



City of Emeryville

CALIFORNIA

MEMORANDUM

DATE: July 23, 2019
TO: Christine Daniel, City Manager
FROM: Andrew Clough, Public Works Director
SUBJECT: Information Report: Climate Action Plan Update

RECOMMENDATION

Staff recommends that the City Council receive information about the status of Emeryville's Climate Action Plan implementation and provide direction on future activities. No action is requested.

BACKGROUND

Emeryville's Climate Action Plan ("CAP") 2.0, approved in November 2016, includes goals for reducing greenhouse gas emissions ("GHG") both at the community-wide level and for City operations. Emeryville's goals of a 40% reduction over 2004 baseline levels by 2030 and an 80% reduction by 2050 match the State of California's targets in Executive Order B-30-15 and SB 32. These goals build on the first target, in the City's 2008 CAP, of a 25% reduction over baseline by 2020.

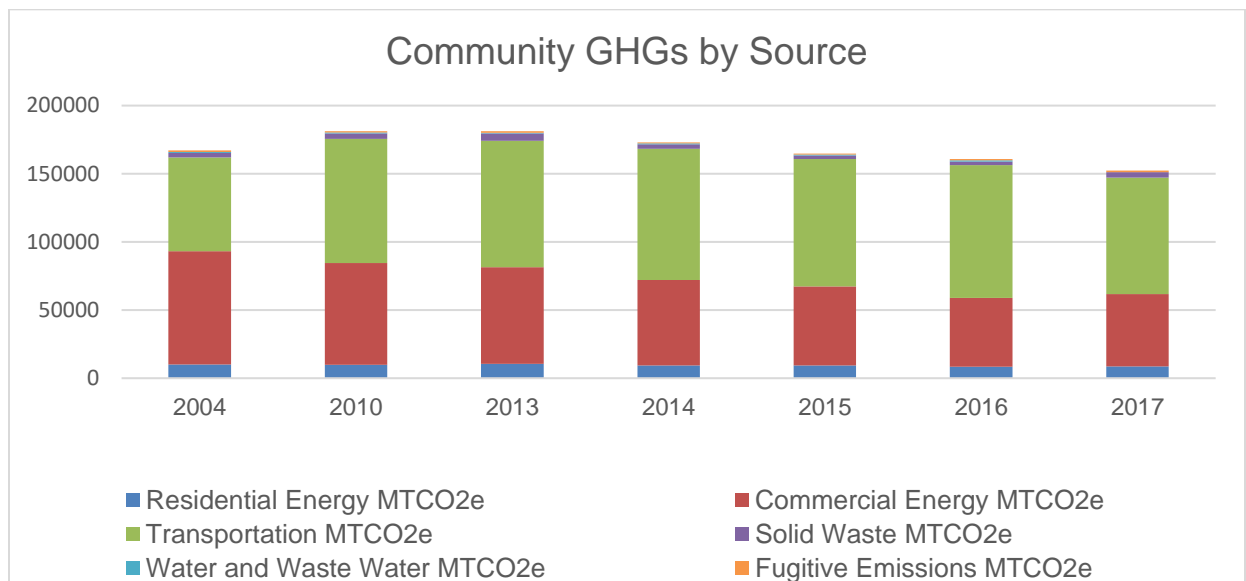
In addition to the GHG reduction targets, the CAP 2.0 includes a hazard vulnerability assessment, an implementation plan, and both a climate mitigation action plan and an adaptation action plan for 2030.

Emeryville is a member of the Global Covenant of Mayors (formerly the Compact of Mayors) in support of the Paris Climate Accords. As a member of this group, the City has committed to reporting its GHG emissions to the Climate Disclosure Project ("CDP"), a non-profit entity that runs a global GHG disclosure platform. For the first time in 2019, the CDP released a list of cities that achieved an "A" grade on its climate action progress; this grade was earned by only 43 of the nearly 600 cities reporting. Emeryville is among that 7%, exhibiting climate leadership and action and achieving an "A".

