a half bath. We will be relocating the furnace and water heater. Do we have to get a new electric heat pump water heater and furnace?

A: The Ordinance does not specifically require you to install a heat pump water heater (HPWH) or heat pump furnace. A project of that size will be required to incorporate two energy efficient upgrades or electrification improvements into the project scope. There are other options in addition to HPWH and furnaces. Your type of project is a great time to consider upgrading to heat pump appliances. You can take advantage of the rebate programs for those products. You will be able to enjoy the energy savings and increased comfort of your home those provide in addition to the increased space in your home.

Q: Why doesn't the City provide incentives for installing Heat Pump Furnaces and Water Heaters and the other items in the Ordinance?

A: The City doesn't have the financial resources to make a significant financial incentive for the installation of Heat Pump Furnaces or Water Heater or other items. There are many rebate and discount programs available. Currently there are rebate programs from East Bay Community Energy (EBCE) for Heat Pump Water Heaters and Solar Energy and Battery Systems. PG&E has

rebates for appliances. The Bay Area Regional Energy Network (BayRen) and PG&E have rebate programs for Energy Home Score reports. The City is a participant in the SunShares solar energy program that offers discounted solar systems.

[Back to the top](#)

KITCHEN AND BATHROOM REMODELS

Q: Does the ordinance make me get rid of my gas range and install an electric stove?

A: No. If you are renovating your kitchen, the Ordinance does require the installation of an outlet near the stove, so you or future owners can easily install an electric induction stove. There is no requirement to remove an existing gas appliance in the Ordinance.

Q: We just moved in to our new home. Two of the bathrooms haven't been touched since 1953. They need an upgrade. The estimated work is about \$37,000. What upgrades are required by the new Ordinance?

A: Since your project is more than \$25,000, you will have to incorporate one of the upgrades from the list. Since you just bought your home, you should have a copy of the Energy Score or Home Audit from the point of sale. You can choose one of the recommendations from those reports to include in the scope of your project. Item C on the list, includes low flow plumbing fixtures and insulating hot water piping. Most of that work is already part of your project because it is required by the California Building and Energy Codes. The inclusion of new water efficient plumbing fixtures and insulating accessible piping in rooms other than these two bathrooms will fulfill the upgrade measures.

Q: We are planning on renovating our kitchen. The project is estimated to cost \$85,000. Will the new Ordinance apply to our renovation?

A: Yes. There are a couple of sections of the Ordinance that will apply to your project. If you are not installing an electric stove, you will be adding an electrical outlet near your stove for a future electric stove. Adding an additional outlet during a construction project, costs a few hundred dollars. Since the project has a value greater than \$25,000, you will incorporate one energy efficiency upgrade into your project from a list of options. Several of the options should be easily added into your type of project.

[Back to the top](#)

LANDSCAPE IMPROVEMENTS

Q: We are going to be renovating the landscaping my backyard, installing an outdoor kitchen and reconfiguring the swimming pool to add a spa. I have an estimate for the project of \$175,000. Do I have to insulate my attic, too?

A: No. Projects that do not involve alterations to the home (the building) are not subject to the Ordinance.

[Back to the top](#)