



DATE: March 9, 2020

TO: Council Sustainability Committee

FROM: Director of Public Works
Development Services Director

SUBJECT: Greenhouse Gas Emission Reduction Goals: Review and Recommend to Council the Proposed Greenhouse Gas Reduction Goals to be Included in the General Plan

RECOMMENDATION

That the Council Sustainability Committee reviews the Proposed Greenhouse Gas Reduction Goals to be included in the General Plan and makes a recommendation to Council.

SUMMARY

Hayward currently has goals for reducing GHG emissions with specific targets for 2020, 2040, and 2050. This report provides recommended GHG reduction goals for 2025 and 2030 and a carbon neutrality goal for 2045, revised based on input from the Planning Commission. This report also presents some of the actions that will be necessary to achieve the new goals as well as potential challenges related to review of new development projects.

BACKGROUND

Hayward's original Climate Action Plan (CAP), adopted in 2009, included the following goals for reducing GHG emissions in both the community and municipal operations:

- 6% below 2005 levels by 2013
- 12.5% below 2005 levels by 2020
- 82.5% below 2005 levels by 2050

The above goals were established to mirror those identified in the California Global Warming Solutions Act of 2006 (AB 32), which set a statewide GHG emissions limit equivalent to the statewide GHG emissions level in 1990 to be achieved by 2020 and the Governor's Executive Order # S-03-05, which set a target of an 80% reduction by 2050. The City's goals were adjusted due to the use of a different baseline year. When the CAP was

incorporated into the General Plan in 2014, the following goals for both the community and municipal operations were included:

- reduce emissions by 20% below 2005 baseline levels by 2020
- strive to reduce emissions by 61.7% by 2040
- strive to reduce emissions 82.5% by 2050

On September 8, 2016, SB 32 was signed into law and requires that California's statewide GHG emissions are reduced to 40% below the 1990 level by 2030.

On July 16, 2018,¹ the Council Sustainability Committee (CSC) recommended that Council adopt an interim goal, which would be to reduce emissions by 40% below 2005 baseline levels by 2030. On September 17, 2019,² during discussion of a broader set of new sustainability goals for 2025 and 2030, the Committee acknowledged California's goal³ of achieving economy-wide carbon neutrality by 2045, and asked staff to consider incorporating the 2045 carbon neutrality goal and re-evaluate the 2030 goal.

On October 30, 2019,⁴ staff proposed GHG emission reduction goals as follows:

- 27% below 2005 levels by 2025
- 50% below 2005 levels by 2030
- 100% below 2005 levels (i.e., carbon neutrality) by 2045

The Committee voted unanimously to round up the 2025 figure and recommend the following GHG emission reduction goals:

- 30% below 2005 levels by 2025
- 50% below 2005 levels by 2030
- 100% below 2005 levels (i.e., carbon neutrality) by 2045

While acknowledging that the 30% reduction goal by 2025 may be challenging to reach, the Committee chose this as an aspirational target.

Planning Commission's Review & Recommendation – Prior to the Planning Commission meeting, staff consulted with an environmental consulting firm regarding the proposed GHG emission reduction goals and how they may affect the City's review of planning applications in regard to compliance with the California Environmental Quality Act (CEQA). Considering the City's use of 2005 as the baseline year, it was determined that Hayward's

¹ <https://hayward.legistar.com/View.ashx?M=F&ID=6359386&GUID=70A23070-7298-43DD-BFE8-C5F20A1838FA>

² <https://hayward.legistar.com/View.ashx?M=F&ID=7706750&GUID=857C8FDB-84A9-4D43-A0F6-F69031B25ABF>

³ In September 2018, Governor Brown signed Executive Order #B-55-18, committing California to economy-wide carbon neutrality by 2045.

⁴ <https://hayward.legistar.com/View.ashx?M=F&ID=7831513&GUID=CD4CAE5E-6391-4862-A2FA-6961E502C8EF>

2030 goal should be 55% to be consistent with SB 32.⁵ Having a local goal that is not as stringent as state law can complicate the analysis of development applications. Staff also found that a carbon neutrality goal, if adopted as policy in the City's General Plan, could be very difficult for developers to provide emissions analyses showing that projects will be consistent with the General Plan. Staff presented this information to the Planning Commission on December 12, 2019,⁶ and the Planning Commission voted unanimously to recommend that Council amend the General Plan to include the following GHG emission reduction goals.