DISCUSSION

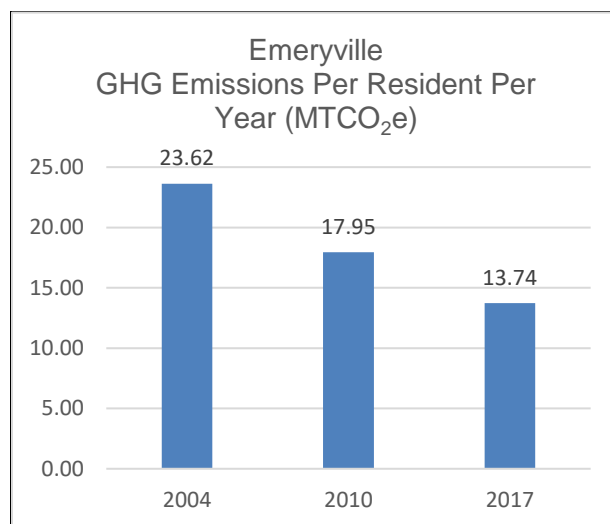
Community-Scale Data

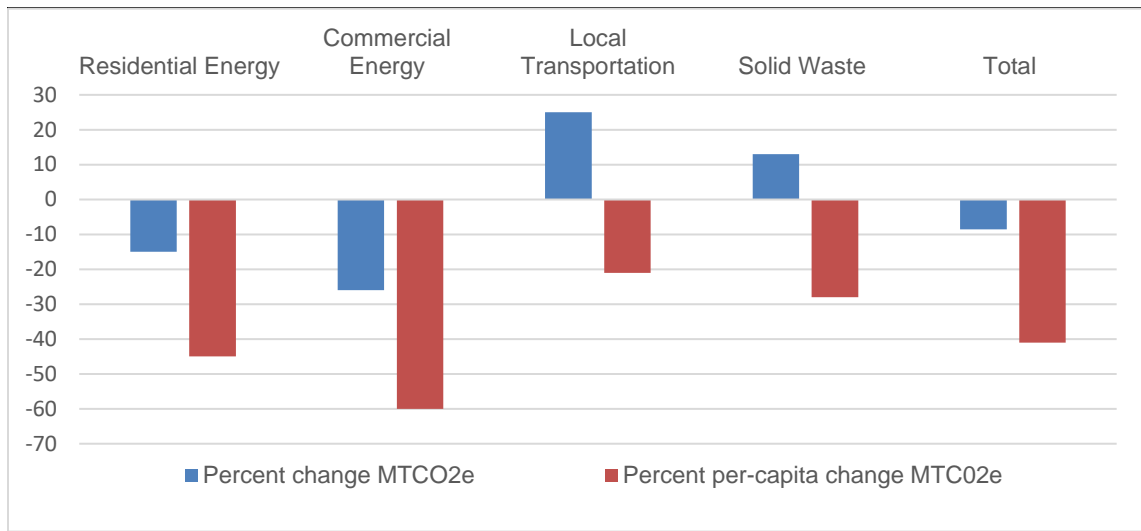
Emeryville has made good progress both at the community level and in municipal operations. At the community level, the GHGs (expressed in metric tonnes of carbon dioxide equivalent emissions (MT CO₂e)), there has been a 9% overall reduction in emissions from the baseline year in 2004 to 2017, from 165,337 to 151,167 metric tonnes.



While this raw result does not meet the City's 2020 goal of a 25% reduction overall, there are several ways to review the data that present a more accurate picture of the City's progress.

