



San Francisco

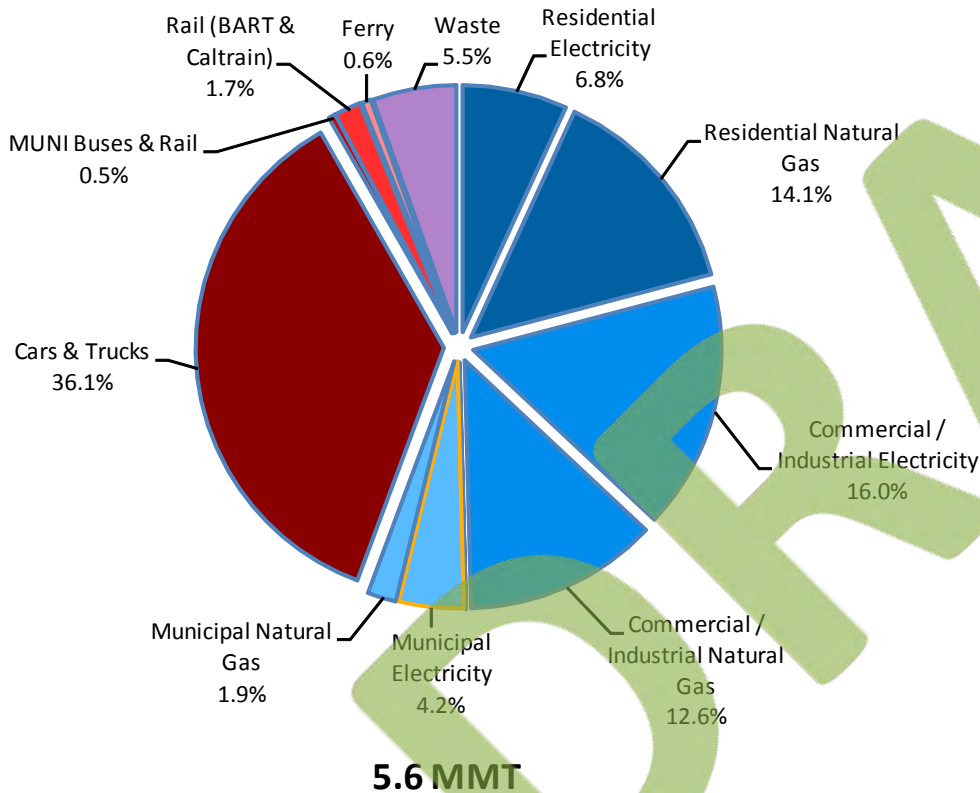
Department of the Environment

Calla Rose Ostrander
CEQA & Municipal Climate Planning
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SF
Environment

2008 SF CO₂e Emissions by Sector



Source	CO ₂ e (MT)
Cars & Trucks	2,032,638
Commercial/Industrial Electricity	907,299
Residential Natural Gas	792,633
Commercial/Industrial Natural Gas	710,010
Residential Electricity	385,475
Waste	308,441
Municipal Electricity	238,509
Municipal Natural Gas	105,040
Rail (BART & Caltrain)	97,717
Ferry	34,103
MUNI	25,985
Total:	5,637,851



