



**SF Environment**

**Our home. Our city. Our planet.**

A Department of the City and County of San Francisco

# All-Electric New Construction Ordinance

Land Use and Transportation Committee - September 21, 2020

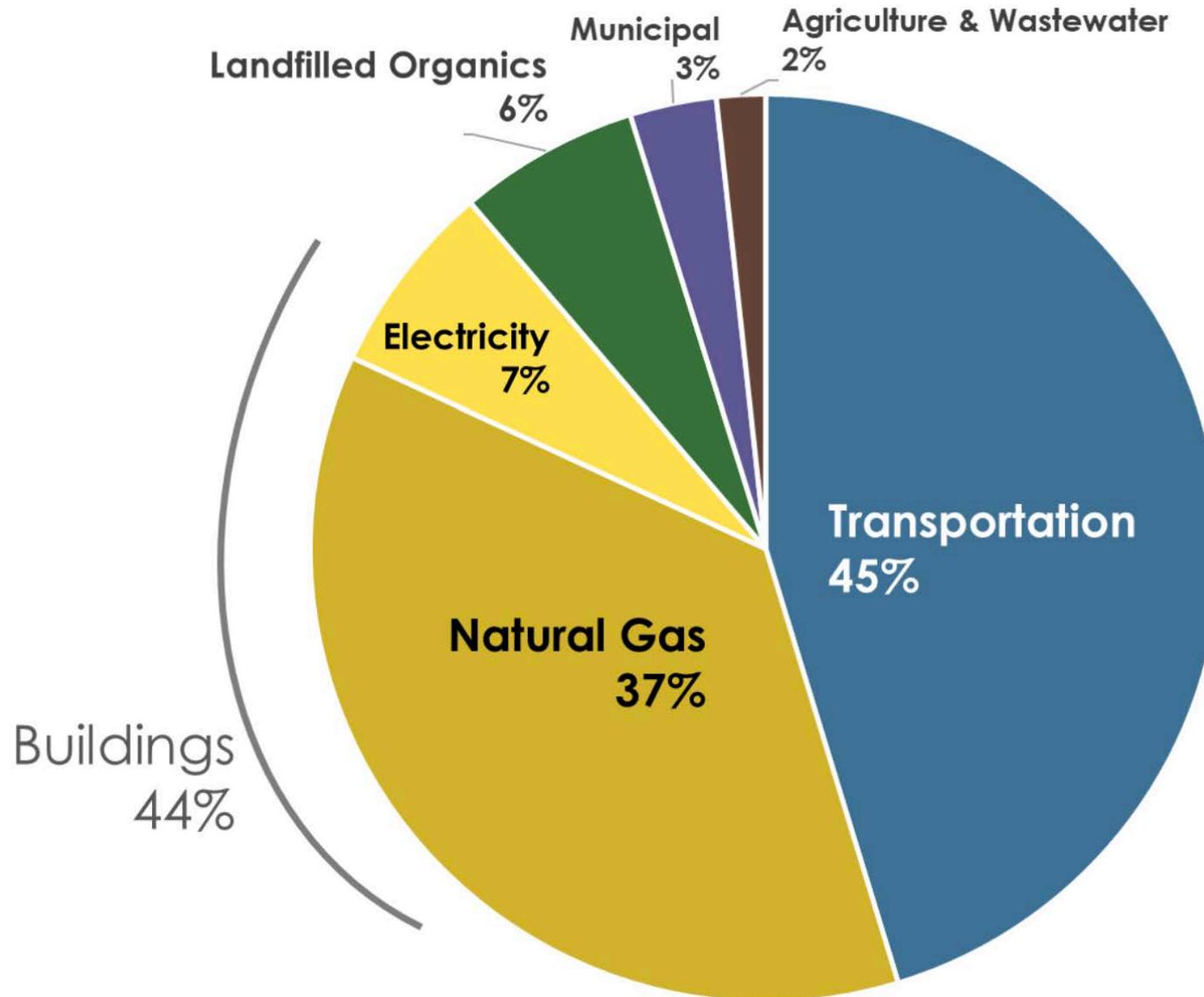


# Today's Objectives



1. Emissions and Progress
2. Benefits of Building Electrification
3. Stakeholder Process and Outreach
4. Key Components of Ordinance
5. Cost and Equity Analysis
6. Discussion

