SF Environment
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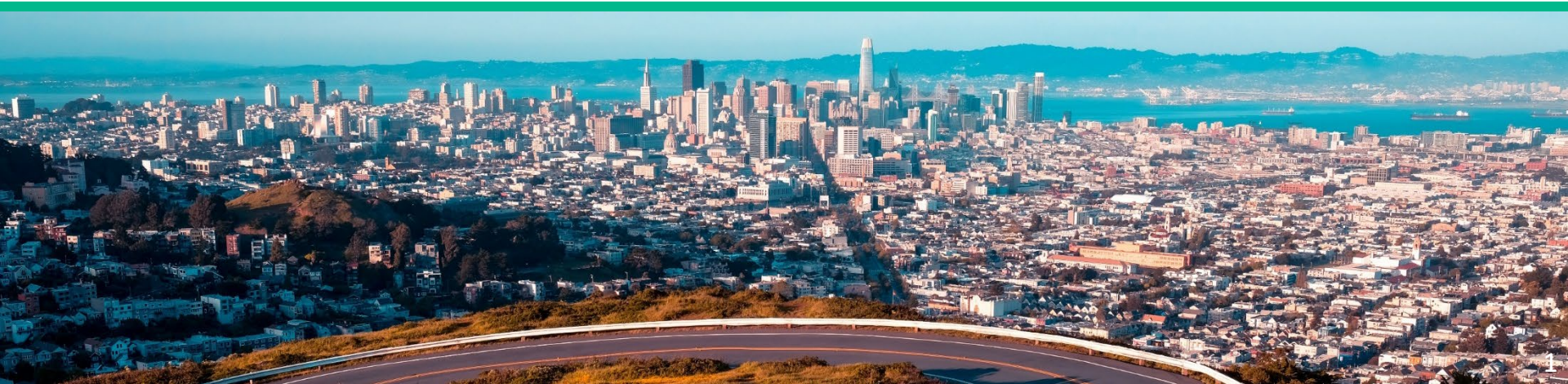
A Department of the City and County of San Francisco