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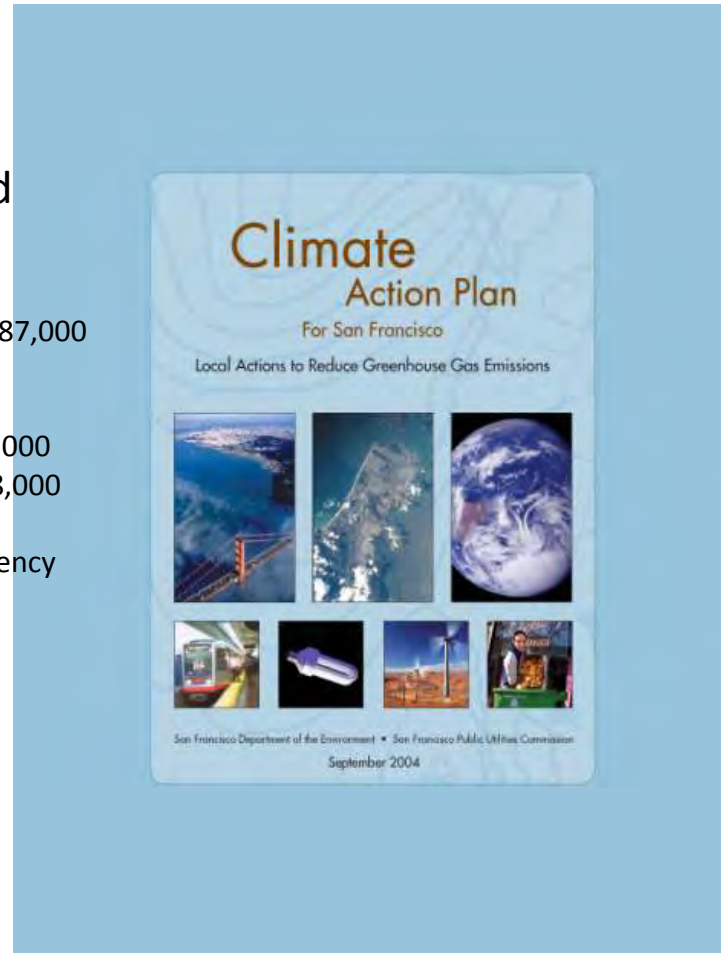
2004 Climate Action Plan

Transportation Action Categories Estimated CO2

Reduction (tons/year)

- A. Increase the Use of Public Transit as an Alternative to Driving 87,000
- B. Increase the Use of Ridesharing as an Alternative to Single Occupancy Driving 42,000
- C. Increase Bicycling and Walking as an Alternative to Driving 10,000
- D. Support Trip Reduction Through Employer-Based Programs 28,000
- E. Discourage Driving 155,000
- F. Increase the Use of Clean Air Vehicles and Improve Fleet Efficiency 641,000

Total 963,000



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City and County of San Francisco

Strategies to Address Greenhouse Gas Emissions



http://sfmea.sfplanning.org/GHG_Reduction_Strategy.pdf



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SF Community-Wide CO₂ Emissions Are On Track to Beat Upcoming International and State Targets