# Sources of San Francisco GHG Emissions (2018)

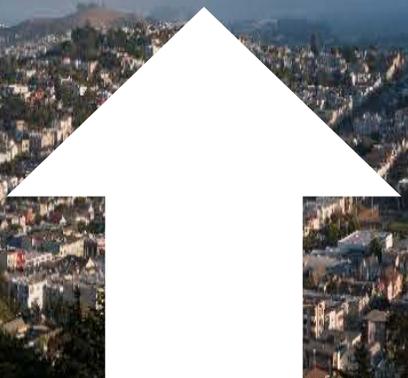


# Emissions for San Francisco (1990 – 2018)



2017

2018



22%

172%

36%

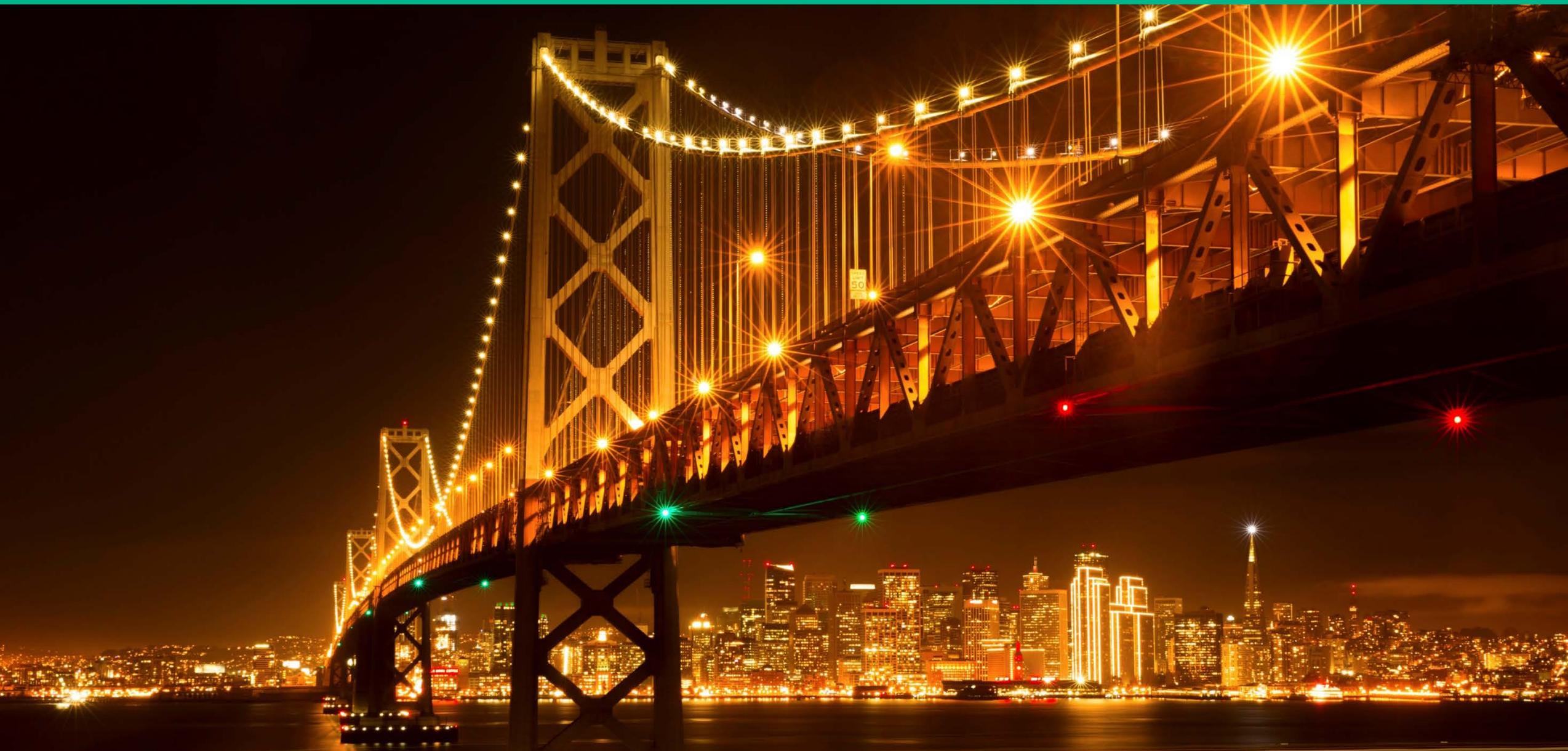
35%

Population

GDP

Emissions below 1990 levels

# The Zero Emission City





# Benefits of Building Electrification

# Natural gas impacts . . .



Health



Safety



Resilience

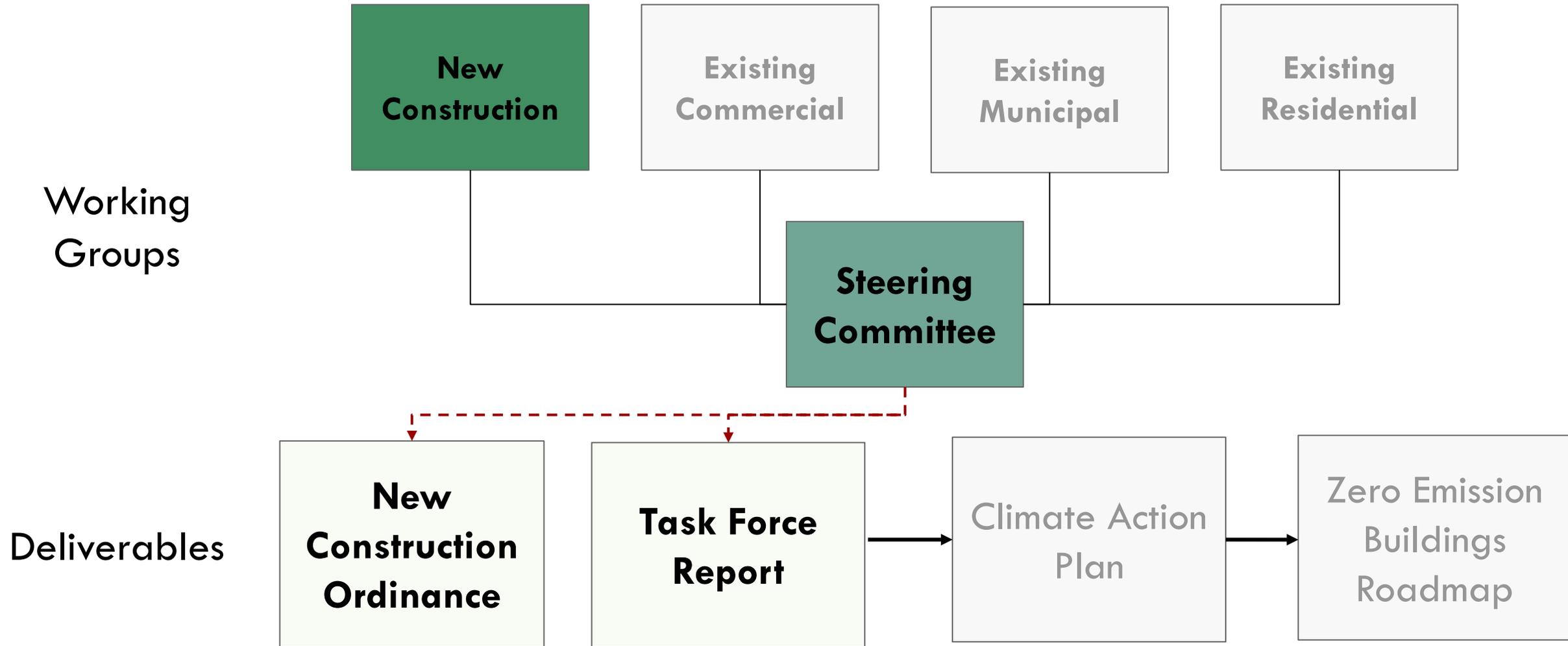


Equity



# Stakeholder Process and Outreach

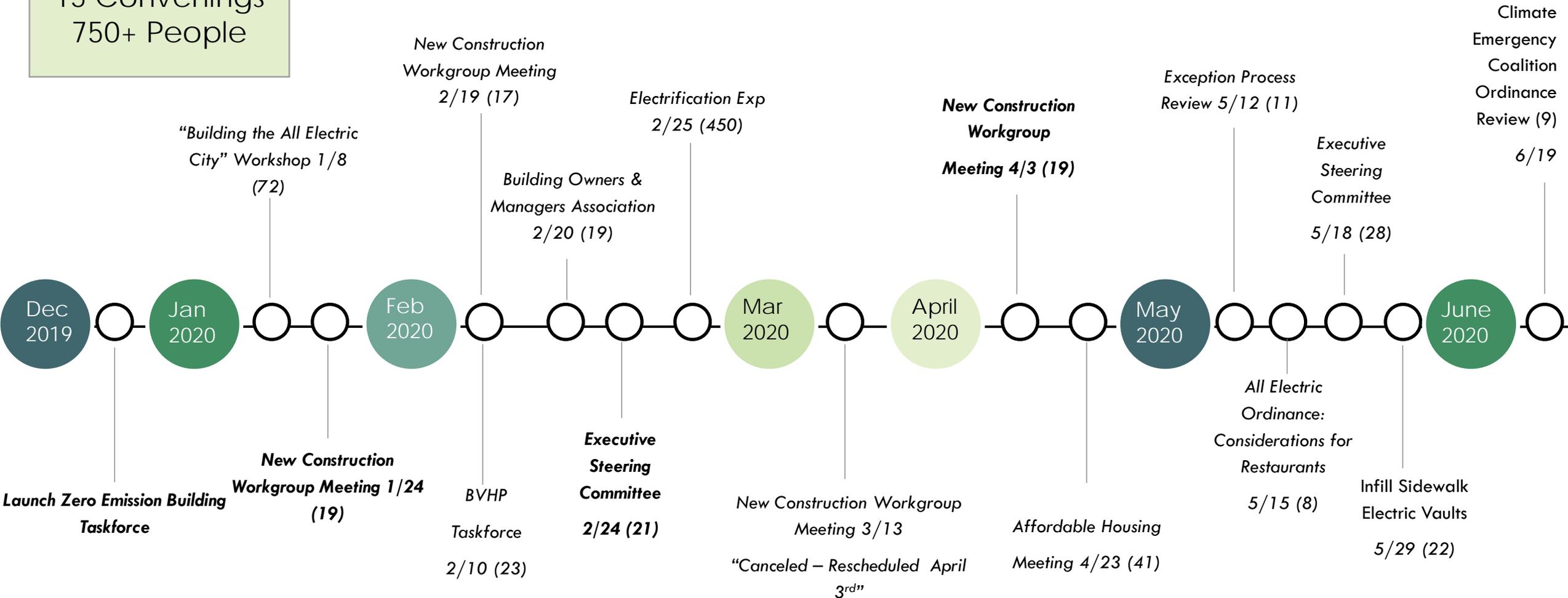
# Zero Emission Building Taskforce





# Overview of Outreach Efforts

15 Convenings  
750+ People





# All Electric New Construction Ordinance

# Key Components of the Ordinance



01

For projects that apply for building permits after January 1, 2021 – heating, cooling, water heating, cooking and clothes drying must be all electric.

02

No permits will be issued to convert all-electric buildings into mixed-fuel buildings



# Key Components of the Ordinance



03

For projects that include a commercial food service establishment, mixed-fuel building permits may continue to be accepted until January 1, 2022 provided gas piping is exclusively for cooking equipment.

04

Mixed-fuel permits may be issued only upon finding that All-Electric construction is physically or technically infeasible for a specific area or system

05

Mixed-fuel permits must be as “Electric Ready” as feasible while complying with all provisions of building and electrical codes.