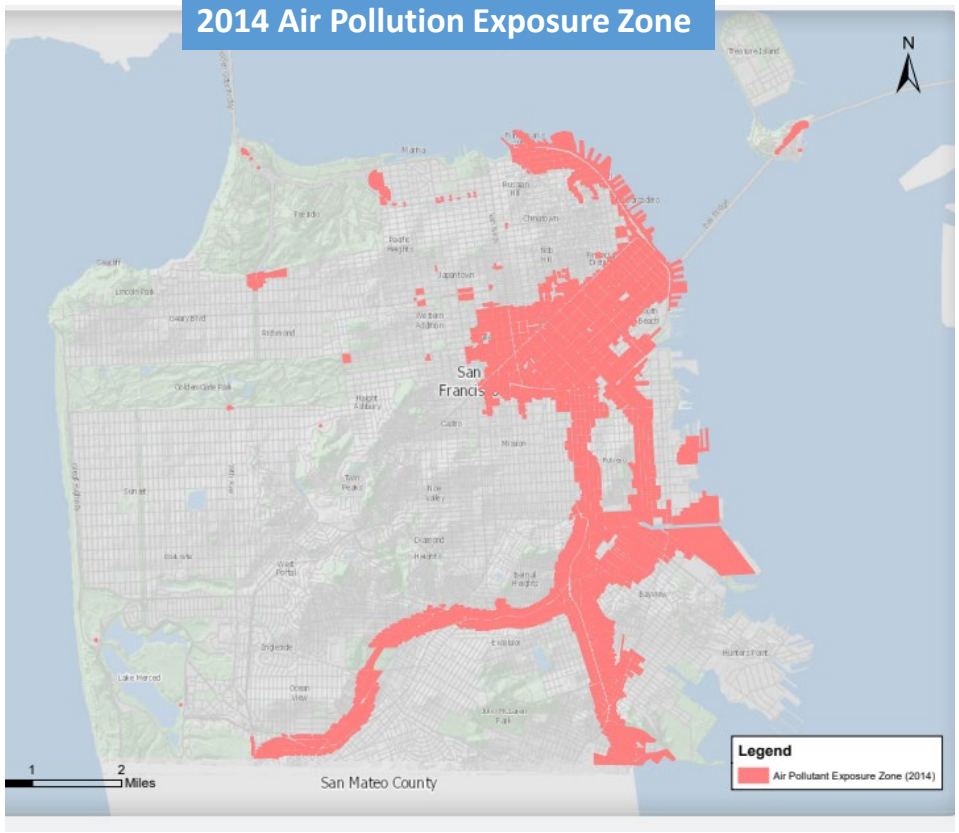
San Francisco EV Fleet Hearing

May 5, 2022

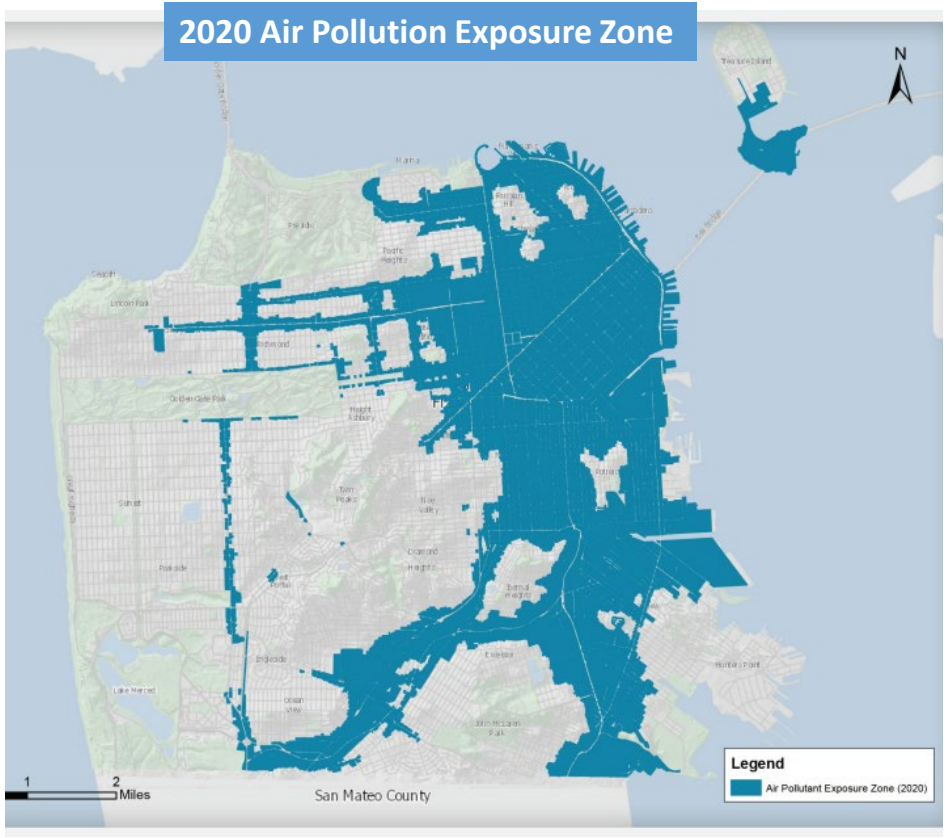


Exposure to air pollution is worsening

2014 Air Pollution Exposure Zone



2020 Air Pollution Exposure Zone



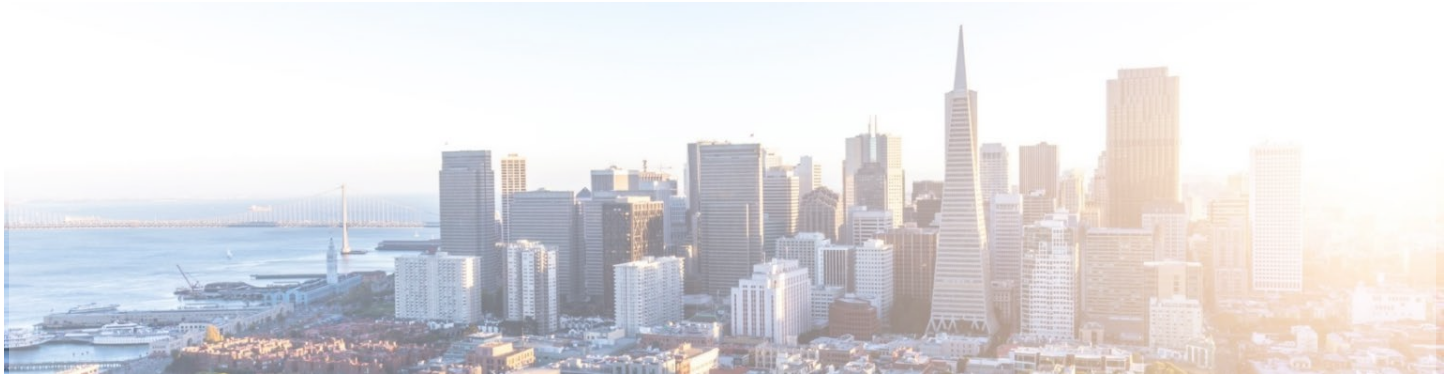
San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

