



# STOP WASTE

at home • at work • at school



## What We Measure Matters

---



Miya Kitahara | Program Manager  
CCC Sustainability Exchange | Dec 10, 2020



# EBEW GHG Inventory Tool

- Updated through 2018
  - 2005, 2020, 2015, 2017, 2018
- Ready to enter in 2019 data
  - Requires PG&E, CCA, waste data
- No more consultant support

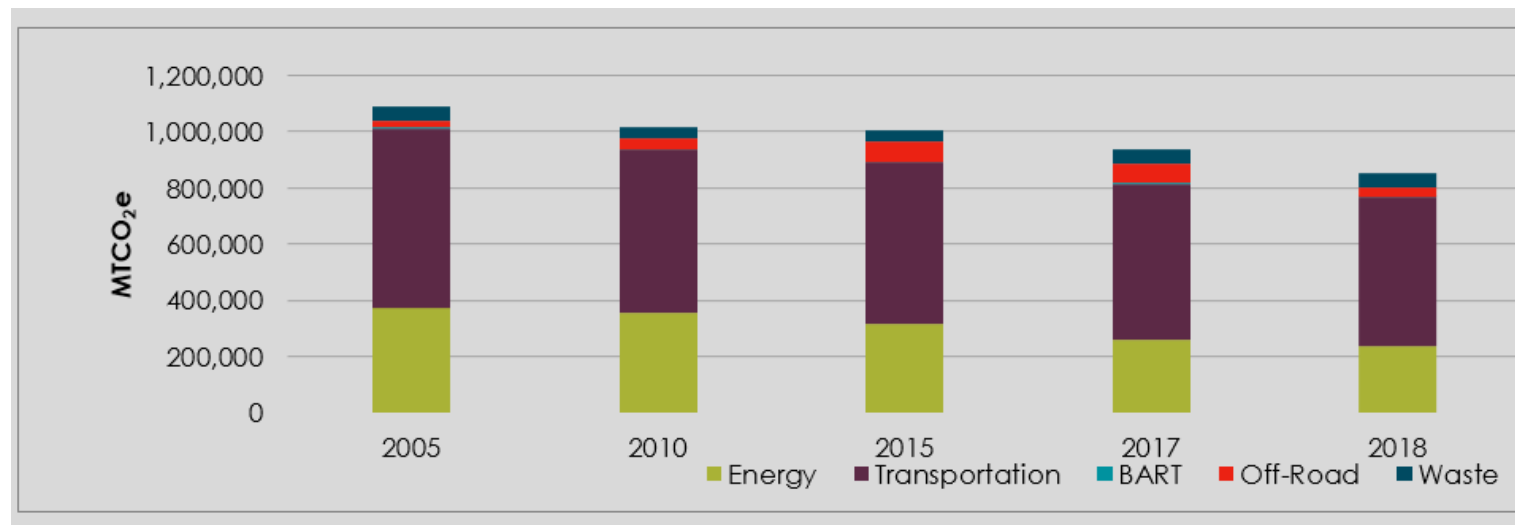
**East Bay Greenhouse Gas Inventories**

1 You will need to obtain an Excel file with data from PG&E to complete the inventory. Data from this file will need to be added below for the tool to conduct the necessary analysis.

Contact your PG&E representative. Request the report named "Community-wide GHG Invenfor PG&E will process the request and should make it available within a short period of time as an And the tab in the Excel file labeled "Data".

Paste the complete table from this tab into the space below, directly under the green arrow. The cell directly below the green arrow should read "TOTALCOUNTY". If not, please contact StopWaste. Please make sure that any data posted here includes data for the calendar year 2018. The data

COUNTY	CITY	YEAR	CATEGORY	RES ELEC (KWH/KW)	RES ELEC (USE/KWH)	RES ELEC CO2 (MTCO2e)
ALAMEDA	HAYWARD	2009 (3) COUNTY		420	5037	
ALAMEDA	HAYWARD	2009 (4) CITY				
ALAMEDA	HAYWARD	2009 (5) DISTRICT		1287	30877	
ALAMEDA	HAYWARD	2009 NONGOVMENT		464	25861366	662



