

UC Berkeley Climate Action Data & Tools Project

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C/CAG San Mateo RMCP Committee

Sept 18, 2024



Problem Statement

**Local governments are
critical partners in
California's climate goals...**

**... but they lack information,
capacity & resources.**

The primary measurement tool to date - GHG inventory -
is time and resource intensive
for each jurisdiction to do individually.

Streamlining and Centralizing Climate Action Data

County-level Collective Efforts

RICAPS

East Bay
Energy
Watch

Marin Climate
& Energy
Partnership

Sonoma
RCPA

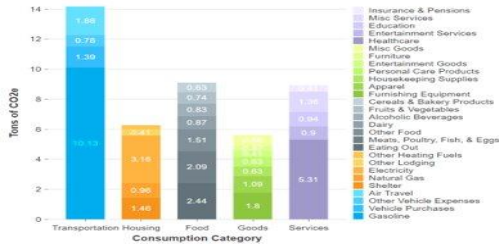
Statewide Efforts

Senate Bill 511
Attempted in 2022

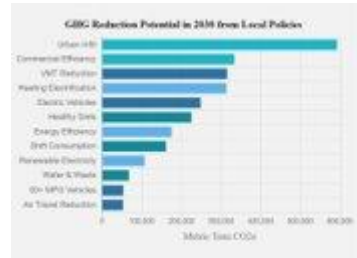
UCOP Climate Action
Seed Grant

UCB Project Overview: Outputs

Territorial & Consumption Based Inventories



Policy Planning Tools



Equity Indicators



Journalism

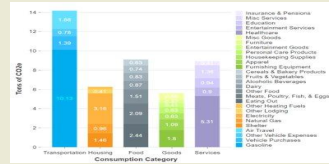
The Climate Impact of Your Neighborhood, Mapped



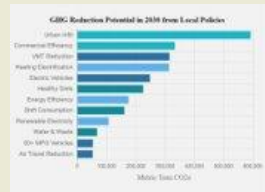
Project Input Process

Methodology
& Policy
Advisory
Committee

Inventories



Policy Tools



Equity Indicators



Local Government
Needs Assessment

Journalism



Surveys
Interviews
Webinars
Beta Testing

Methodology and Policy Advisory Committee

State

California Air Resources Board staff
on transportation, buildings, waste

Local

Leading cities and counties,
including those who were active in
advancing SB 511

Regional

Air district and MPO staff

Consultants

Leading climate action planning
consultants

Academics

UC's and CalPoly researchers

Methodology and Policy Advisory Committee

Topic	Date
Transportation: GHG quantification methods	Feb 29
Transportation: Measures	Mar 22
Buildings: GHG quantification methods	Apr 25
Buildings: Measures	May 21
Energy (grid) GHG quantification methods and measures	June 17
Waste & Materials: GHG quantification methods	July 15
Waste & Materials: Measures	August 8
Actionable & Inclusive Data Indicators	September 18
Review of Methodology Summary and Beta Version of Tool	October 23

UC Berkeley Cool Climate Network

Who are we?

A consortium of leading academic institutions, companies, local governments and affiliated partners seeking aggressive, science-based climate solutions