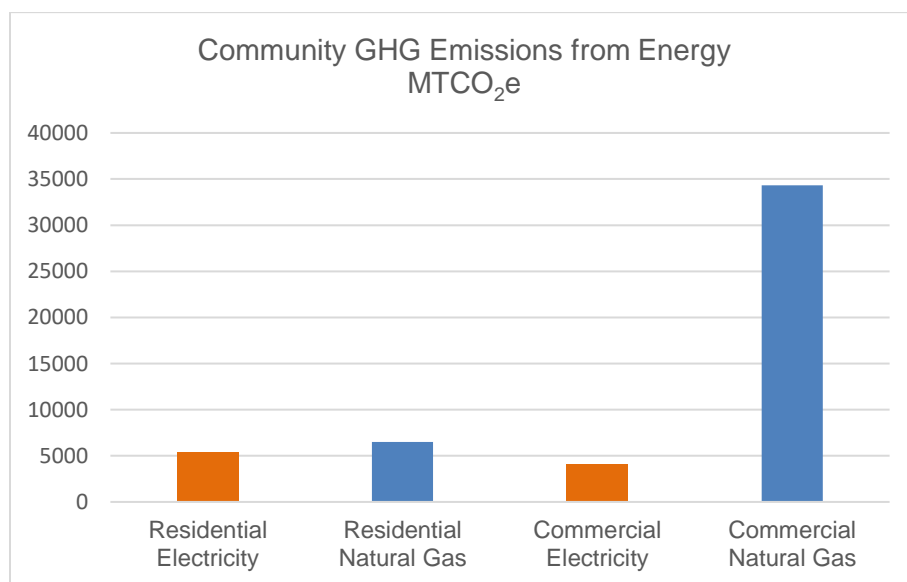
Between 2004 and 2017, Emeryville experienced roughly a 64% increase in its residential population. On a residential per-capita basis, there has been a 41% decrease in GHG emissions, from 23.6 to 13.7 MTCO₂e.





Much of the progress can be attributed to energy efficiency in both the commercial and residential sectors, along with the decreasing GHG intensity of PG&E's electric power mix.

The availability of GHG-free electricity through East Bay Community Energy, which launched in 2018, may help drive improvement in the community sector, and will certainly show an impact in municipal GHGs, since the City's accounts all use GHG-free electricity. Natural gas emissions continue to be a major contributor to overall GHG emissions, and these standard calculations may significantly undercount the impact of leakage at every step of its delivery, from extraction through distribution. A given unit of leaked gas has 100 times the GHG impact of gas that is combusted, meaning that even a 1% leakage rate carries with it an equal GHG impact to the gas that is used.



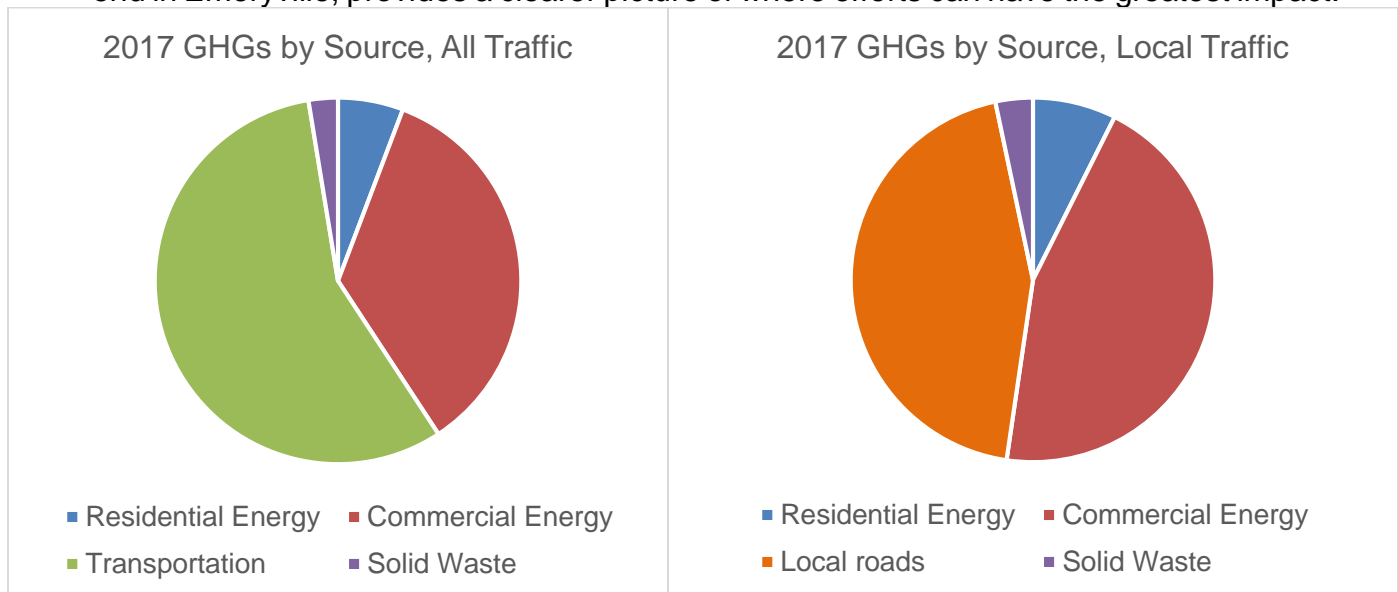
Unlike electricity, which can be derived from renewable sources, natural gas cannot be GHG-free. In addition, natural gas production causes groundwater contamination and earthquakes, and its distribution poses risks of catastrophic explosions; for all these