Hetch Hetchy POWER

Municipal Fleet Electrification
Government Audit and Oversight Committee

May 5, 2022

Catherine Spaulding
Deputy Assistant General Manager, Power Enterprise
San Francisco Public Utilities Commission

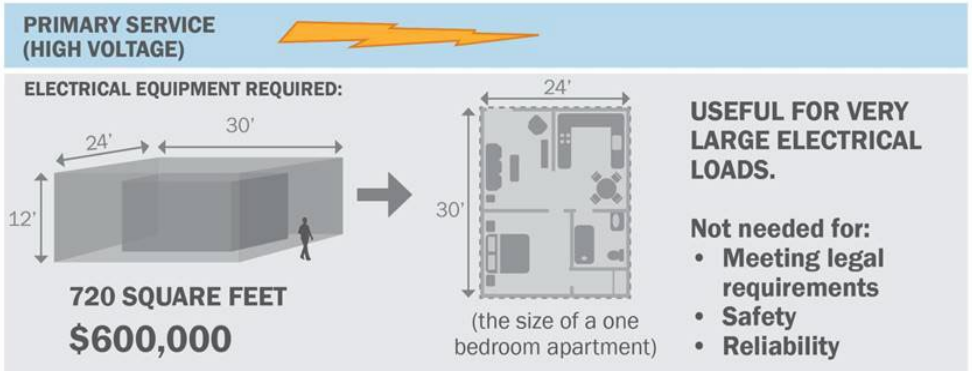


Interconnection Challenges

PG&E owns the distribution grid in San Francisco – thus significant costs and delays in transportation decarbonization, and ***some projects won't be able to proceed***.

The City intends to purchase these distribution assets in order to meet the City's climate goals and provide timely services to San Franciscans

This graphic shows the size of infrastructure PG&E requires



In the meantime, SFPUC engages upstream with municipal customers to make progress despite PG&E challenges

Our Support to Municipal Departments

In the critical transition to electrical fleets, SFPUC provides:

- ✓**Planning**
- ✓**Project Support**
- ✓**Rates**
- ✓**Programs**

San Francisco Office of the City Administrator

Status of City's Electric Vehicle Fleet

Douglas Legg, Deputy City Administrator

May 5, 2022

ZEV Mandate Scope

The ZEV mandate applies to the **"Light Duty Passenger Vehicle"** fleet, defined in the legislation as including all sedans, coupes and station wagons primarily for the purposes of carrying passengers, and comprising of no more than 5 passenger seats.

Focus on sedans

The ZEV mandate also provides an exception for **"Emergency Vehicles,"** defined as any vehicle used by a public safety officer for law enforcement purposes, fighting fires or responding to emergency fire calls, or used by emergency medical technicians or paramedics.