<https://coolclimate.org/consortium>



+ many more

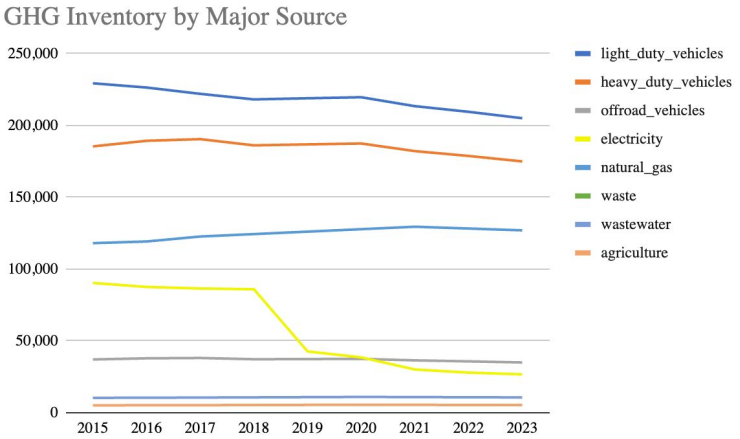
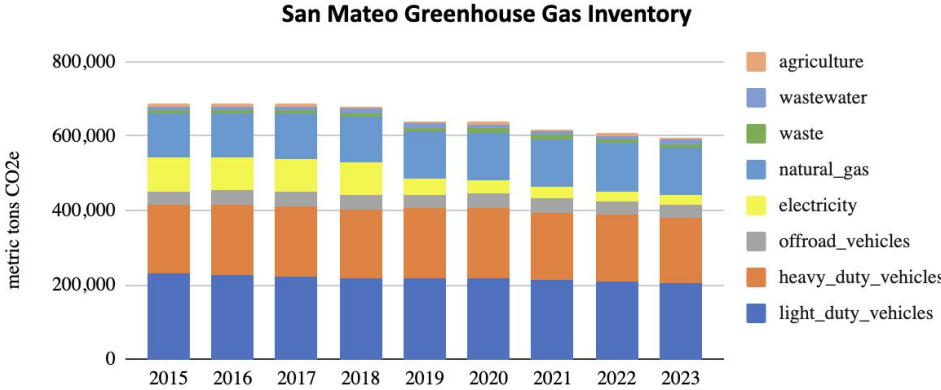


