

RICAPS Monthly Meeting

March 26, 2024



Agenda

Welcome & Announcements



1:30-1:35: Welcome & Announcements

1:35-1:40: Temperature: City Progress Towards New Construction Reach Code Adoption



Building Electrification 2.0 Showcase: Los Altos Hills & Santa Cruz



1:40-2:30:

- Air Quality Approach- Jay Bradford, Town of Los Altos Hills
- Energy Performance Approach, Tiffany Wise-West, City of Santa Cruz



Brainstorming Next Steps: AQ or Energy Performance Approaches



2:30-2:55:

- Breakout Room 1: Air Quality Approach
- Breakout Room 2: Energy Performance



Welcome and Announcements



A few random announcements....



- April meeting in North County: location TBD (north County)
- Scheduling next Advisory Group meeting



FINAL REMINDER: April 1 Deadline for Advanced Clean Fleets Inventory



Message from Phillip Kobernick, Senior Transportation Programs Manager at PCE:

Final reminder - all government fleets need to submit their fleet inventories to CARB by April 1.

Here are some resources to help you:

1. [CARB Advanced Clean Fleets Overview from PCE](#)
2. [Full CARB reporting requirements for State and Local Government fleets](#)
3. [PCE Case Study](#) - how many EV chargers do you *really* need?
4. [PCE GovEV Program](#) to help you transition your fleet to EVs

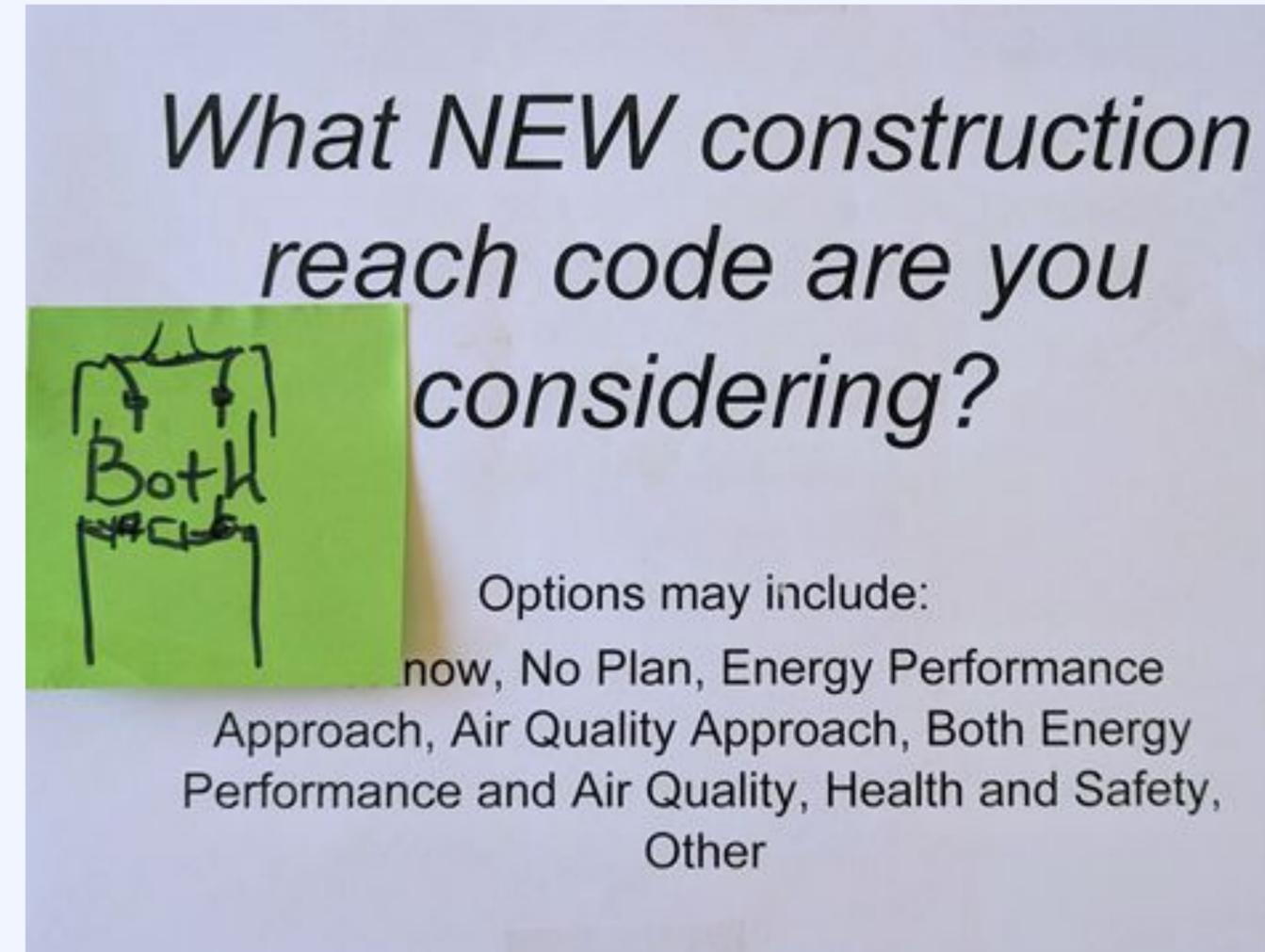


Temperature Check - City Progress Towards New Construction Reach Code Adoption

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Zoom poll + drop updates since last Feb meeting in the chat

- What is preventing your agency from adopting a replacement reach code for new construction?