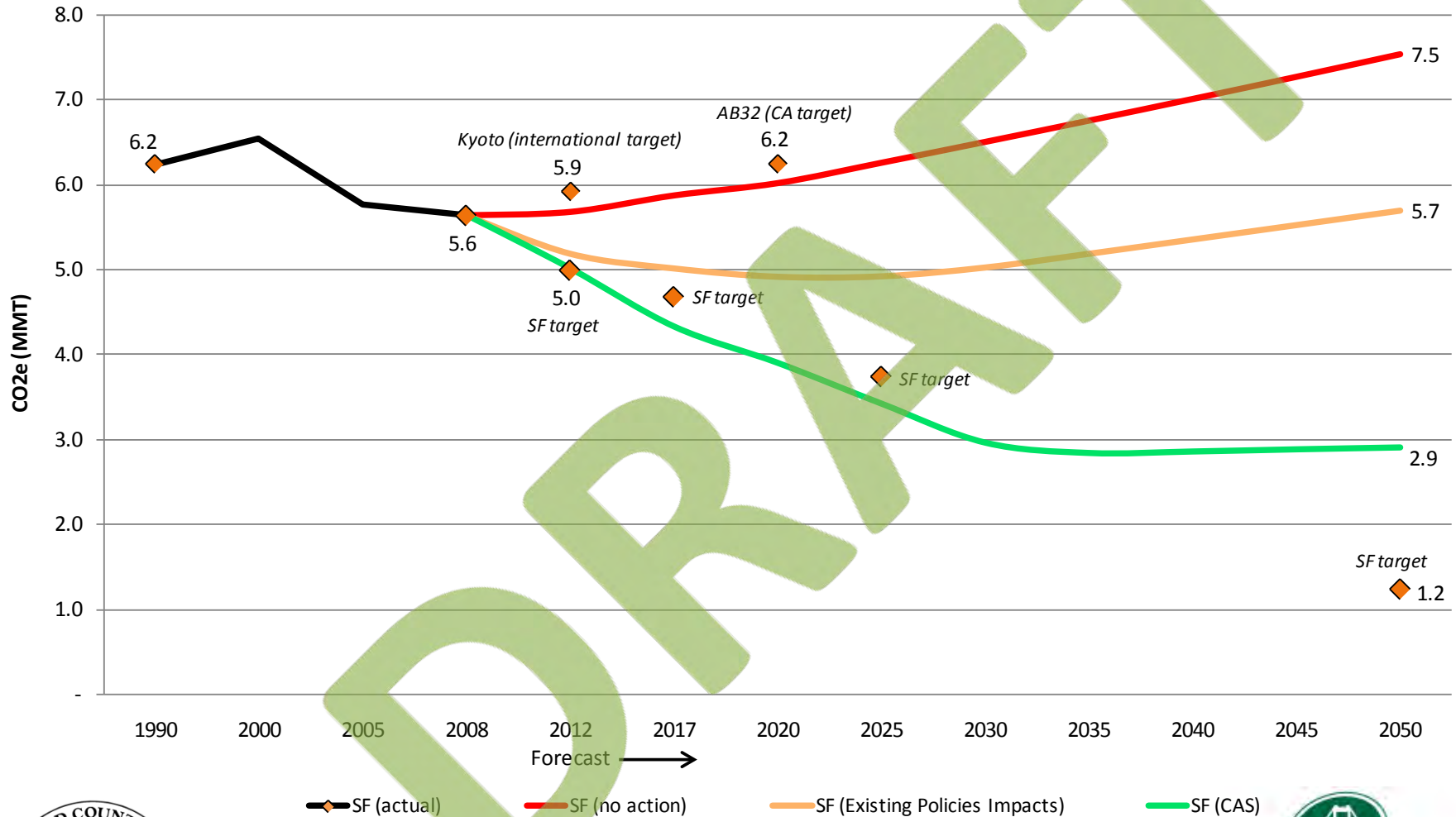


Figure 1: San Francisco Projected CO₂ Emissions thru 2050



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SF Community GHG Inventory: looks like this...

	1990 Act	2000 Act	2005 Act	2008 Act	2009 Act
Building Electricity	1,951,157	1,879,127	1,481,550	1,507,341	1,409,685
BAU Usage	1,951,157	1,879,127	1,481,550	1,507,341	1,409,685
Transportation	2,184,672	2,436,104	2,260,841	2,272,186	2,268,227
BAU Usage	2,184,672	2,436,104	2,260,841	2,272,186	2,268,227
Building Natural Gas	1,634,262	1,679,907	1,579,889	1,600,089	1,574,866
BAU Usage	1,634,262	1,679,907	1,579,889	1,600,089	1,574,866
Waste	472,646	480,407	365,526	308,441	261,911
BAU Usage	472,646	480,407	365,526	308,441	261,911
Building Steam					
BAU Total	6,242,737	6,475,545	5,687,806	5,688,058	5,514,689



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Total SF CO₂ Emissions Decline With Cleaner Electricity and More Waste Recycling

