



Sunnyvale



SILICON VALLEY  
CLEAN ENERGY

## Reach Codes

Suzanne Park, Chief Building Official



# Presentation Agenda

---

What are Reach Codes


Phased Implementation

Discussion and Outreach

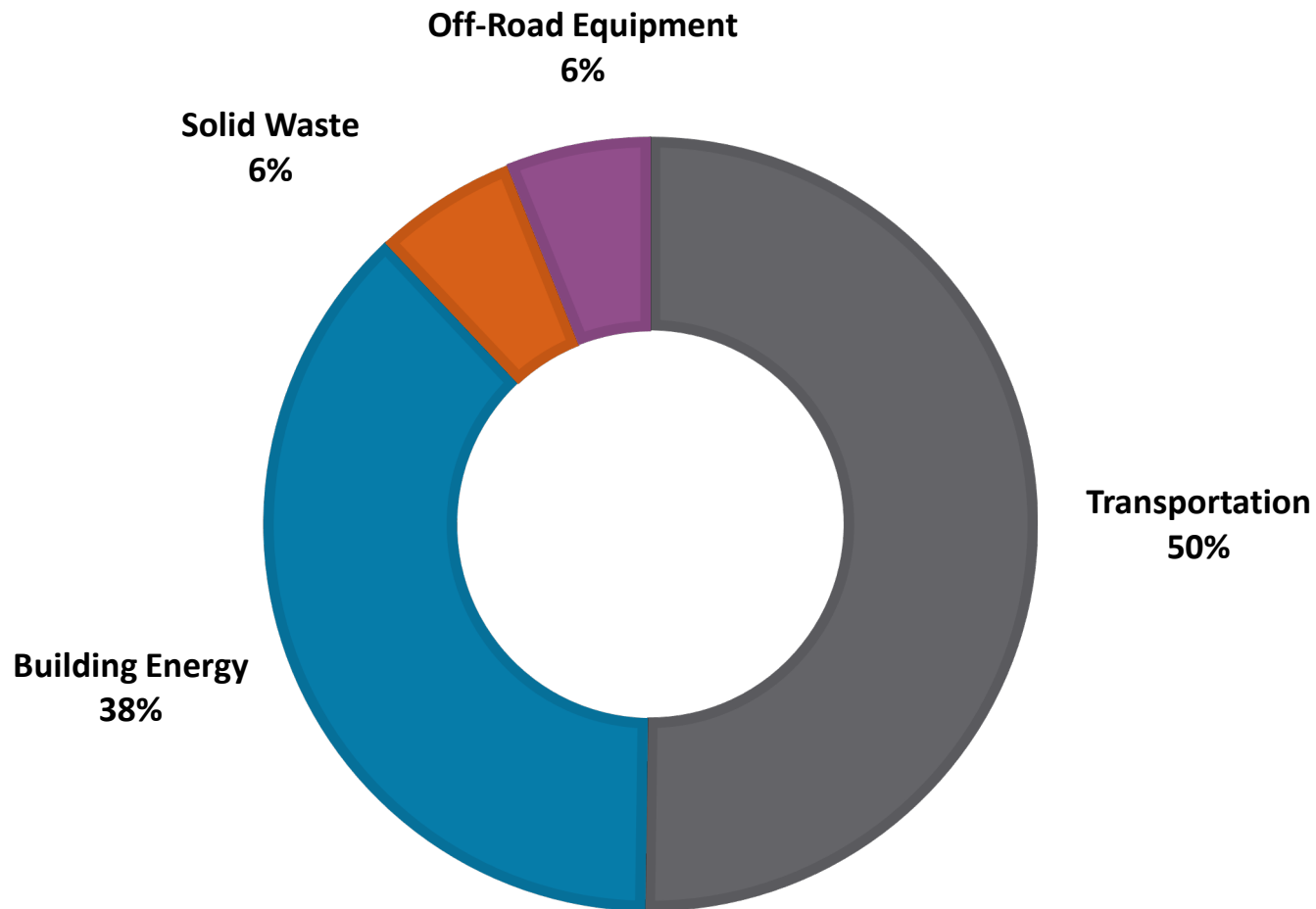
Questions & Feedback

# Reach Codes

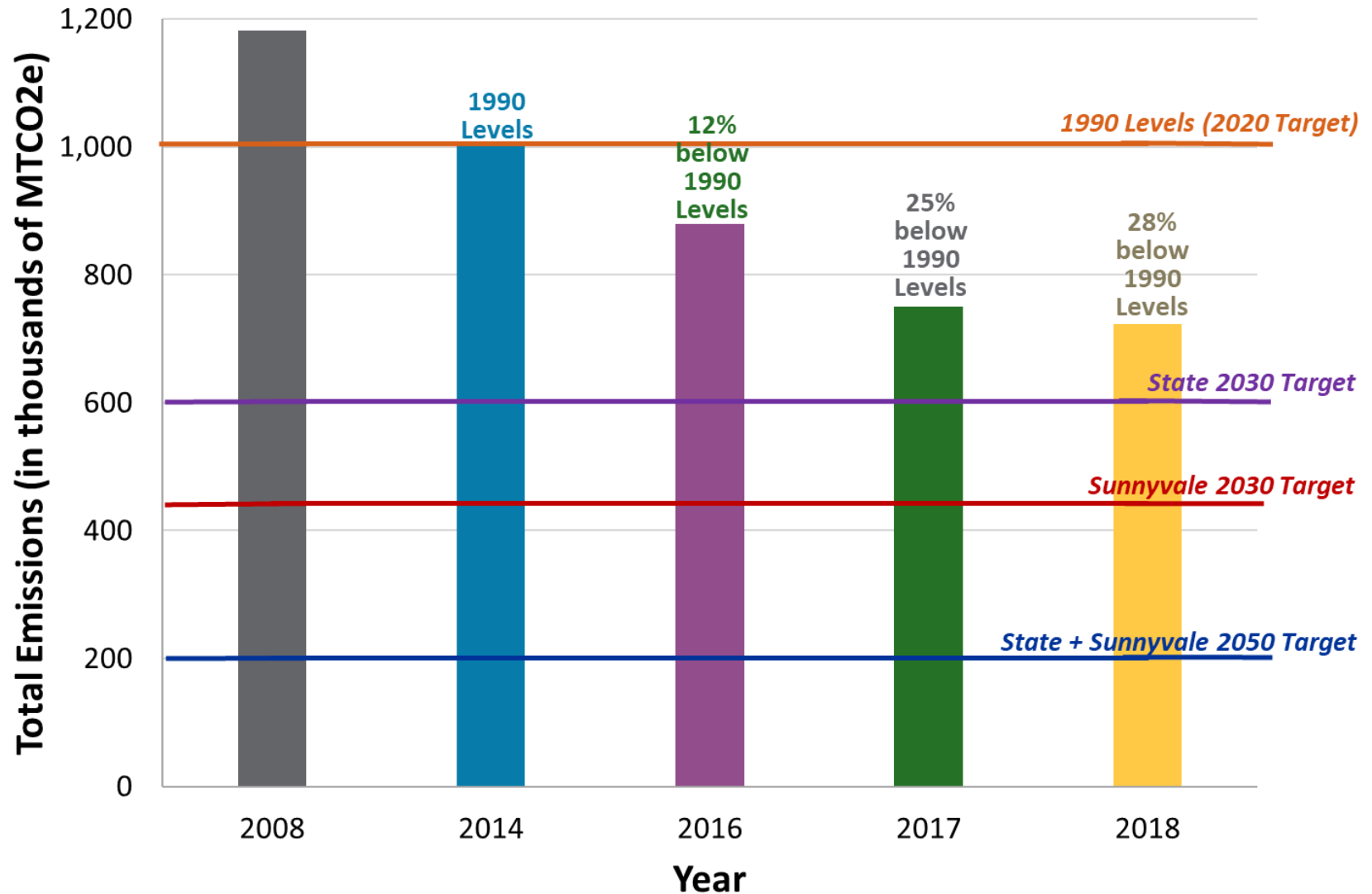
---

- 
1. Exceed California Energy Codes
  2. Pathway toward California Emission Goals
  3. Fiscally Responsible
  4. Encourage Healthier, Safer buildings
  5. Increase Number of Low/No Pollution Vehicles

# Sunnyvale 2018 GHG Emissions By Sector



# Total Emissions by Year



# Definitions



## Reach Codes

Exceeding California Energy Standards



## All Electric

No gas appliances



## Photovoltaic (PV)

Solar Panels

# Definitions

---



## **Climate Action Playbook**

Sunnyvale's Climate Action Initiative



## **Green Building Program**

Holistic Approach to GHG reduction.