# EBEW Inventory Data

✓ <b>Energy</b>	<b>381,397</b>	<b>373,837</b>	<b>447,419</b>	<b>449,702</b>	<b>405,735</b>	<b>356,004</b>	<b>337,086</b>	<b>344,865</b>	<b>340,060</b>	<b>315,940</b>	<b>310,777</b>	<b>276,206</b>	<b>253,406</b>	<b>224,446</b>	<b>181,576</b>
Residential electricity	54,284	51,577	71,940	73,641	66,617	51,309	45,686	51,167	49,174	48,033	45,034	32,287	23,315	19,148	1,305
Nonresidential electricity	141,079	131,326	178,471	182,683	153,033	118,682	98,593	108,046	104,451	105,846	98,257	70,911	51,296	24,226	3,972
Residential gas	104,669	106,973	106,835	106,048	102,921	102,992	107,599	103,255	102,540	84,774	87,213	88,815	91,899	93,141	95,103
Nonresidential gas	81,364	83,961	90,173	87,329	83,164	83,021	85,208	82,397	83,894	77,286	80,274	84,193	86,896	87,932	81,197
✓ <b>Transportation</b>	<b>616,349</b>	<b>606,039</b>	<b>595,792</b>	<b>585,607</b>	<b>575,485</b>	<b>565,425</b>	<b>564,054</b>	<b>562,575</b>	<b>560,987</b>	<b>559,291</b>	<b>557,487</b>	<b>549,499</b>	<b>541,411</b>	<b>520,021</b>	<b>511,225</b>
Passenger vehicles	380,553	371,275	362,059	352,907	343,816	334,788	331,511	328,126	324,633	321,032	317,322	311,754	306,087	299,865	292,620
Commercial vehicles	235,796	234,764	233,733	232,701	231,669	230,637	232,543	234,448	236,354	238,259	240,165	237,744	235,324	220,156	218,605
✓ <b>Waste</b>	<b>50,924</b>	<b>49,782</b>	<b>54,291</b>	<b>43,127</b>	<b>40,158</b>	<b>38,338</b>	<b>37,496</b>	<b>33,520</b>	<b>34,746</b>	<b>33,647</b>	<b>38,148</b>	<b>41,567</b>	<b>47,555</b>	<b>52,209</b>	<b>52,209</b>
✓ <b>Off-road</b>	<b>24,345</b>	<b>27,002</b>	<b>29,659</b>	<b>32,316</b>	<b>34,973</b>	<b>37,630</b>	<b>44,311</b>	<b>50,992</b>	<b>57,673</b>	<b>64,353</b>	<b>71,034</b>	<b>70,156</b>	<b>69,279</b>	<b>36,064</b>	<b>51,392</b>
Construction	0	2,296	4,591	6,887	9,183	11,478	17,662	23,846	30,030	36,214	42,398	40,970	39,542	5,696	20,447
Industrial + Commercial	17,523	17,626	17,729	17,832	17,935	18,038	18,241	18,444	18,647	18,850	19,052	19,271	19,490	19,707	19,927
Other	6,822	7,081	7,339	7,597	7,855	8,114	8,408	8,702	8,995	9,289	9,583	9,915	10,247	10,661	11,018
<b>Total of Above</b>	<b>1,073,014</b>	<b>1,056,660</b>	<b>1,127,161</b>	<b>1,110,752</b>	<b>1,056,351</b>	<b>997,397</b>	<b>982,948</b>	<b>991,951</b>	<b>993,466</b>	<b>973,232</b>	<b>977,446</b>	<b>937,429</b>	<b>911,651</b>	<b>832,739</b>	<b>796,402</b>



Interim years extrapolated  
Doesn't solve missing PG&E data gap!