Intervention Areas

- Research
- Software
- Programs
- Outreach
- Teaching

Progress to Date: Sector-Based GHG Inventory

Provisional GHG Inventory City of San Mateo



San Mateo CAP (Placeworks): 559k tCO₂e
 CoolClimate Network 638k tCO₂e

Progress to Date: Consumption-Based GHG Inventory

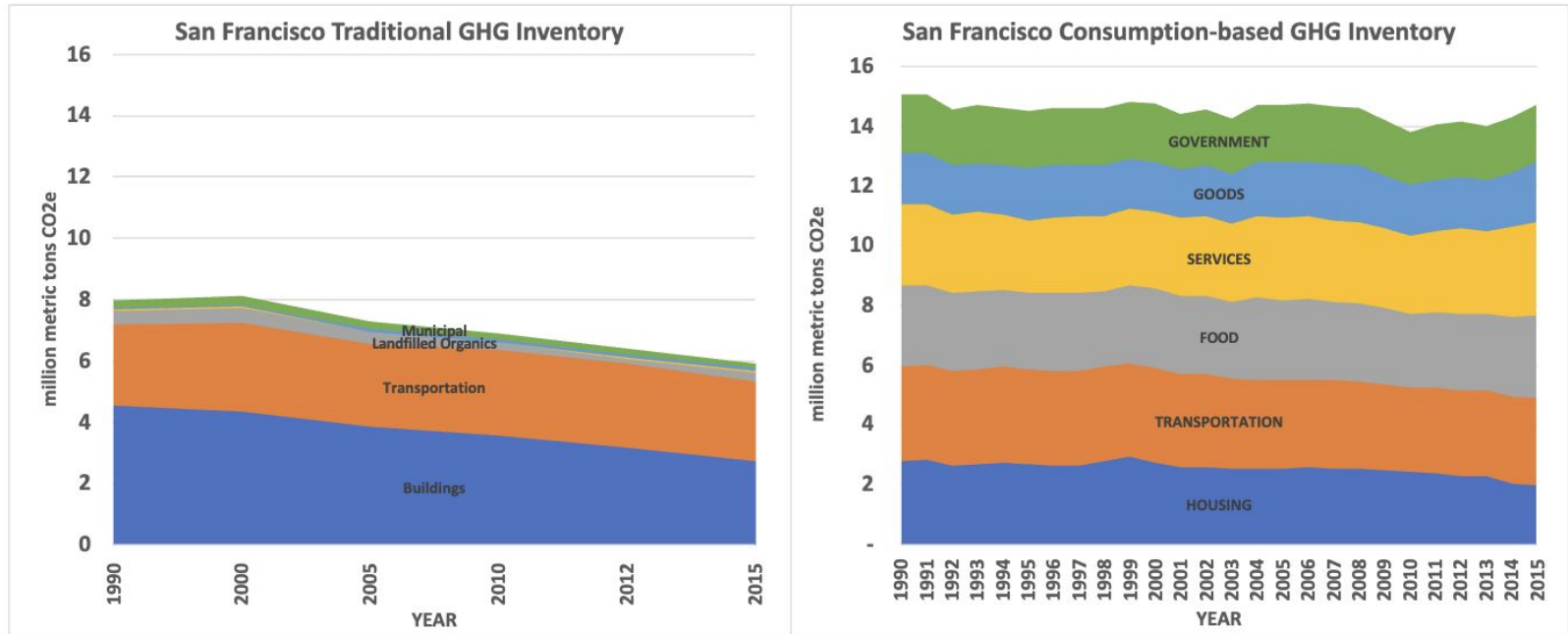
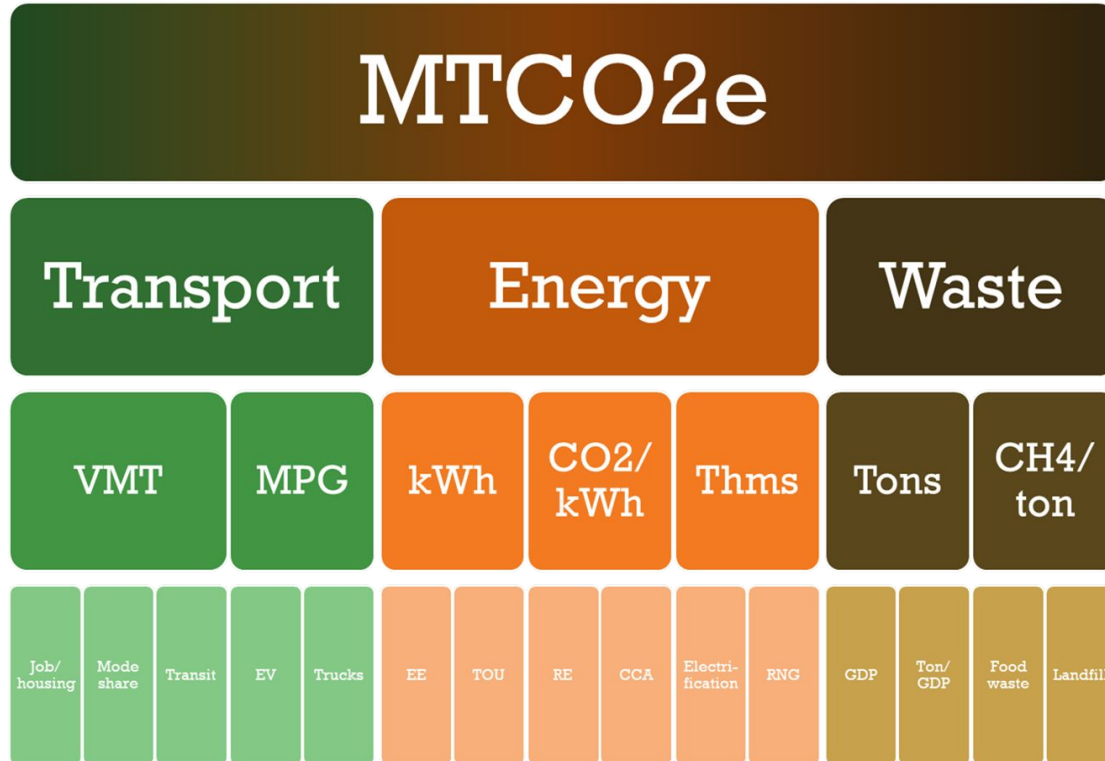


Figure A. San Francisco's Traditional GHG Inventory (left-hand figure) vs. Consumption-based GHG Inventory (right-hand figure) for the year 2015.