What NEW construction reach code are you considering?

Options may include:

now, No Plan, Energy Performance Approach, Air Quality Approach, Both Energy Performance and Air Quality, Health and Safety, Other

Both

The image shows a presentation slide with a light blue background. The main text is in a large, italicized, black font. Below the main text, there is a list of options in a smaller, black font. A green sticky note is placed over the left side of the slide, with the word "Both" written in black marker. The sticky note also has some faint, illegible markings below the word "Both".



EV Infrastructure Plan Poll



Would you be interested in a countywide EV charging infrastructure deployment plan?



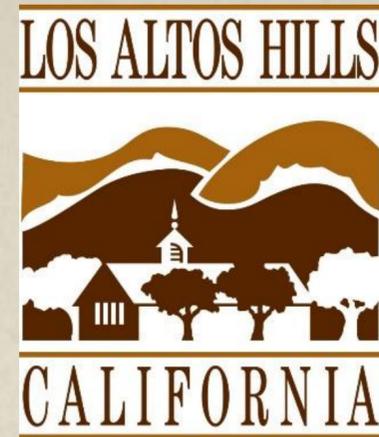
Sustainable Facilities Forum, May 9, Sacramento

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Building Electrification
2.0 Showcase:
Air Quality & Energy
Performance
Approaches





2024 Reach Codes
**Zero NOx Emissions Requirements for
New and Substantially Altered Existing
Construction**

REGIONALLY INTEGRATED CLIMATE ACTION PLANNING SUPPORT
MARCH 26, 2024

TOWN OF LOS ALTOS HILLS

- Incorporated in Santa Clara County on January 27, 1956.
 - Served by a five-member elected city council and over 13 specialized committees and commissions.
 - The town has a population of 8,489 people.
 - Los Altos Hills maintains a rural feel with:
 - 1 acre lot sizes,
 - required easements for public pathways, and
 - focus on agricultural uses.
 - Los Altos Hills has had a ban on commercial zoning since 1973.
-

BACKGROUND

Climate Action Planning and Previous Reach Code Initiative

- The Town of Los Altos Hills is committed to sustainability, adopting an updated Climate Action Plan (CAP) in 2016 with goals to reduce GHG emissions.
 - During the 2019 Building Code Adoption Cycle, the Council adopted the Town's first local building energy reach code which was readopted during the 2022 cycle.
 - In 2021, a more ambitious target was set for a 52% reduction in town-wide GHG emissions by 2030.
 - The Environmental Initiatives Committee (EIC) leads CAP efforts, introducing goals in 2021 to reduce residential fossil fuel use and transition all homes off natural gas by 2045.
 - The CAP identified adopting local reach codes as a strategy for emissions reduction.
-

REACH CODES

What are Reach Codes?

- Local code amendments that impose standards surpassing the minimum requirements outlined in the state code have come to be known as “Reach Codes”.

Reach Code Adoption Process?

- Community Survey, July 24, 2023
 - PC / EIC Study Session, September 14, 2023
 - EIC Study Session, October 26, 2023
 - PC / EIC Study Session, November 15, 2023
 - City Council First Reading, January 18, 2024
 - City Council Second Reading, February 15, 2024
 - Newsletters, news ads and online & posted notices
-

REACH CODES, CONTINUED

What is included in the Reach Codes?

- Zero NOx emissions standards are used to restrict GHG emissions.
 - The ordinance addresses both new and existing structures
 - Definition of “Substantial Remodels”.
 - Focus on heat pump water heaters and HV/AC systems.
 - Electric Ready Kitchens have been included.
 - Exceptions related to undergrounding for new panel installation has been added.
 - Exceptions related to residents is enrolled in the PG&E CARE and FERA Programs.
 - Equity Incentives.
 - Equipment Rebates and Whole Home Energy Surveys.
-

REACH CODES, CONTINUED

What's not covered by or exempt from the Reach Codes?

- Indoor cooking for residential building projects
 - Outdoor cooking
 - Outdoor fireplaces
 - Portable space heaters
 - Generators
 - Pools/spa heaters
-

REACH CODES, CONTINUED

What makes this code different?

Besides focusing on NOx emissions, there are a few differences in the approach to how this regulation versus others:

- It's simple to implement compared to the Flexible Path Model Code.
- No moratoriums.
- It regulates the structure and not the supporting infrastructure (Example: CEC not requiring cost-effective studies for infrastructure preferences).
- It uses the green building code, which already has pollution controls and air quality standards as part of its regulations.
- DSA has used the administration of the California Green Building Standards Code to uniformly apply standards that other codes would preempt or limit (Example: accessible features).