Focus on non public safety depts

City's Light Duty Fleet

Vehicle Types	Non Emergency Vehicles	Emergency Vehicles	Grand Total
Sedans	815	454	1,269
Sedans-Patrol	-	160	160
Pickups	533	42	575
SUVs	212	158	370
SUVs-Patrol	-	383	283
Vans	279	23	302
Grand Total	**1,839**	**1,120**	**2,959**

Non-Emergency Sedan Fleet Composition

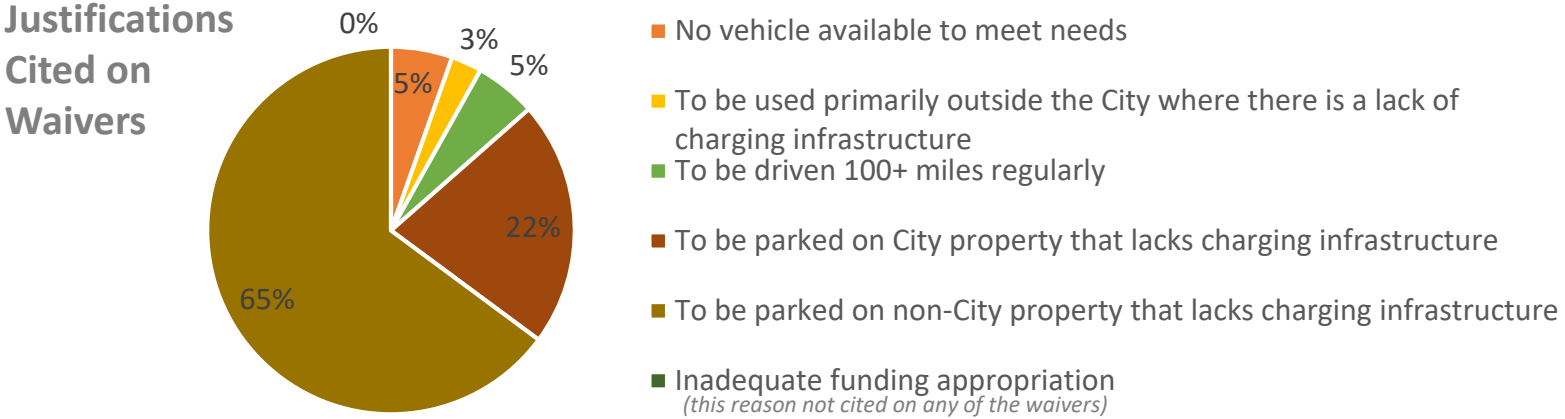
- Currently, our non-emergency sedan fleet is 13% ZEV, and 24% EV (including PHEVs).
- We are increasing the proportion of ZEV purchases each year. However, the current conversion rate is only ≈5%, so it will be years before we have an all ZEV fleet.

	Fuel Type	FY18	FY19	FY20	FY21	FY22,23*
Purchases (both new & replacements)	Gas, Hybrid, CNG	9	2	-	-	-
	PHEV	6	22	12	7	5
	ZEV	17	22	16	17	34
	EV Subtotal	**23**	**44**	**28**	**24**	**39**
Fleet Composition (Non-emergency sedan fleet only)	Gas, Hybrid, CNG	90%	87%	82%	78%	70%
	PHEV	6%	7%	9%	11%	12%
	ZEV	4%	7%	9%	11%	17%
	EV Subtotal	**10%**	**13%**	**18%**	**22%**	**30%**

** Includes all approved equipment budgets, and most have not yet gone through procurement.*

ZEV Mandate Waivers

- Since FY18, a total of 8 waivers have been approved (for 33 vehicles), and 5 waivers have been denied (for 11 vehicles).
- Lack of charging infrastructure is a common theme.
- Waivers will not be granted as hydrogen fuel stations become more reliable, and charging infrastructure becomes available.



LOI Question: Projection for the next 4 years?

The responding departments together project adding 130 or so EVs in the next 4 years, which would boost the EV percentage from 24% now to 40% by FY25.

ADM	All sedans in the shared pools and ADM departments to be ZEV.
DBI	Acquisition of 2–6 passenger vehicles, converting up to half of sedan fleet to EVs.
POL	Replace 150 marked and unmarked units with hybrid units in the next 2 years.
PRT	Acquisition of 2–6 passenger vehicles, converting up to half of sedan fleet to EVs.
PUC	Passenger vehicle fleet to be 50% all electric.
SFO	All passenger vehicles to be ZEV by 2023.