# The Exception Process: Narrow & Specific



Case by case basis  
– there are no  
blanket exceptions



Exceptions are  
limited to  
infeasibility



Limited to the  
area/system that  
cannot all be electric



Exceptions would  
need to be electric  
ready



# Cost and Equity Analysis

# Cost and Benefits – Studies



	<b>Change in Construction Cost (\$/Sq Ft)</b>	<b>Lifetime Net Present Value (\$/Sq Ft)</b>
<b>Single Family</b>	-\$5.01	\$3.62
<b>Multifamily 3 floors or less</b>	-\$1.18	\$4.64
<b>Multifamily 4-8 floors</b>	-\$0.13	\$0.68
<b>Retail</b>	-\$0.98	\$6.37
<b>Office</b>	-\$1.54	\$1.09

**Sources:**

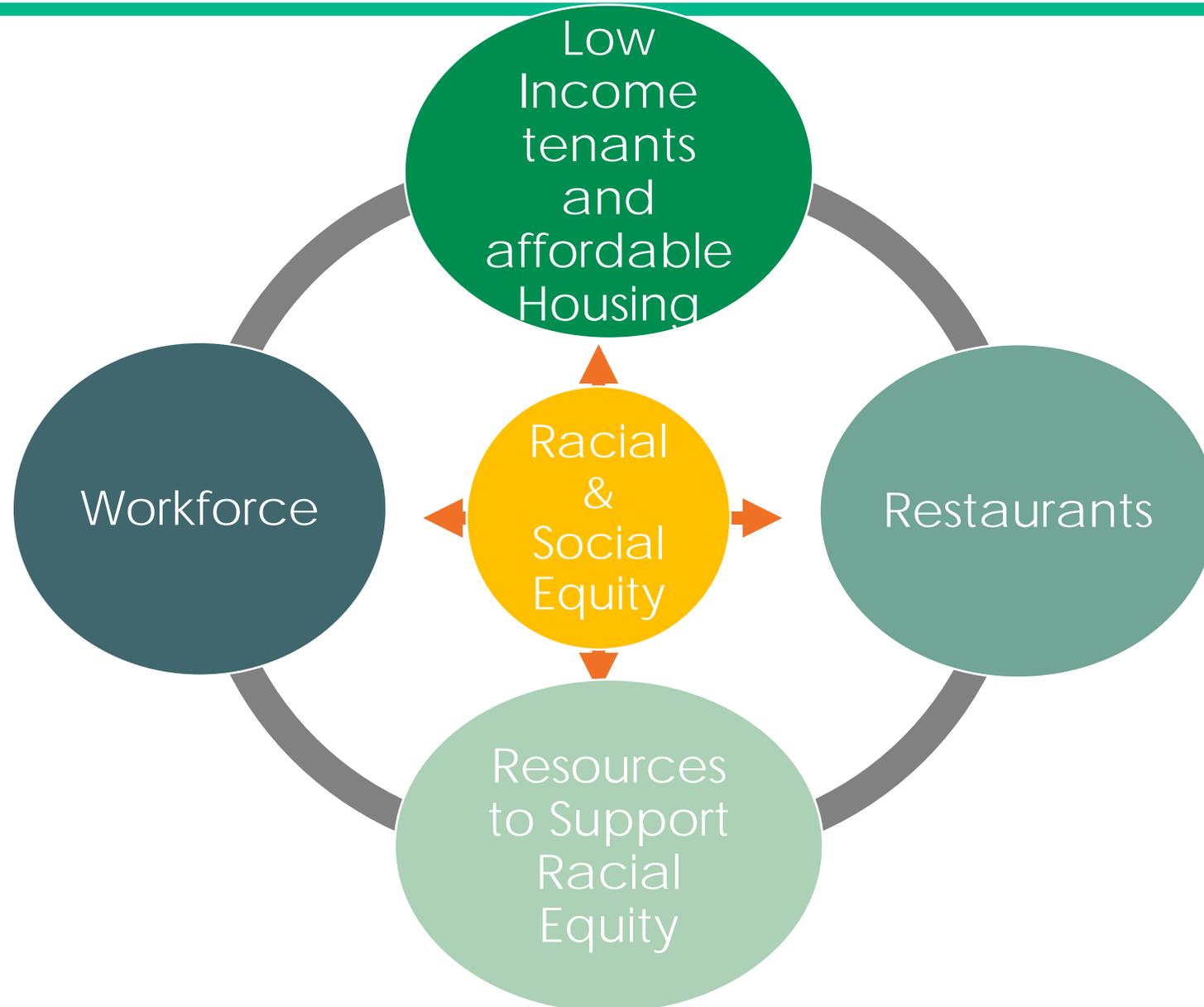
*Low-Rise Residential:* Frontier Energy (2019)