# Phased Implementation Summary

|   | Residential Construction | Non-Residential Construction |
|---|--------------------------|------------------------------|
| Phase 1<br>New Construction   | X                        | X                            |
| Phase 2<br>New Commercial Kitchen<br>New Electric Vehicle<br>Chargers | X                        | X                            |
| Phase 3<br>Additions and Alterations<br>to Existing Structures        | X                        | X                            |
| Phase 4<br>New Large Hotels   | X                        |                              |





Sunnyvale

# Phase 1 – New Construction

- Residential – Single Family Dwelling & Duplex
- Multifamily Residential
- All Non-residential

# Phase 1 – Climate Action Playbook

- **Playbook Strategy 1:**  
Promoting Clean Energy

- ◆ **Play 1.2**  
Increase local solar photovoltaics



- **Playbook Strategy 2:**  
Decarbonizing Buildings

- ◆ **Play 2.3**  
Achieve all-electric new construction



# All-Electric with Green Building Program

---

**SINGLE- AND TWO-FAMILY HOMES**

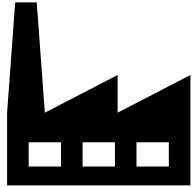
**MULTI-FAMILY RESIDENTIAL**

**NON-RESIDENTIAL (COMMERCIAL)**

# Photovoltaic Installation

- Residential
  - ◆ **Always** Required (*per current CA Codes*)
- Multifamily Residential
  - ◆ **Always** be Required, optional solar water heating
- Non-Residential
  - ◆ **Always** be Required, optional solar water heating

# EXEMPT from Phase 1



Factory, Laboratory, and Hazardous Materials



Emergency Operating Centers



Commercial Kitchens



Previously Entitled Multifamily



Hotel Laundry Facilities

# Phase 2

## New Commercial Kitchens

## New Vehicle Chargers

### (Proposed 2021)

## Phase 2 – Climate Action Playbook

- **Playbook Strategy 2:**  
Decarbonizing Buildings
  - ◆ **Play 2.3**  
Achieve all-electric new construction



- **Playbook Strategy 3:**  
Decarbonizing Transportation & Sustainable Land Use
  - ◆ **Play 3.3**  
Increase zero-emission vehicles



# Non-Residential Requirements

---

## Step 1:

Highly-efficient commercial kitchens.

## Step 2:

New commercial kitchens would be all-electric.





# Residential Requirements

---

Prewire for electric vehicle chargers at residential additions and alterations.





Sunnyvale

# Phase 3

## Additions and Alterations to Existing Structures

### (Pending Cost-Effectiveness Study)

# Phase 3 – Climate Action Playbook

- **Playbook Strategy 2:**  
Decarbonizing Buildings
  - ◆ **Play 2.1**  
Reduce energy consumption in **existing** buildings
  - ◆ **Play 2.2**  
Support electrification of **existing** buildings



# RESIDENTIAL CONSTRUCTION

## COST-EFFECTIVENESS STUDY NEEDED

### Alterations

- New appliances shall be electric.
- Meet minimum CalEnergy standards.

### Additions

- New Construction requirements

# NON-RESIDENTIAL CONSTRUCTION

## COST EFFECTIVENESS STUDY NEEDED

### Alterations

- Appliances shall be electric.
- Meet minimum CalEnergy standards.

### Additions

- New construction requirements.

# Phase 4

## New Large Hotels (80+ rooms)

### (Pending Cost-Effectiveness Study)

# Outreach and Feedback

# Feedback

## Support/Pro

- Reduces greenhouse gases
- Promotes a Healthier and Safer Community
- Electrification is cost-effective through the life of the project
- Supports the City's Climate Action Playbook



# Feedback

## Negative/Cons

- Increased upfront construction costs.
- PG&E is raising the cost of electricity.
- Implementation is overreach of government.
- Government should provide monetary incentives for Reach Code upgrades.
- Reach Codes will not provide a significant impact on reduction of GHG.
- Concentrate on sustainable buildings to reduce GHG.

# Commission Questions and Feedback