# We Manage What We Measure

Residential Gas Emissions  
Passenger Vehicle Emissions

**We can't manage this directly!**

Water & Wastewater Emissions

Nonresidential Gas Emissions

Truck Emissions

Nonresidential Electricity Emissions

Electricity Emissions

Residential Electricity Emissions

Methane Emissions in Landfills

Electricity Emissions in Landfills

Food Supply Chain Emissions

**Missed opportunities!**

Supply Chain Emissions

Construction Site Emissions

Air Travel by Community

Manufacturers

0.55 car

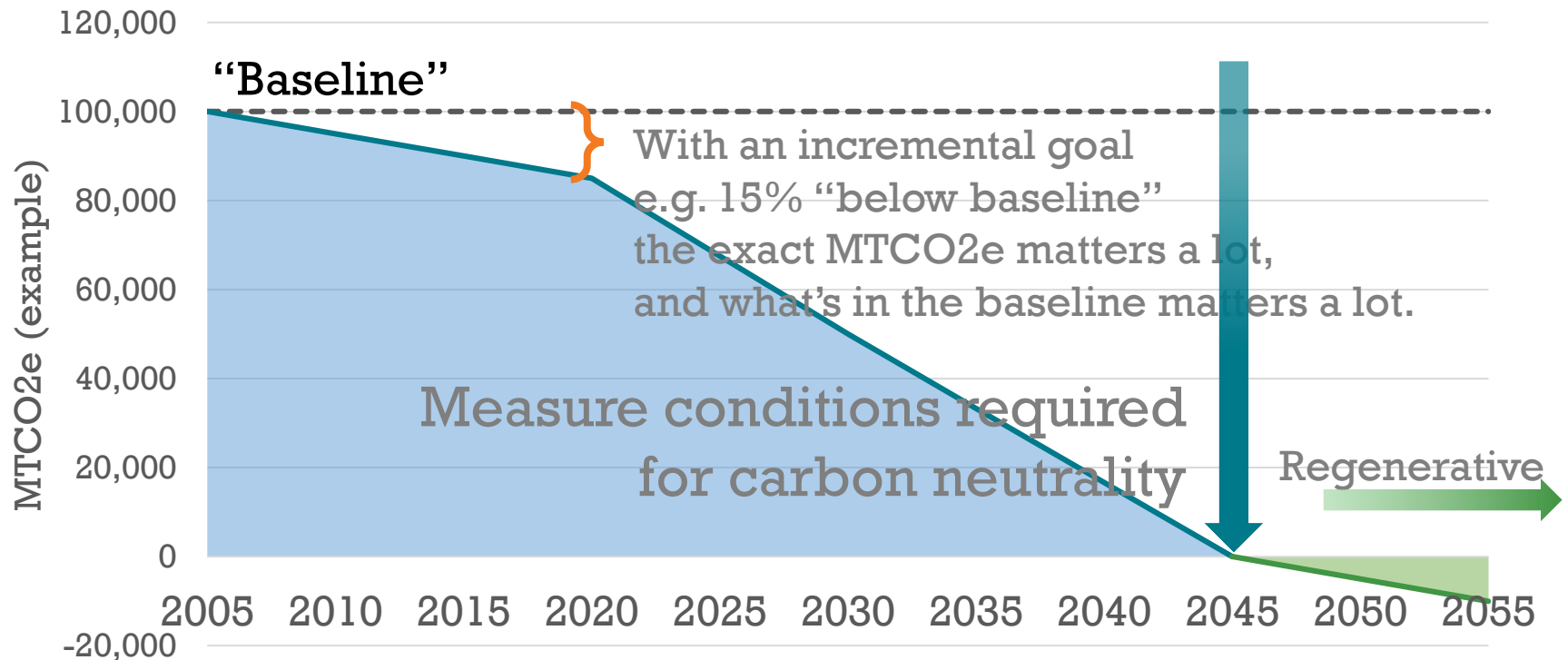
Building Material Supply Chain Emissions

# The Limitations of MTCO<sub>2</sub>e

---

- What is 1 MTCO<sub>2</sub>e?
- Cannot be directly managed
- Doesn't relate to co-benefits
- Abstracts the problem
- Puts onus on climate staff, not all staff