Why Go Beyond MTCO₂e?

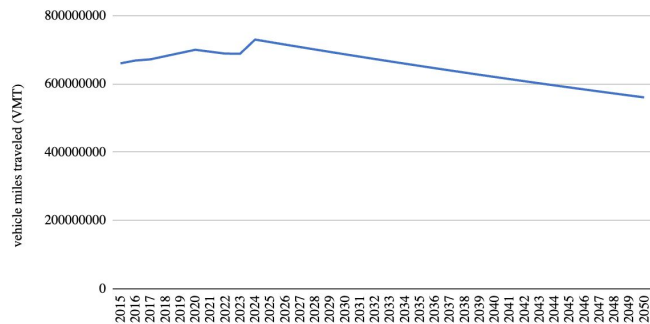


- What is 1 MTCO₂e?
- Cannot be directly managed
- Doesn't communicate tangible community benefits
- Abstracts the problem
- Puts onus on climate staff, not all gov depts
- Equity is primary concern

Progress to Date: Actionable Data Indicators

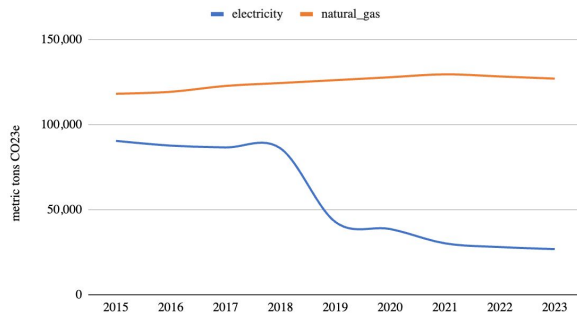
Sample of 200+ Indicators for City of San Mateo

Vehicle Miles Traveled Light-Duty Vehicles (BAU)



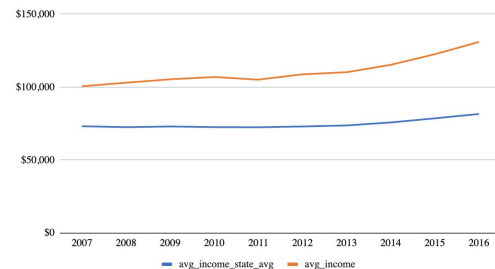
Source: Replica

GHG Emissions from Electricity and Natural Gas



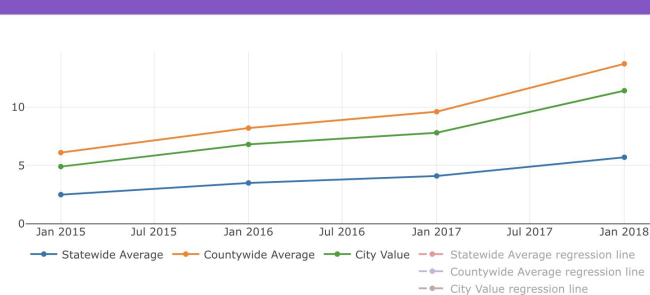
Source: Bay Area Energy Atlas + CoolClimate

Average Household Income vs. State Average



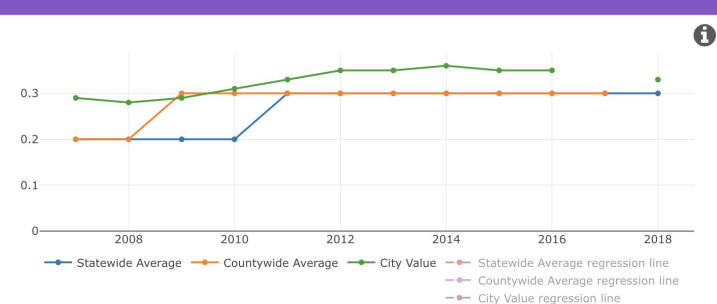
Source: US Census

Electric Vehicles per 1,000 People



Data Source: California Air Resource Board / CoolClimate

% of Homes With Electricity Primary Heating Fuel



Data Source: American Community Survey [Sociaexplorer.com](https://www.sociaexplorer.com)