LOI Questions Regarding EV Charging Infra

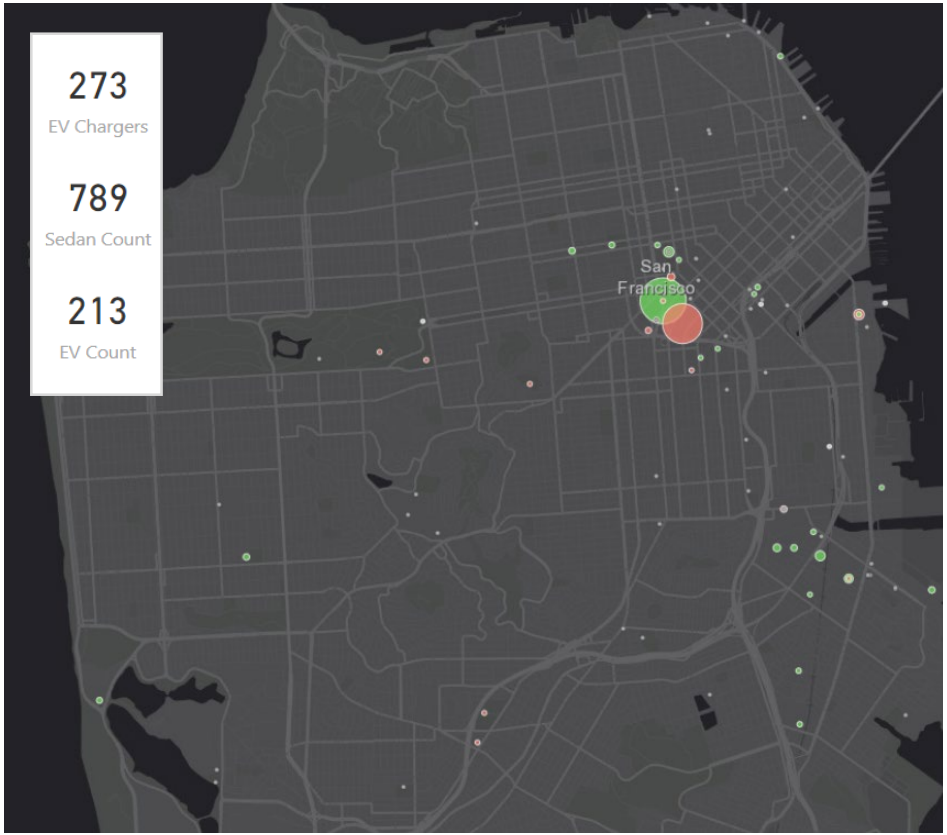
	Enough Chargers for current/future EVs?	*How are you doing with regards to charging stations? What are your plans if any?*
ADM	**Yes / No**	Make EV charging stations at 49SVN available for depts that need them in 2022. Work with ADM divisions to plan for infrastructure projects, promote shared pools.
DBI	**No / No**	Only have enough chargers for 10 electric vehicles between 2 sites, and do not have the ability to charge the rest of the 34 PHEVs.
POL	**Yes / No**	Charging stations will be planned for new facilities and existing facility remodels. Infrastructure plan to retrofit existing facilities will be developed.
PRT	**Yes / No**	Conducted RFI with 3 companies to develop publicly accessible charging stations. Working with PUC to expand electric grid to support future demand.
PUC	**Yes / No**	Engaging with departments to support them in their electrification projects. (e.g. MTA bus electrification pilot, MTA Ocean Ave lot, Fort Mason Center parking lot)
SFO	**Yes / No**	Target of installing EV charging in at least 10% of parking stalls by 2023-25. Landside and airside projects will advance with funding availability.

Supply & Demand Gap of EV Chargers

The bubbles represent the difference between the number of EV chargers and EV sedans at each site.

- = *Fewer EVs than Chargers*
- = *More EVs than Chargers*

The obvious gap is downtown – 49SVN has an abundance of EV chargers available, while there are no chargers at the 12th Street Garage for the 64 EVs parked there.



Opportunities to Further ZEV Adoption

- Obtain funding for departments' EV infrastructure projects via capital planning, grant programs, etc.
- Re-strategize on usage of 49SVN garage.
- Expand inter-departmental pooling at Civic Center Garage or other locations where vehicles and facilities concentrate, allowing incremental fleet reduction.
- Reduce size of fleet if consistent lower vehicle usage is observed post-pandemic.
- Pursue partnerships to add a hydrogen fueling station in the City.
- Pilot emerging ZEV pickup trucks and vans.