reasons, the switch away from natural gas to clean electricity will be a critical effort going forward both locally and globally.

The total tonnage of landfilled waste has gone down 46% from the 2004 baseline. A Mandatory Recycling Ordinance began a phased implementation County-wide in 2012, requiring commercial properties that generate over four cubic yards of waste weekly to provide proper containers and ensure segregation of recyclable materials and of organic wastes. Improved solid waste sorting and diversion from landfill – Emeryville’s diversion rate is 83% per CalRecycle’s formula, the highest in Alameda County - coupled with the capture and reuse of methane at Waste Management of Alameda County’s Altamont landfill, has also had a large impact on overall emissions.

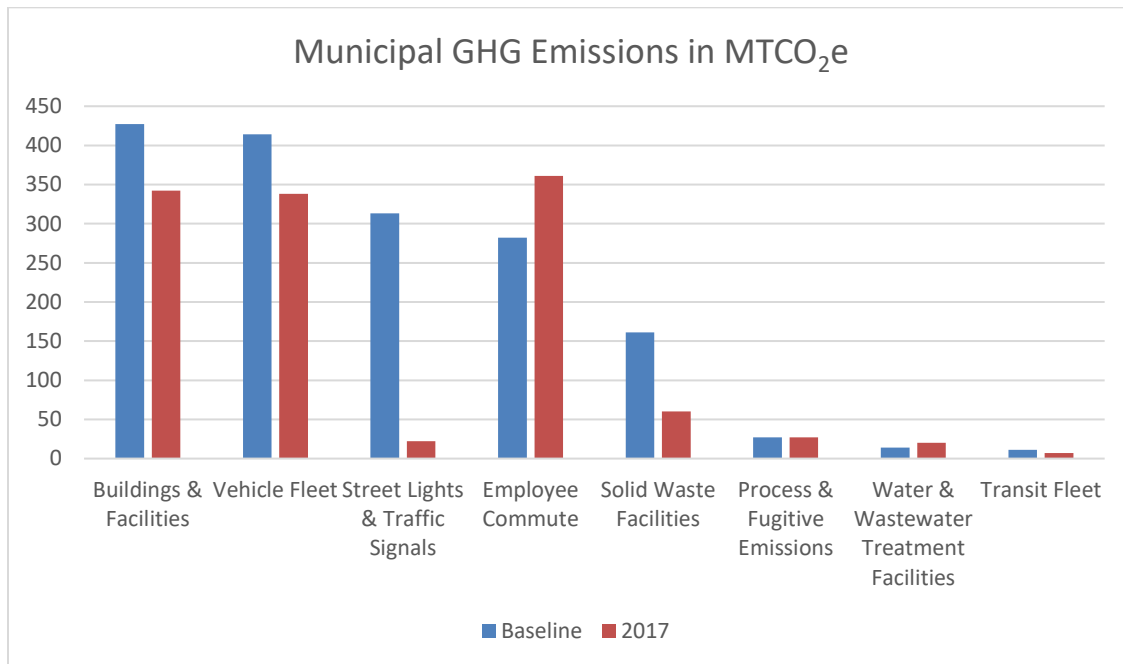
The transportation sector has seen the least improvement. The City has, however, been prioritizing active transportation and transit through its General Plan, Pedestrian and Bicycle Plan, the adoption of shared mobility systems, and improvement of bicycle and pedestrian infrastructure. These changes, along with the initiation of paid parking in some areas of the city, additional infrastructure for electric vehicles, and the City’s participation in regional efforts to incentivize the use of alternative fuels, show promise in reducing GHG emissions associated with transportation.