# Incremental Reduction vs. Zero or Regenerative



# What Should We Measure? Just a few examples...

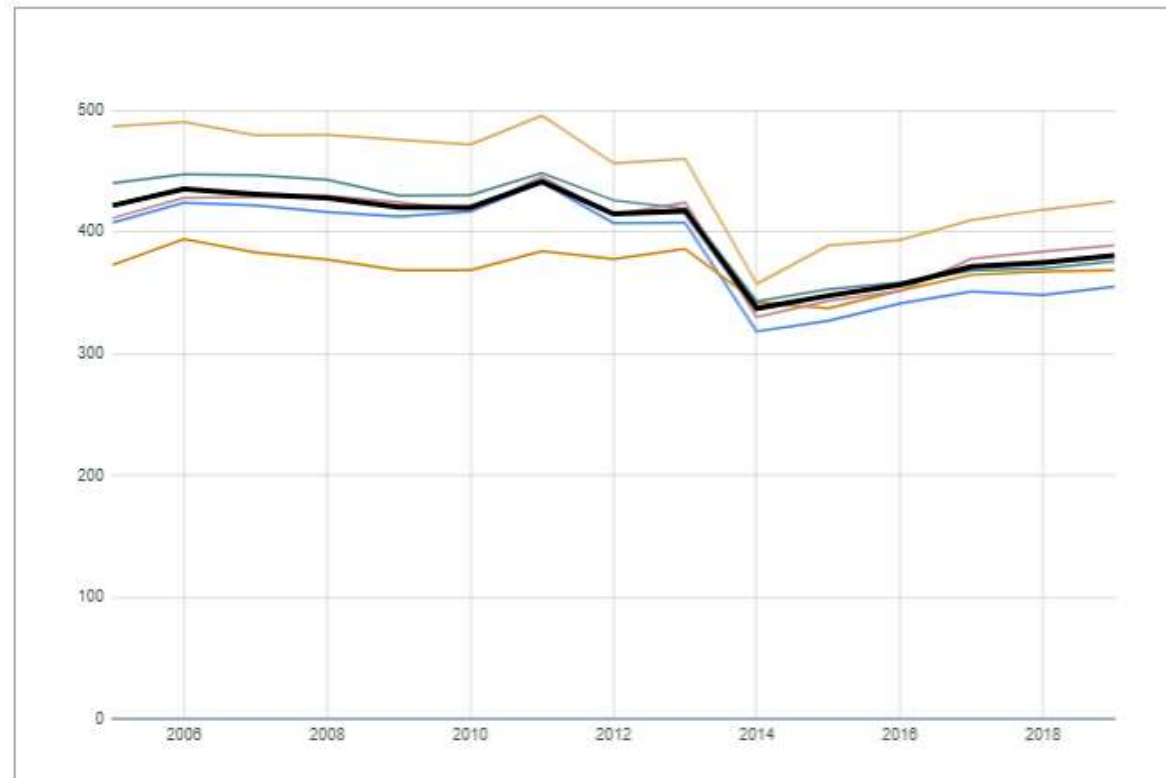
<b>Currently used to calculating MTCO<sub>2e</sub></b>	<b>More meaningful for implementation</b>
Modeled total annual VMT (100% of in-boundary + 50% of origin/destination)	Modeled average daily VMT per resident, or per in-bound commuter (in the same VMT data)
County level average MPG	EV registrations (available from DMV)
Total nonresidential kWh (usually missing data for privacy)	Businesses using 100% clean energy (MCE/EBCE)
Residential therms	Electrified, efficient, healthy homes (not tracked)