Progress to Date: Policy Planning Tool

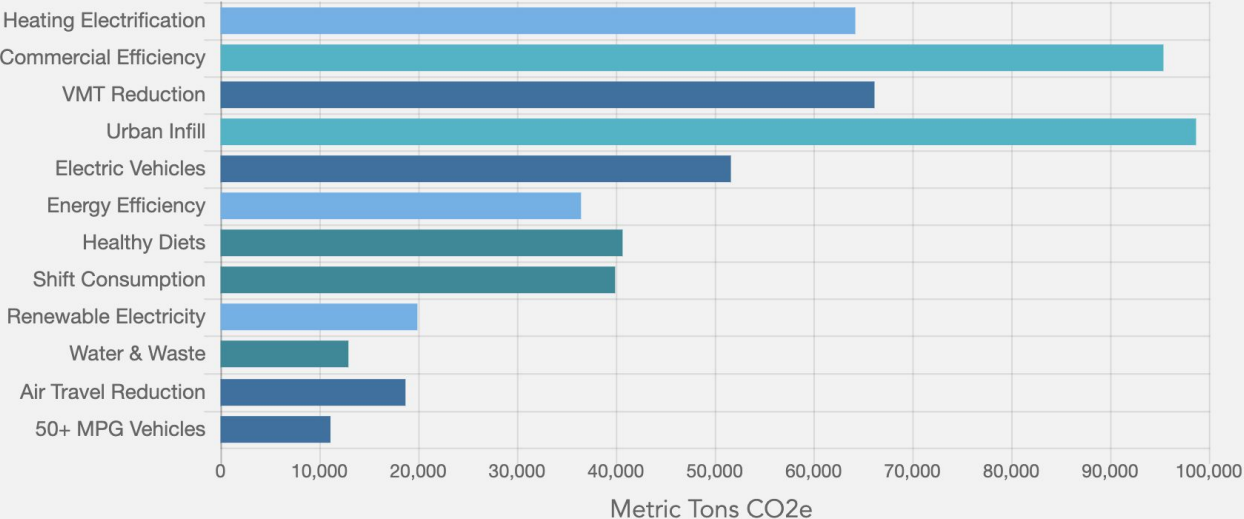
Enter State, County, City, Zip Code, or BlockGroup

Location 1

SAN MATEO

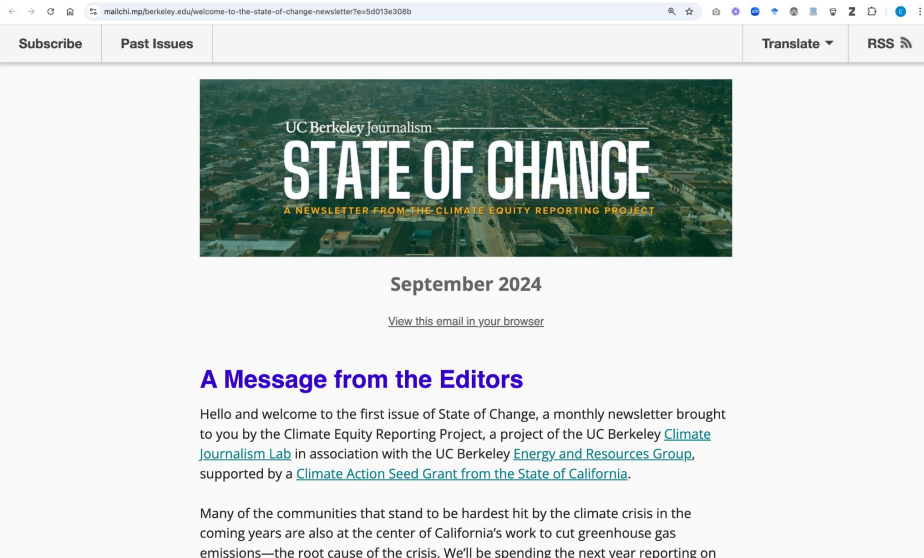
SEARCH LOCATION

GHG Reduction Potential in 2030 from Local Policies



Progress to Date: Journalism

Newsletter



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UC Berkeley Journalism
STATE OF CHANGE
A NEWSLETTER FROM THE CLIMATE EQUITY REPORTING PROJECT