Given Emeryville’s small size and the inclusion of one of the most heavily traveled freeways in the state, the emissions from the transportation sector are overstated in our inventory in relation to other sources. Looking at only the vehicle trips that begin and/or end in Emeryville, provides a clearer picture of where efforts can have the greatest impact.

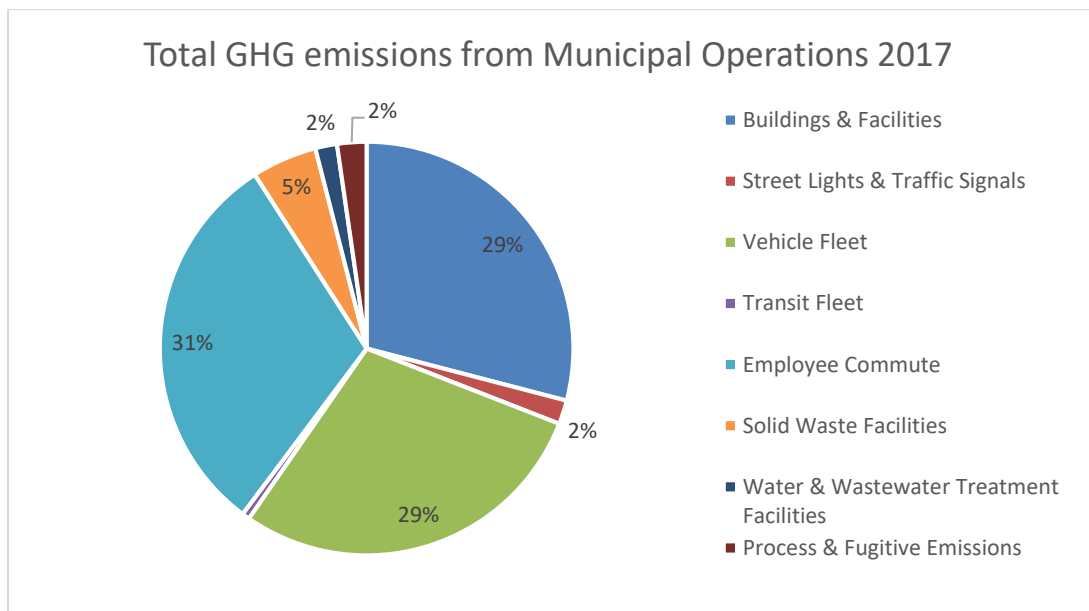


Municipal Data

Emissions from City activities have decreased 28% over baseline. Most notable is the impact of the retrofit of all of Emeryville’s streetlights and traffic signals to LED, which reduced annual emissions in MTCO₂e from 313 to just 22.



There were improvements in all but one area: employee commute. Perhaps related to the housing crisis, employees are driving more miles to work than they were during the 2010 baseline for this measure. Employee commute now accounts for 31% of emissions attributable to municipal operations; the single largest contributor.



Next Steps

In municipal operations, we are making progress toward the 40% reduction goal for 2030. Significant steps the City may take going forward include converting the eligible fleet to electric vehicles; instituting disincentives for drive-alone commuting such as charging for employee parking; installing electric charging stations for employees' use; and fuel-

switching from natural gas to all-electric for City facilities. Preliminary cost/benefit calculations show that 45% of our 2030 goal could be met by converting the portion of the fleet accounting for 80% of fuel usage to electric; 42% could be met by providing charging and purchase/lease incentives for employees to move to electric vehicles, and 13% could be met by installing an all-electric HVAC system as part of the planned City Hall HVAC replacement project.

