

DOCKETED

Docket Number:	22-BSTD-07
Project Title:	Local Ordinance Applications Exceeding the 2022 Energy Code
TN #:	247523-5
Document Title:	Piedmont Overview of Cost Effectiveness Studies
Description:	List of cost effectiveness studies supporting local ordinance 766 N.S.
Filer:	Danuta Drozdowicz
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	11/18/2022 1:25:04 PM
Docketed Date:	11/18/2022

OVERVIEW OF SUPPORTING COST EFFECTIVENESS STUDIES

REFERENCE STUDIES:

1. Title: 2022 Cost-Effectiveness Study: Single Family New Construction
 Prepared For: Kelly Cunningham, Codes and Standards Program, Pacific Gas and Electric Company
 Prepared By: Frontier Energy, Inc., Misti Bruceri & Associates, LLC
 Last Modified: September 12, 2022
 Findings: The proposed all-electric new construction amendment to the Building Energy Efficiency Standards are found to be cost-effective.

2. Title: 2019 Cost-Effectiveness Study: Existing Single Family Residential Upgrades
 Prepared For: Kelly Cunningham, Codes and Standards Program, Pacific Gas and Electric Company
 Prepared By: Frontier Energy, Inc., Misti Bruceri & Associates, LLC
 Last Modified: August 27, 2021
 Findings: The proposed list items related to insulation are found to be cost effective. This study also found that a requirement for non-high efficacy internal lights be replaced with high efficacy internal lights was cost-effective, as well as the proposed solar installation requirement.

PROPOSED REQUIREMENTS

SUMMARY – ALL-ELECTRIC REQUIRED

All newly constructed single family buildings, including new detached accessory dwelling units (ADUs), shall be an all-electric building or all electric design, defined as a building that uses a permanent supply of electricity as the only source of energy for space conditioning (including heating and cooling), water heating (including pools and spas), cooking appliances, and has no natural gas or propane plumbing installed. An addition to or alteration of a single family building, with a stated project value of \$30,000 or more, is required to include one item from a list of energy efficient measures. An addition to or alteration of a single family building with a stated project value of \$115,000 or more shall require the inclusion of two items from the list of energy efficient measures. Some exceptions are allowed, as summarized in the table below.

Proposed Reach Code	Building Electrification	Solar PV	Reference Study
New Single Family Building Construction	All electric;	Not Applicable – Solar already required by Energy Code.	Refer to Reference Study 1: Title: 2022 Cost-Effectiveness Study: Single Family New Construction
Existing Single Family Building	Energy efficiency upgrades;	Solar required for projects adding an entirely new upper level or that increase the	Refer to Reference Study 2: Title: 2019 Cost-Effectiveness Study: Existing Single

Att. 4a Overview of cost effectiveness studies

<p>Addition or Alteration</p>	<p>Exception if a Home Energy Score Report for the single family building is completed within 5 years, demonstrating a minimum score of 7 or greater.</p> <p>Exception if the unique features of the construction of the single family building are not configured for conversion to forced air systems.</p> <p>Exception if the installation of the measures is not commensurate with the project's scope and budget because the measures would exceed 20% of total project cost or require substantial construction in areas that would otherwise not be part of the project.</p>	<p>building's roof area by 30% or more.</p> <p>Exceptions for buildings with limited solar access.</p>	<p>Family Residential Building Upgrades</p>
--------------------------------------	---	--	---