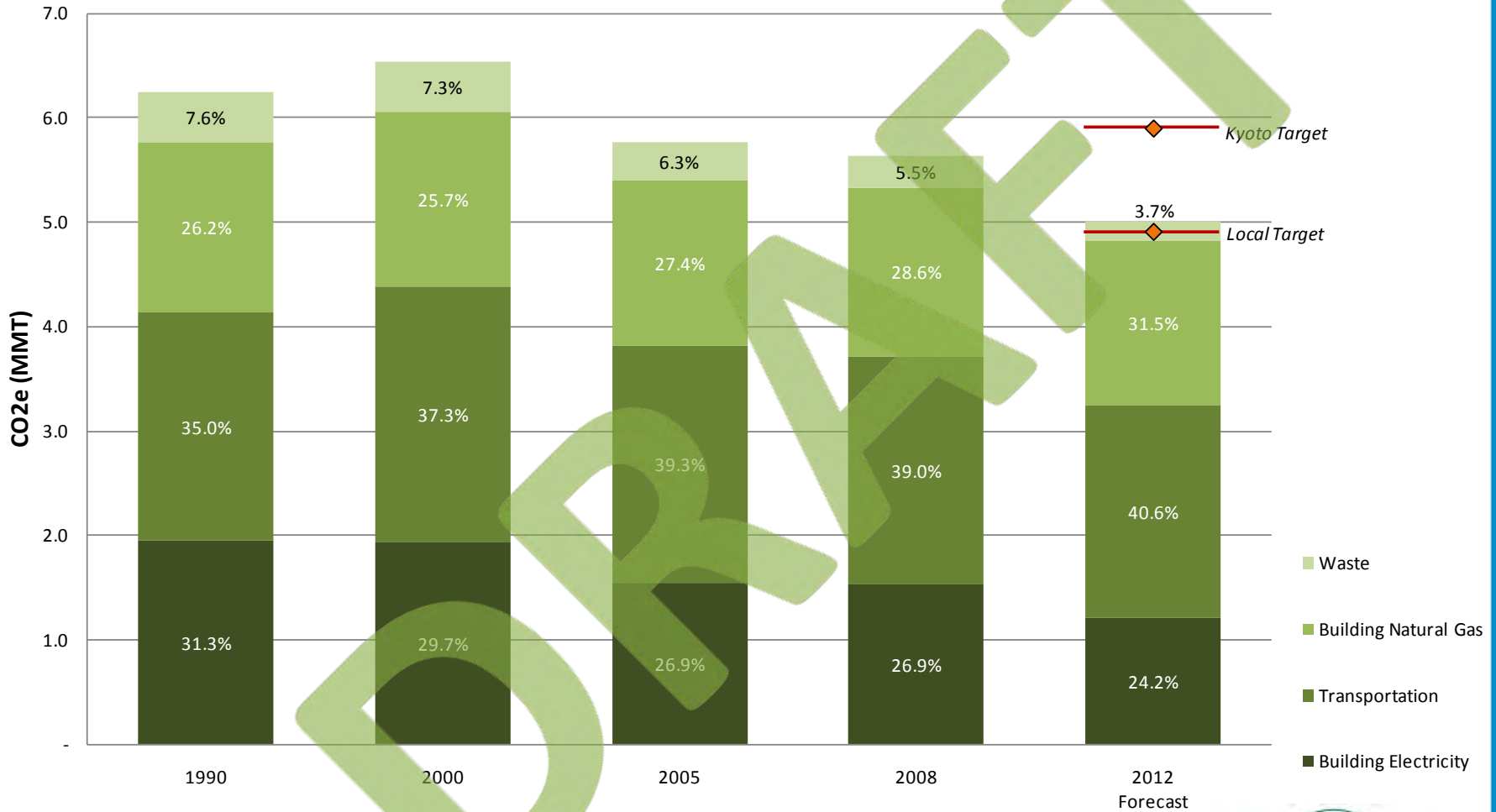


Figure 2a: San Francisco's CO₂ Emissions by Sector thru 2012



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SF's Climate Action Strategy Projected to Beat Local Targets thru 2025