MODEL CODES

Los Altos Hills

<https://losaltoshillsca.portal.civicclerk.com/event/3448/files/attachment/10829>

BayAreaReachCodes.org (Sponsored By Silicon Valley Clean Energy)

<https://bayareareachcodes.org/> (Air Quality Approach)

THANK YOU

2024 Reach Codes

Zero NOx Emissions Requirements for New and Substantially Altered Existing
Construction

Present by: Jay Bradford, Assistant Community Development Director

New Buildings Energy Reach Code

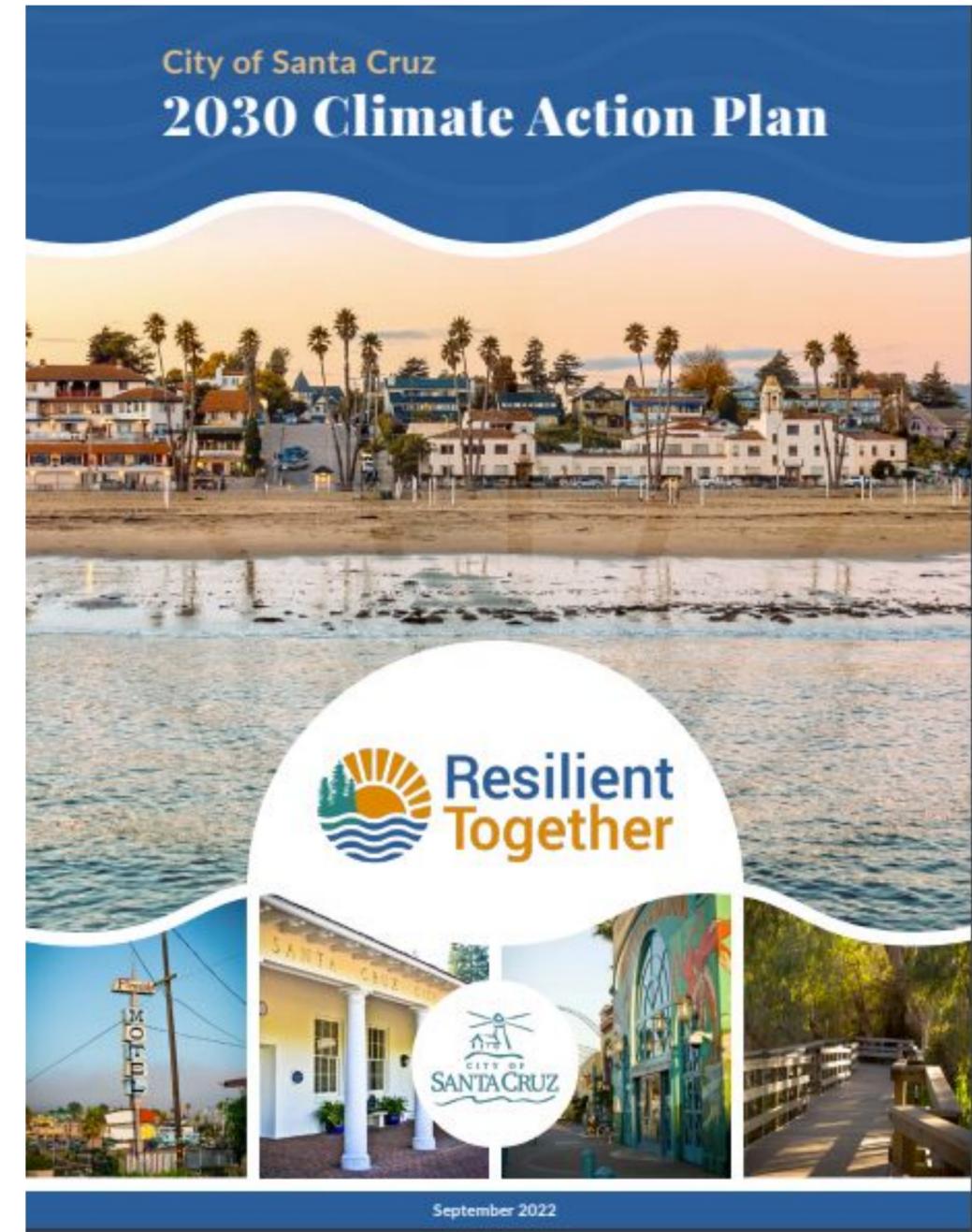
March 26, 2024



Policy Background

Resolution NS-30-042 (2022) adopts a community-wide goal of carbon neutrality by 2035; legal target of 40% reduction in emissions by 2030 from 1990 levels.

Ordinance 2020-06 adds Chapter 6.100 (Natural Gas Prohibition in New Building Construction) to the Municipal Code requiring all new buildings be all-electric with certain limited exceptions *(suspended 6/13/23)*



Approaches to Compliance

Example Single Family Building Design under current Code

ENERGY DESIGN RATINGS						
	Energy Design Ratings			Compliance Margins		
	Source Energy (EDR1)	Efficiency ¹ EDR (EDR2efficiency)	Total ² EDR (EDR2total)	Source Energy (EDR1)	Efficiency ¹ EDR (EDR2efficiency)	Total ² EDR (EDR2total)
Standard Design	29.7	27.2	31.8			
Proposed Design	26.7	20.5	28.2	3	6.7	3.6
			RESULT³: PASS			
¹ Efficiency EDR includes improvements like a better building envelope and more efficient equipment ² Total EDR includes efficiency and demand response measures such as photovoltaic (PV) system and batteries ³ Building complies when source energy, efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded						
<ul style="list-style-type: none"> Standard Design PV Capacity: 2.04 kWdc PV System resized to 2.04 kWdc (a factor of 2.044) to achieve 'Standard Design PV' PV scaling 						