September 2024

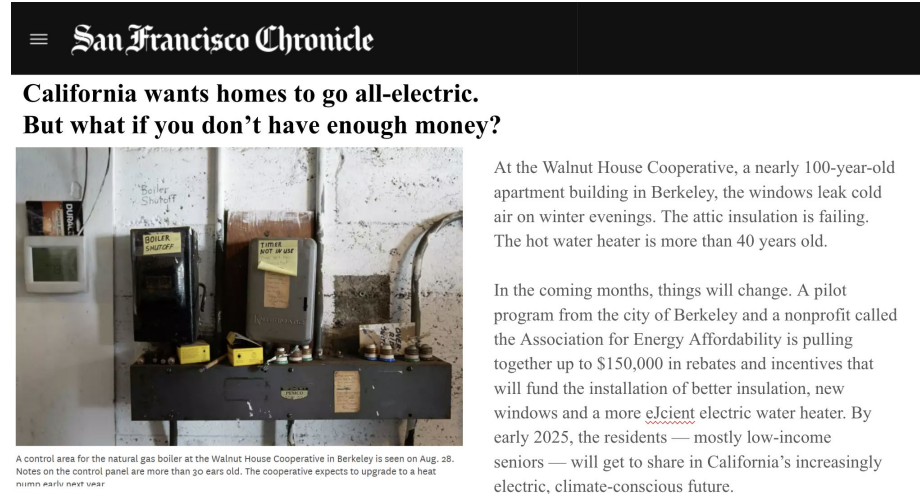
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A Message from the Editors

Hello and welcome to the first issue of State of Change, a monthly newsletter brought to you by the Climate Equity Reporting Project, a project of the UC Berkeley [Climate Journalism Lab](#) in association with the UC Berkeley [Energy and Resources Group](#), supported by a [Climate Action Seed Grant from the State of California](#).

Many of the communities that stand to be hardest hit by the climate crisis in the coming years are also at the center of California's work to cut greenhouse gas emissions—the root cause of the crisis. We'll be spending the next year reporting on

Stories in Print



San Francisco Chronicle

California wants homes to go all-electric. But what if you don't have enough money?

At the Walnut House Cooperative, a nearly 100-year-old apartment building in Berkeley, the windows leak cold air on winter evenings. The attic insulation is failing. The hot water heater is more than 40 years old.

In the coming months, things will change. A pilot program from the city of Berkeley and a nonprofit called the Association for Energy Affordability is pulling together up to \$150,000 in rebates and incentives that will fund the installation of better insulation, new windows and a more efficient electric water heater. By early 2025, the residents — mostly low-income seniors — will get to share in California's increasingly electric, climate-conscious future.

A control area for the natural gas boiler at the Walnut House Cooperative in Berkeley is seen on Aug. 28. Notes on the control panel are more than 30 years old. The cooperative expects to upgrade to a heat pump early next year.

Progress to Date & Timeline to Completion

Task	Progress (Percent Complete)										Anticipated Completion Date
Committee Meetings	█	█	█	█	█	█	█	█	█	█	Oct 2024
Methodology Developed	█	█	█	█	█	█	█				Dec 2024
GHG Inventories Developed	█	█	█	█	█	█					Dec 2024
Policy Planning Tool	█	█	█	█	█						Dec 2024
Local Government Engagement	█	█	█	█							Jan 2025
Indicators Developed	█	█	█								Mar 2025
Journalism Articles	█	█									Jun 2025

Thank You

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coolclimate.org