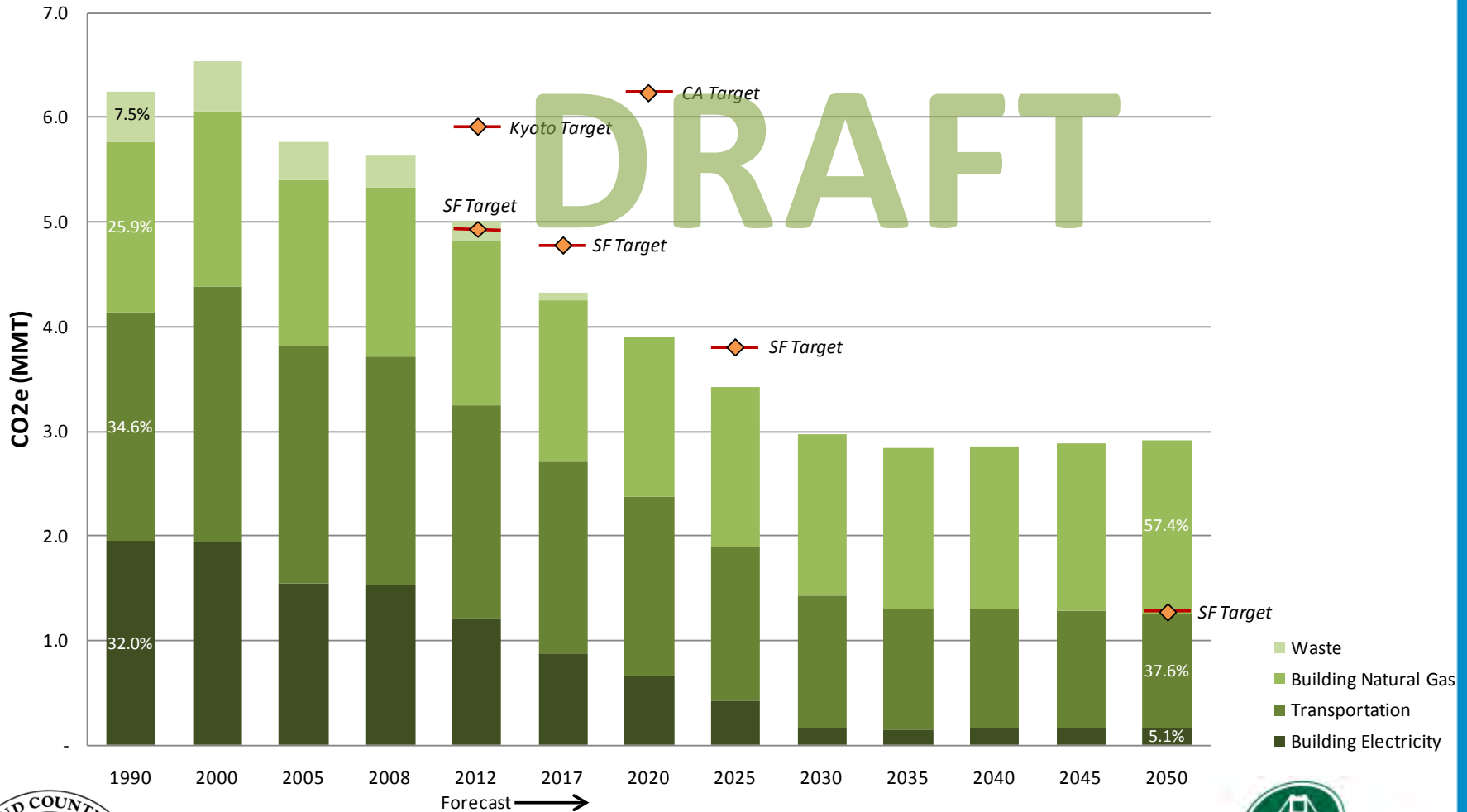


Figure 2c: San Francisco's Projected CAS CO₂ Emissions thru 2050



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	1990 Act	2000 Act	2005 Act	2008 Act	2009 Act	2010 Act	2012 Fcst	2017 Fcst	2020 Fcst	2025 Fcst	2030 Fcst	2035 Fcst	2040 Fcst	2045 Fcst	2050 Fcst
Building Electricity	1,951,157	1,879,127	1,481,550	1,507,341	1,409,685	1,302,778	1,215,930	892,984	678,611	448,280	159,136	158,445	162,715	167,213	171,708
BAU Usage	1,951,157	1,879,127	1,481,550	1,507,341	1,409,685	1,302,778	1,251,522	1,151,779	1,080,054	1,140,855	1,203,189	1,263,276	1,329,887	1,398,645	1,469,718
Efficiency Measures	-	-	-	-	-	-	(34,978)	(101,860)	(128,739)	(188,812)	(246,032)	(299,960)	(338,436)	(363,837)	(389,371)
Renewables (Std)	-	-	-	-	-	-	(614)	(637)	(343)	(263,992)	(798,021)	(804,872)	(828,737)	(867,596)	(908,639)
Renewables (Agg)	-	-	-	-	-	-	-	(156,298)	(272,360)	(239,771)	-	-	-	-	-
Transportation	2,184,672	2,436,104	2,260,841	2,272,186	2,268,227	2,259,688	2,128,455	1,937,065	1,824,334	1,555,436	1,351,374	1,214,904	1,201,433	1,182,542	1,158,282
BAU Usage	2,184,672	2,436,104	2,260,841	2,272,186	2,268,227	2,259,688	2,147,371	2,047,208	2,005,885	1,872,863	1,844,977	1,881,195	1,915,398	1,945,881	1,972,641
Fuel VMT Reduction Measures	-	-	-	-	-	-	(10,775)	(69,193)	(113,726)	(191,861)	(289,574)	(412,771)	(419,142)	(425,095)	(430,684)
Electric Vehicles (EVs)	-	-	-	-	-	-	(5,682)	(21,524)	(34,328)	(59,221)	(88,830)	(122,055)	(148,165)	(175,396)	(203,930)
Renewables (Std)	-	-	-	-	-	-	(2,459)	(4,708)	(5,610)	(38,610)	(115,199)	(131,464)	(146,658)	(162,848)	(179,745)
Renewables (Agg)	-	-	-	-	-	-	-	(14,718)	(27,886)	(27,735)	-	-	-	-	-
Building Natural Gas	1,634,262	1,679,907	1,579,889	1,600,089	1,574,866	1,587,844	1,577,856	1,542,904	1,525,032	1,524,833	1,530,182	1,540,644	1,567,645	1,607,703	1,649,469
BAU Usage	1,634,262	1,679,907	1,579,889	1,600,089	1,574,866	1,587,844	1,612,494	1,660,316	1,689,699	1,739,851	1,791,517	1,844,744	1,899,580	1,956,073	2,014,275
Efficiency Measures	-	-	-	-	-	-	(34,639)	(117,413)	(164,668)	(215,018)	(261,335)	(304,100)	(331,934)	(348,370)	(364,806)