Proposed Reach Code

Proposed Standards

Building Type

Amended Performance Requirement

Single Family Residential buildings

Exceed the standard EDR1 Source Energy requirement
by at least 9 points

Multi-Family Residential (Low - < 3 floors)

Exceed the standard Source Energy requirement
by 10%

Multi-Family Residential (High - \geq 3 floors)

Exceed the standard Source Energy requirement
by 4%

Non-Residential

Exceed the standard Source Energy requirement
by 7%

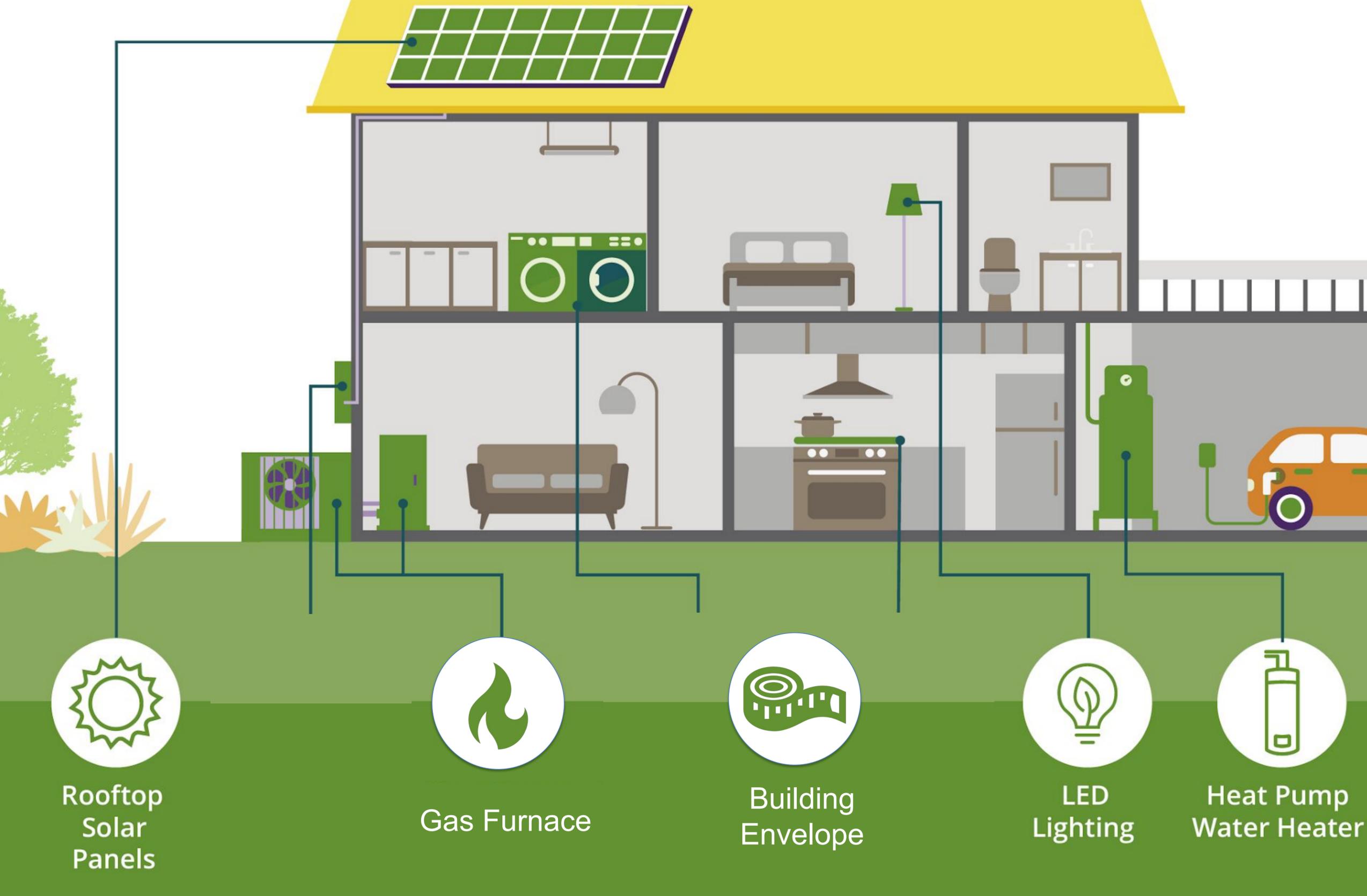
Nonresidential and Multi-Family Residential Buildings
w/Central Water Heating

Where gas appliance is installed, illustrate reserved physical space and ventilation paths for future all-electric equipment, and install sufficient electrical panel and transformer capacity.