*Mid-Rise Residential:* Frontier Energy (2020)

*Non-Residential:* TRC (2019)

Supplemental Analysis by Dept of Environment to account for San Francisco Better Roofs requirements

# Equity Scan Assessment



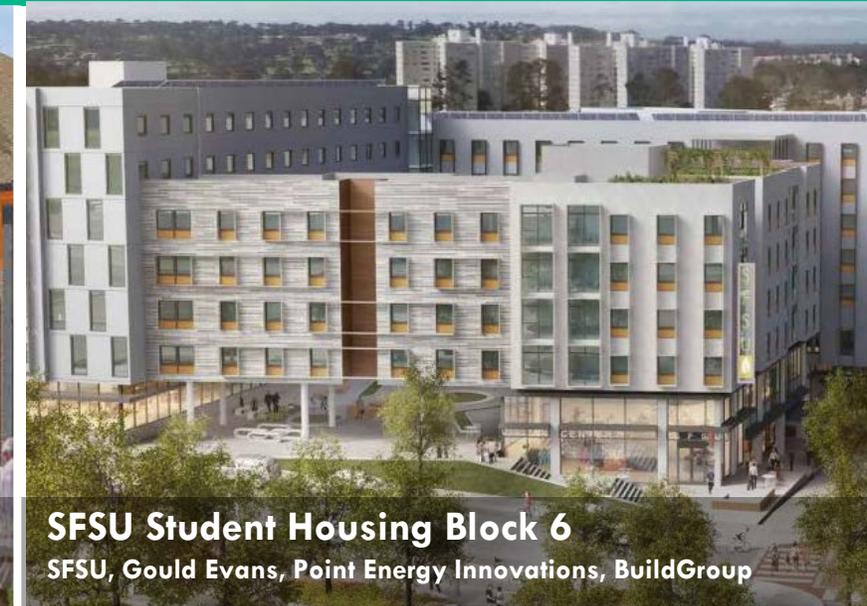
# The future is already here – SF all electric buildings



**2060 Folsom - Casa Adelante – Affordable**  
CCDC, MEDA, Mithun



**Southeast Community Center - Municipal**  
SFPUC, SFPW



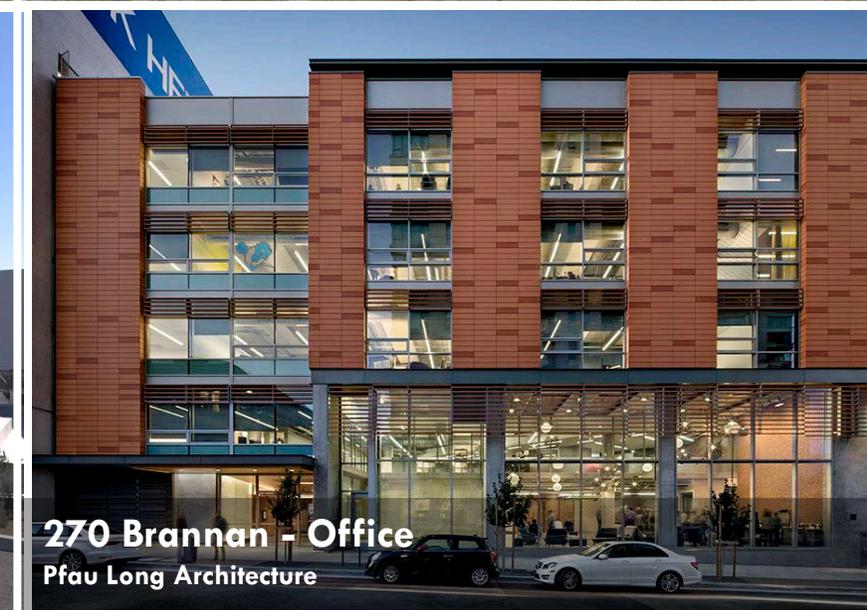
**SFSU Student Housing Block 6**  
SFSU, Gould Evans, Point Energy Innovations, BuildGroup



**685 Florida St – Infill**  
Off The Grid Design, RG Architecture



**Claire Lilienthal Elementary School - SFUSD**  
SFUSD, Lionakis



**270 Brannan - Office**  
Pfau Long Architecture

# Thank you



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