# EBEW Inventory Data

## SELECT SECTOR AND METRIC

Sector Energy  
Metric Residential therm usage  
Per Per household

Average residential therms per household



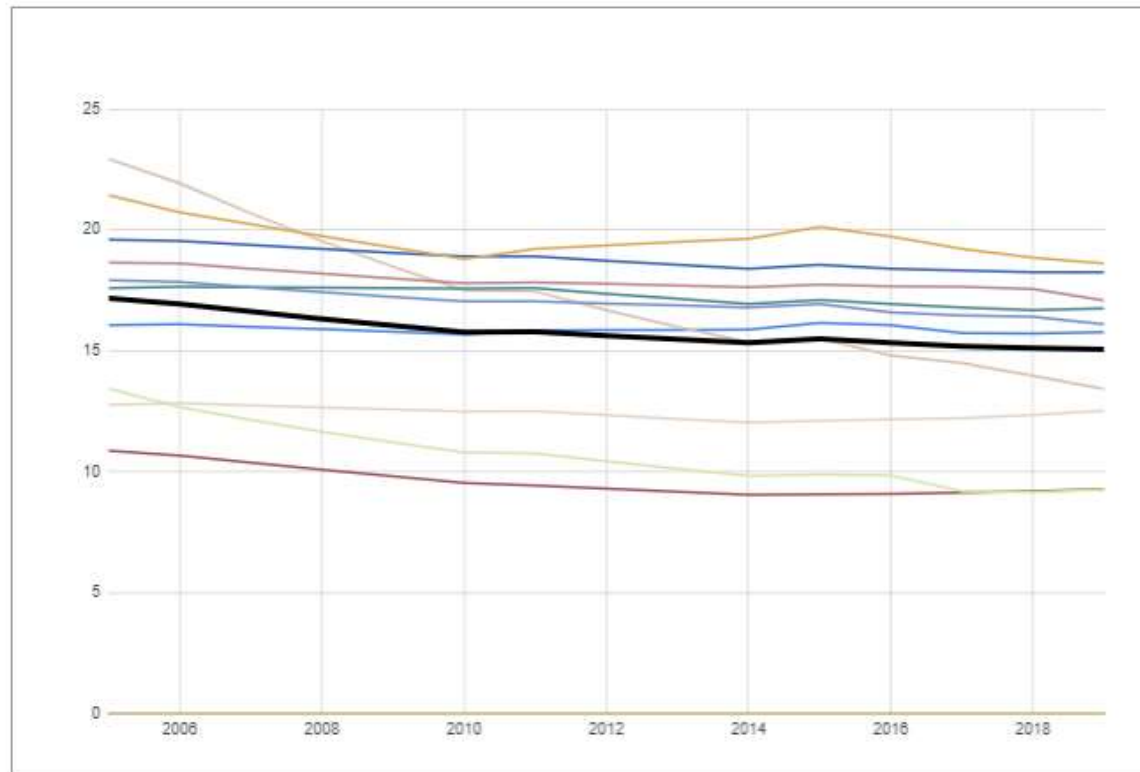


# EBEW Inventory Data

## SELECT SECTOR AND METRIC

Sector: Transportation  
Metric: Total Daily VMT by residents (regardless of l  
Per: Per resident

Average daily miles driven by residents (regardless of boundary)



# Vital Signs

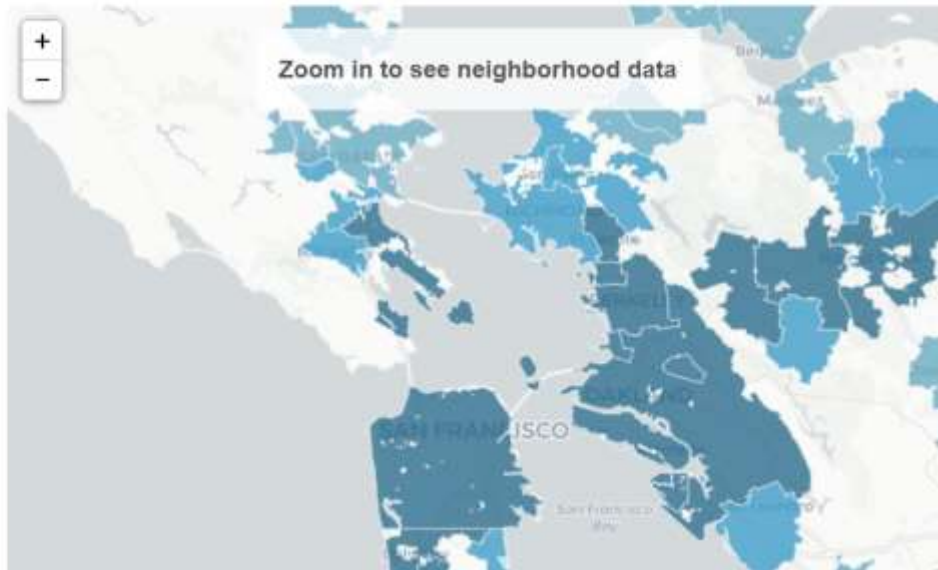
METROPOLITAN TRANSPORTATION COMMISSION

VITAL SIGNS

Indicators

COMMUTE MODE CHOICE Regional Performance Regional Distribution Local Focus National Context

✓ UPDATED MAY 2020



## Top Cities for Residents Taking Transit

1. San Francisco: 34.2%
2. Emeryville: 28.3%
3. El Cerrito: 26.2%
4. Albany: 25.3%
5. Berkeley: 23.6%
6. Oakland: 22.4%
7. Belvedere: 20.9%
8. Orinda: 20.8%
9. Daly City: 20.5%
10. Lafayette: 20.0%

Select a location on the map for more information.