Example Single Family Building Design under Reach Code

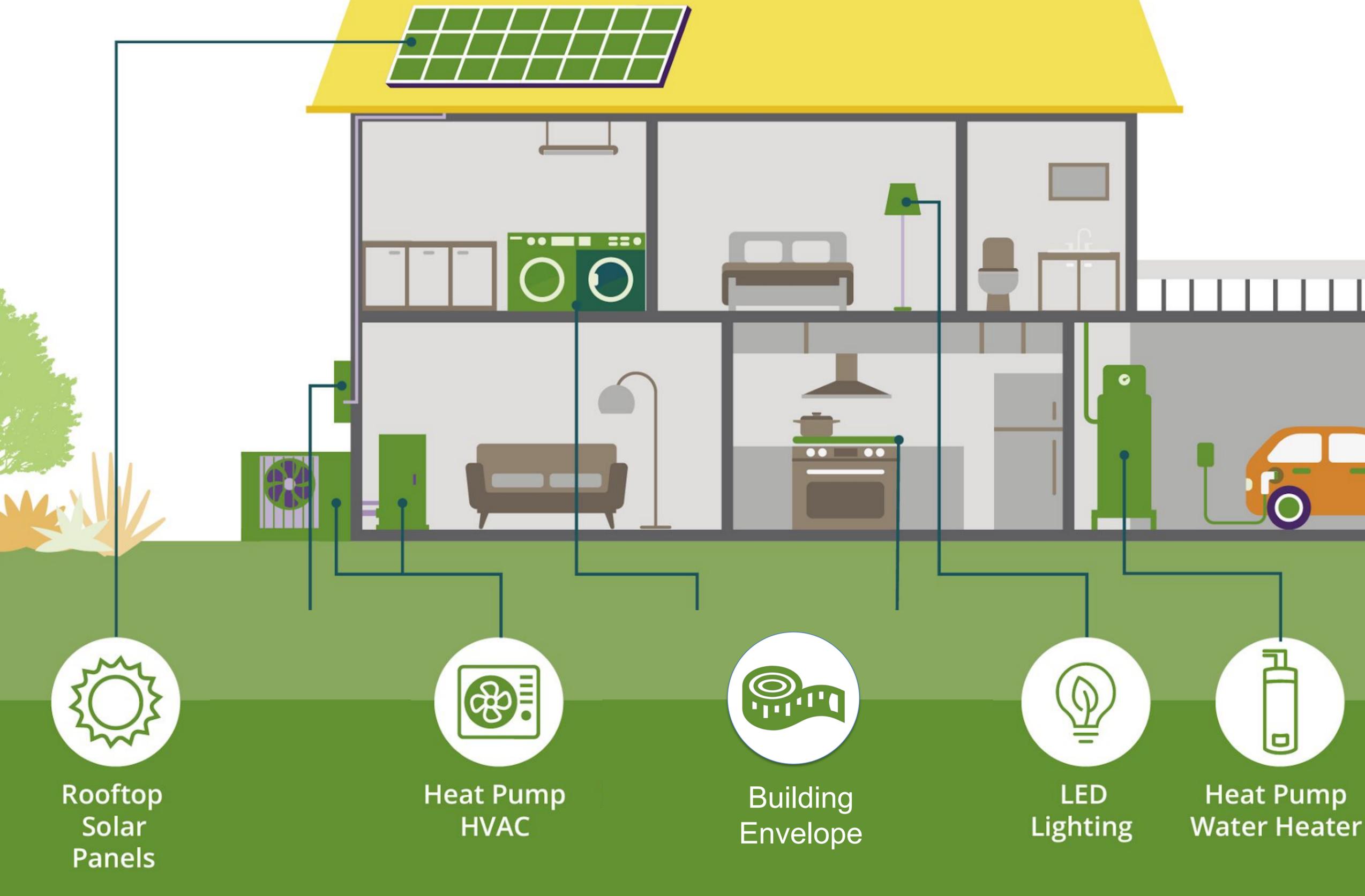
Exceeds the Standard EDR1 Source Energy Score by at least 9 points

ENERGY DESIGN RATINGS						
	Energy Design Ratings			Compliance Margins		
	Source Energy (EDR1)	Efficiency ¹ EDR (EDR2efficiency)	Total ² EDR (EDR2total)	Source Energy (EDR1)	Efficiency ¹ EDR (EDR2efficiency)	Total ² EDR (EDR2total)
Standard Design	35.6	45.8	31.3			
Proposed Design	26.5	39.6	28.4	9.1	6.2	2.9
RESULT³: PASS						
¹ Efficiency EDR includes improvements like a better building envelope and more efficient equipment ² Total EDR includes efficiency and demand response measures such as photovoltaic (PV) system and batteries ³ Building complies when source energy, efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded						
<ul style="list-style-type: none"> Standard Design PV Capacity: 3.46 kWdc PV System resized to 3.46 kWdc (a factor of 3.459) to achieve 'Standard Design PV' PV scaling 						