The Climate Action Plan includes an Implementation Plan (both attached here) with options to consider for both municipal and community GHG reductions. Generally, the City has been adding in climate measures when opportunities arise in existing projects; going forward, there will likely have to be more focused, climate-driven planning to achieve the goals.

In 2018, the Urban Sustainability Directors' Network (USDN), an international peer working group of sustainability staff in nearly 200 cities, researched which practices in sustainability create the largest impact on GHG emissions. Emeryville has already begun planning or work on several of the fourteen identified highest-impact practices; there are policy opportunities particularly in the area of building energy use, including electrifying/fuel switching for building energy systems, developing requirements for energy benchmarking and upgrades at trigger events for large buildings, and requiring zero net energy in new private construction. An annotated copy of the USDN's *GHG Reduction High Impact Practices* is attached.

FISCAL IMPACT

There is no fiscal impact associated with this status report.

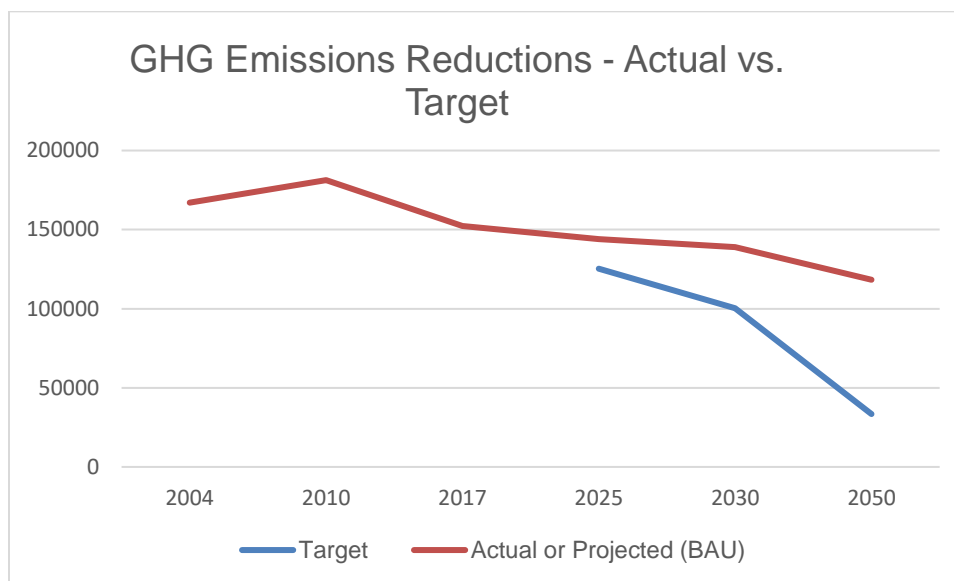
STAFF COMMUNICATION WITH THE PUBLIC

This information was presented at the May 15, 2019 Sustainability Committee meeting.

CONCLUSION

Emeryville's initial Climate Action Plan, in 2008, set a goal of a 25% reduction in GHG emissions by 2020, at both the municipal and community-wide levels. This goal has been met for municipal operations, with a 28% reduction per the most recent available data. At the community level, with a residential population increase of 63% and significant commercial/employment increases, the goal has not yet been met in raw numbers; the overall reduction in GHG emissions is just 9% over baseline. However, when the residential population increase is taken into account, the results show a 41% reduction in GHG emissions per capita.

The next goals for Emeryville, in keeping with the state's own goals, are a 40% reduction in GHG emissions by 2030, and a target of 80% reduction by 2050. As the graph below shows, our current efforts, while they have achieved significant reductions in GHG emissions, will not continue to be enough. Fossil fuels in both building energy and in transportation will have to be phased out through policy and regulation at all levels.



PREPARED BY: Nancy Humphrey, Environmental Programs Supervisor

**APPROVED AND FORWARDED TO THE
CITY COUNCIL OF THE CITY OF EMERYVILLE:**

Christine Daniel, City Manager

ATTACHMENTS

- Climate Action Plan 2.0 with Implementation Plan
- USDN's GHG Reduction High Impact Practices