[vitalsigns.mtc.ca.gov](http://vitalsigns.mtc.ca.gov)

# EcoDataLab

EXPLORE DATA

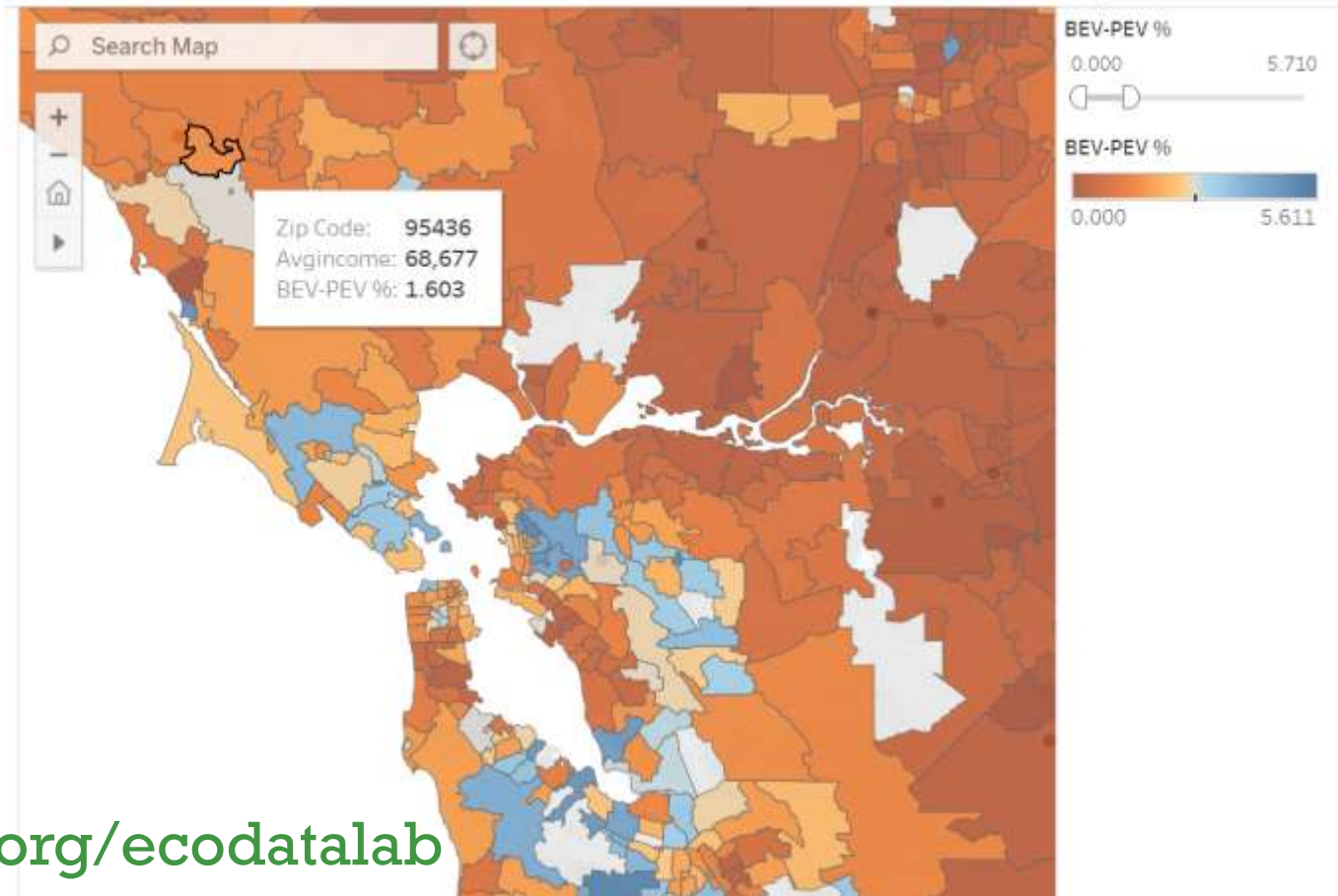
MAPS

TOOLS

ANALYSIS

PEOPLE

MEMBERSHIP



[coolclimate.org/ecodatalab](http://coolclimate.org/ecodatalab)

What do you need to know  
to get to carbon neutrality?