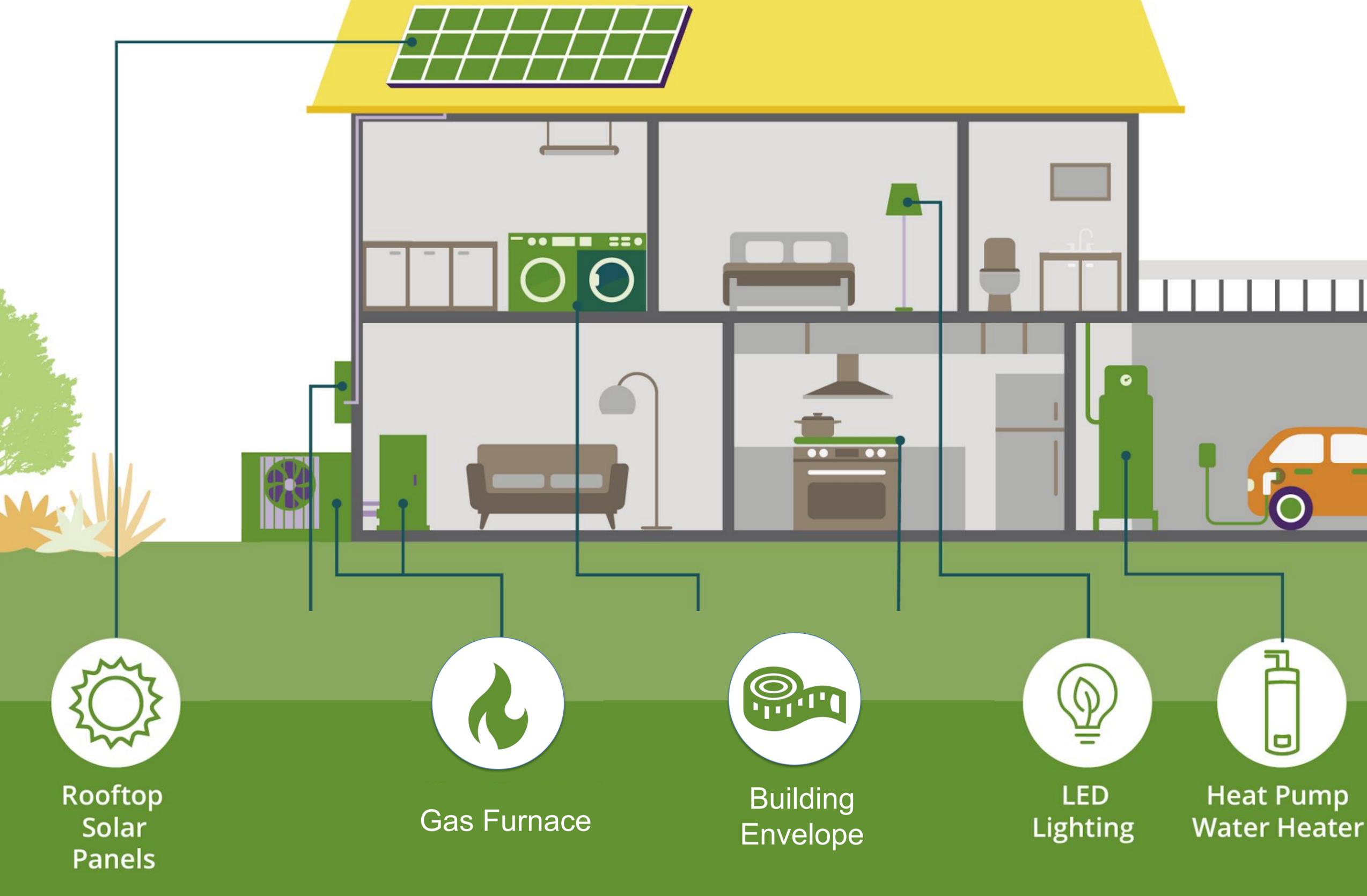
Standard Design

Single Family Building



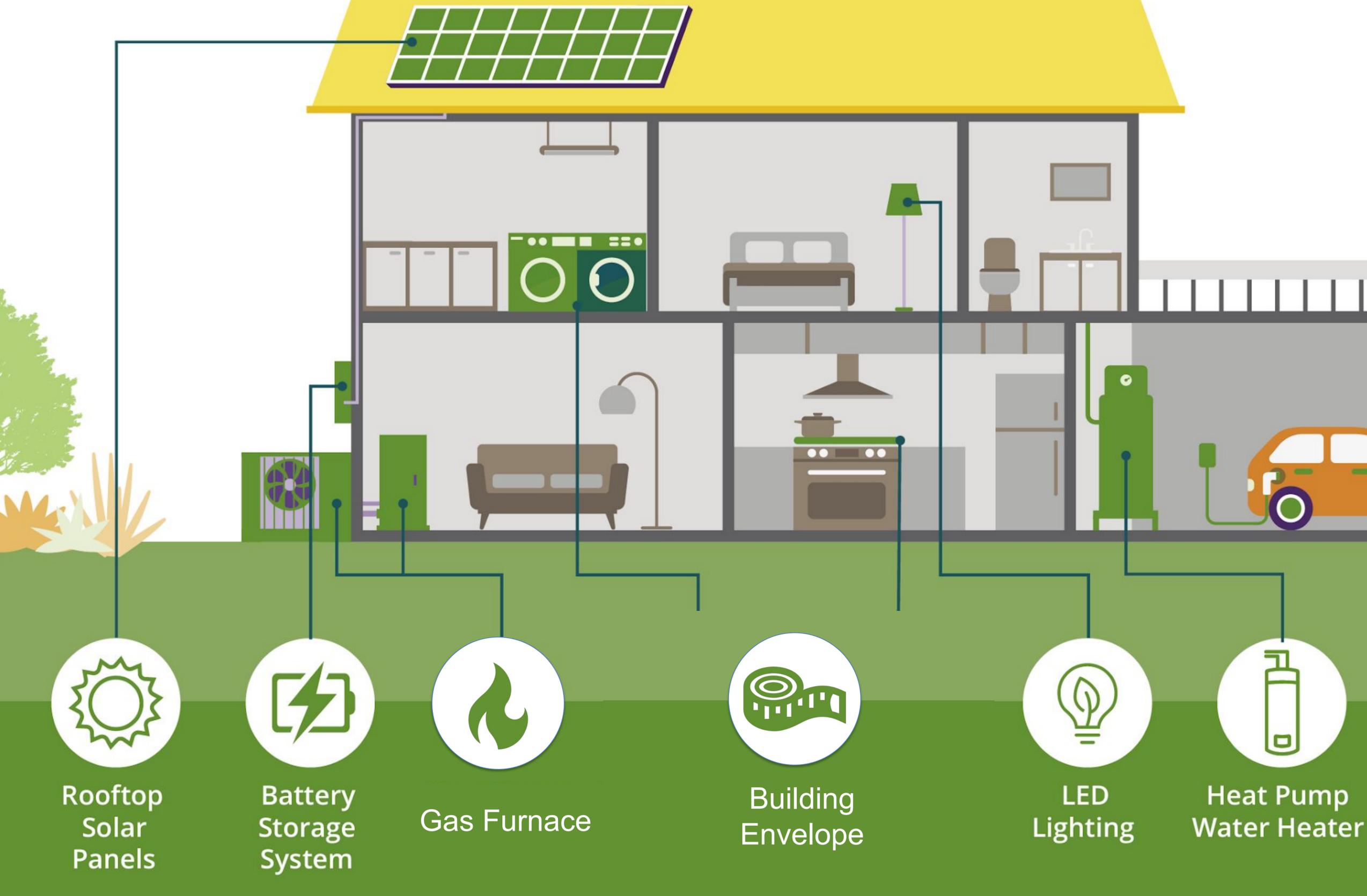
Reach Code
Compliant
Single
Family
Building
Design