Convert to Electricity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Waste	472,646	480,407	365,526	308,441	261,911	244,625	184,489	70,332	-	-	-	-	-	-	-
BAU Usage	472,646	480,407	365,526	308,441	261,911	244,625	276,734	281,330	284,087	295,637	306,891	318,573	330,700	343,289	356,357
Zero Waste Programs	-	-	-	-	-	-	(92,245)	(210,997)	(284,087)	(295,637)	(306,891)	(318,573)	(330,700)	(343,289)	(356,357)
Building Steam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BAU Total	6,242,737	6,475,545	5,687,806	5,688,058	5,514,689	5,394,935	5,288,121	5,140,633	5,059,725	5,049,206	5,146,574	5,307,789	5,475,565	5,643,887	5,812,992
CAS Total	6,242,737	6,475,545	5,687,806	5,688,058	5,514,689	5,394,935	5,106,729	4,443,286	4,027,977	3,528,549	3,040,692	2,913,994	2,931,793	2,957,458	2,979,459



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OPR to regional agencies guidance on CAPs- Michale Melormic (sp?). Chevron had to get permit from City of Richmond.

NOTES

1) CAP undergoes CEQA.....NO! too expensive and lengthy. Unnecessary/ineffective as SF attorney's believe the individual project would not be covered by such a generalized document as the CAS.

2) Qualified.... Meh- not "real" is defensible legally, but tehcnical has holes (Garrets issue: will big projects be exempt just because of QCAS?). Relies on GHG accounting from the community inventory to demonstrate compliance with AB32. Cites are not regulated entities- not produces, but consumers and the interaction of ghg producing activities in a city is part of a complex, dynamic, DEMAND side system where responsibility is not clear or straight forward (instead shared throughout the economic production/consumption chain).

3) Add GHG Goals to General Plan....Yes. Best policy approach, cleanest, but may not happen for a long time as cities update General Plans infrequently. CCSF updates elements of the GP on a rolling/ongoing basis.



Thank you

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Planning Questions?

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