Source
Energy
(EDR1)
+9.0



Standard Design

Single Family Building



Reach
Code
Compliant
Single
Family
Building
Design

Source
Energy
(EDR1) >9.0

Low Rise Multi Family



Standard Design Building

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Add Heat Pump HVAC

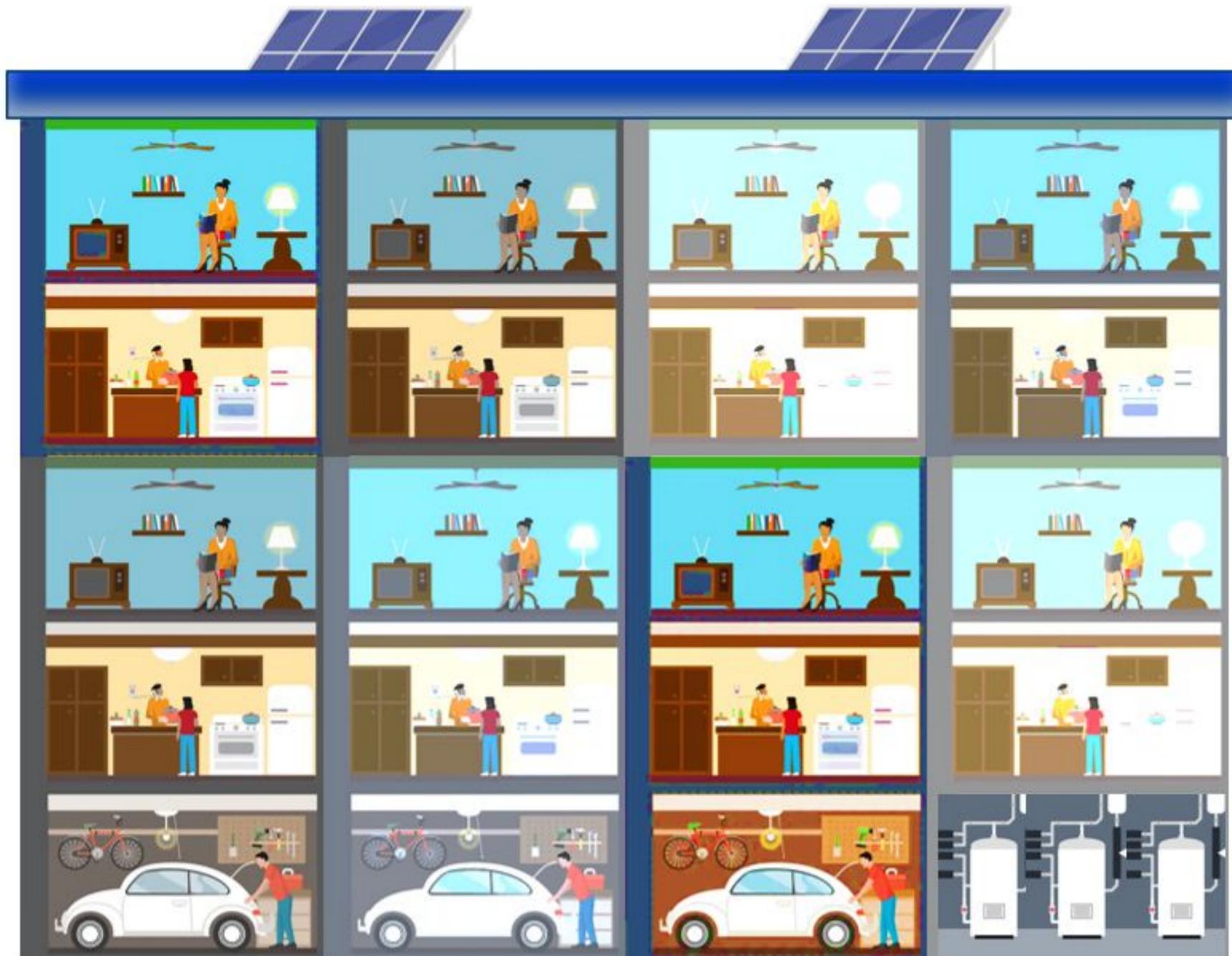
+10%

Keep gas furnace and add efficiency, additional solar, and a battery storage system

>10%

Illustration source: Public Service Enterprise Group

High Rise Multi Family



Standard Design
Building

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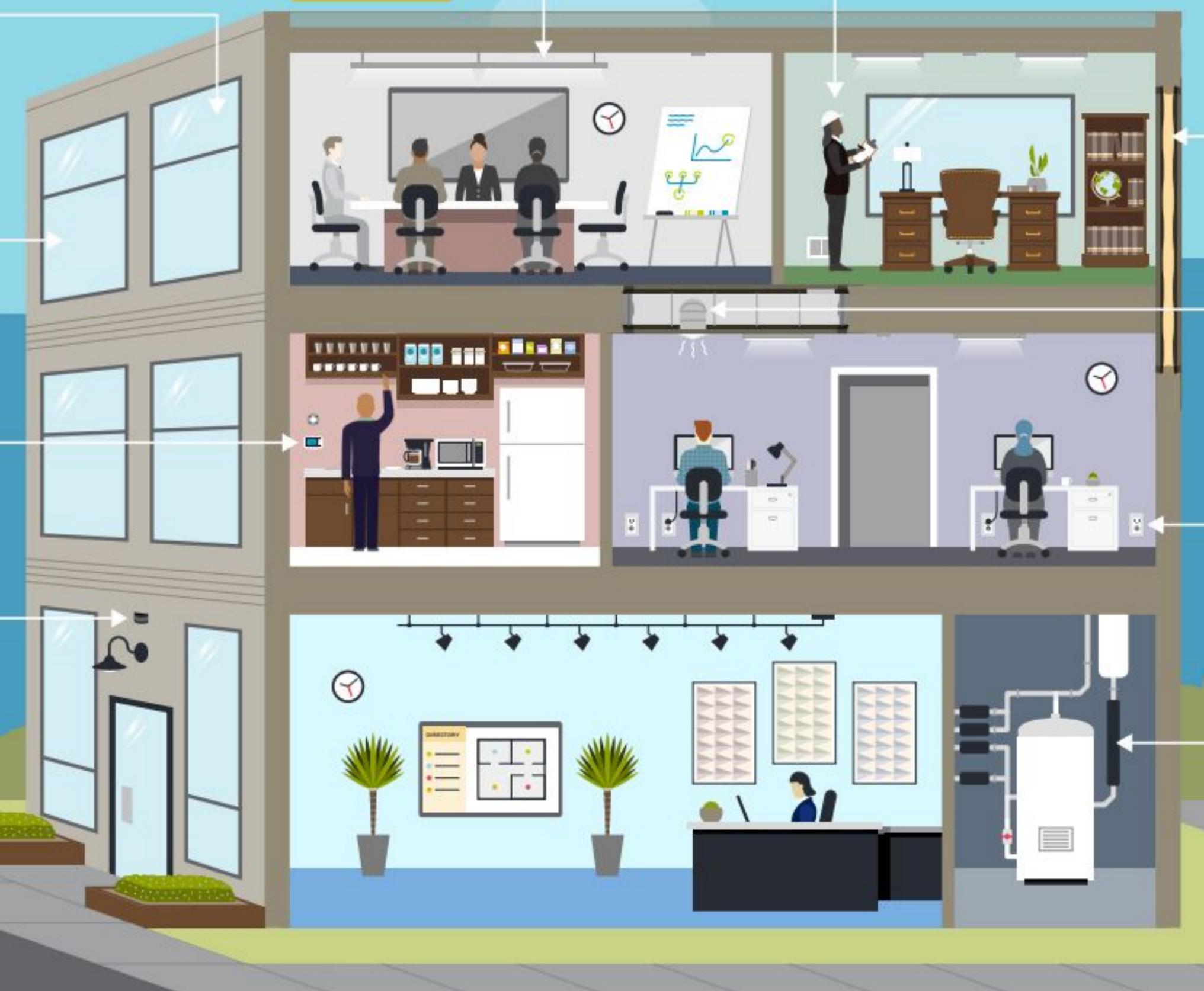
Add Heat Pump
HVAC

+7%

Keep gas furnace and
add efficiency and
additional solar

+4%

illustration source: Public Service Enterprise Group



Non-Residential Building

Standard Design Building

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Add Heat Pump HVAC

>4%

Keep gas furnace and add efficiency and additional solar

>7%

Public Engagement



Extensive outreach in 2019, 2020, 2021 and 2022.

In support of the proposed reach code, staff conducted community outreach as follows:

- Developer's Roundtable (e.g., developers, architects, engineers, design professionals, and property owners)
- Community Climate Action Task Force
- Planning Commission Meeting

2nd Hearing of City Council on November 28, 2023

Awaiting California Energy Commission Approval

Breakout Rooms: Brainstorming Next Steps





Thank you.