- 30% below 2005 levels by 2025
- 55% below 2005 levels by 2030
- Work with the community to develop a plan that may result in the reduction of community-based GHG emissions to achieve carbon neutrality by 2045

In addition, the Commission briefly discussed some of the actions that will be necessary to achieve the new targets – specifically electrification of buildings and vehicles. The Commission recommended staff research the consequences of hazardous waste disposal of batteries for both homes and electric vehicles, including what other communities are doing to mitigate this risk and to maintain the commitment that the City's energy provider be as carbon neutral as possible.

DISCUSSION

While the Planning Commission's recommended goal for 2030 is only 5% higher than that considered by the Sustainability Committee, the work that will be necessary to achieve the extra emissions reduction would be significant.

How the GHG Reduction Goals Could be Met –

Electricity – To meet the proposed 2025 goal, 78% of Hayward customers would need to receive 100% carbon free electricity. By 2030, at least 93% of Hayward customers would need to receive 100% carbon free electricity. This assumes that no more than 5% of residential customers and no more than 10% of commercial customers opt-out of EBCE service. If PG&E's energy mix changes to a much cleaner mix by 2025 and 2030, that will allow for a larger opt-out rate.

Natural Gas – Hayward has seen a slow decline in residential natural gas emissions, but nonresidential natural gas use has been increasing. In order to meet the 2025 goal, if nonresidential natural gas use remains constant, 20% of residential homes (approximately 10,000 dwelling units) would need to be retrofitted to all-electric. For 2030, nonresidential natural gas use would need to decrease significantly and an additional 45% of residential homes (an additional 22,000 dwelling units) would need to be retrofitted to all-electric. With current resources available to residents, this will be very challenging to achieve.

⁵ While the state's goal is 40% below 1990 levels by 2030, guidance from the California Air Resources Board indicates that for cities using 2005 as a baseline, a reduction of 55% by 2040 is roughly equivalent.

⁶ <https://hayward.legistar.com/LegislationDetail.aspx?ID=4274107&GUID=B4340074-1179-4CEB-B3EA-28B1BD1C6B5C&Options=&Search=>

Transportation – Hayward has seen a small decline in transportation emissions from 2005 to 2015. However, this reduction in emissions should be credited to increased vehicle efficiency as the vehicle miles traveled (VMT) have increased since 2010 as the economy recovered from the Great Recession. Meeting the 2025 and 2030 goals will rely on the City drastically reducing transportation related emissions, which accounted for 59% of Hayward's total emissions in 2017. Assuming the continuation of increased vehicle efficiency and that passenger vehicles and light trucks remain the prominent mode of transportation, 15% (around 21,000 vehicles) of the gasoline fleet would need to be replaced with electric vehicles (EVs) by 2025 and 45% (an additional 40,700 vehicles) by 2030. While very challenging, these goals can be helped with the fact that many automobile manufacturers are transitioning to production of all-electric vehicles with some planning to stop manufacturing gas-powered passenger vehicles altogether.

The following table summarizes in each column the actions that would enable Hayward to achieve the new goals.

	2025	2030	2030
Sector	30%	50%	55%
Electricity	78% of Hayward residents and business operate on carbon-free electricity	93% of Hayward residents and business operate on carbon-free electricity	93% of Hayward residents and business operate on carbon-free electricity
Natural Gas	10,016 housing units converted to all-electric	20,033 housing units converted to all-electric	32,554 housing units converted to all-electric
Transportation	21,030 gasoline vehicles taken off the road (converted to electric or resident opts for car-free lifestyle)	48,167 gasoline vehicles taken off the road (converted to electric or resident opts for car-free lifestyle)	61,735 gasoline vehicles taken off the road (converted to electric or resident opts for car-free lifestyle)

Considering the above potential actions, the following table shows how Hayward's emissions would need to decrease to achieve the 2025 and 2030 targets:

	2005 in MT CO ₂ e*	2017 in MT CO ₂ e*	Change from 2005 - 2017	2019**	2025	2030
Electricity	185,890	75,118	-59.6%	-77.5%	-77.5%	-92.5%
Gas	189,995	186,111	-2.0%	0%	-11.7%	-43.3%
Transportation	664,366	624,640	-6.0%	0%	-18.2%	-45.7%
Solid Waste	42,641	38,712	+9.2%	0%	-30%	-60%
Totals	1,082,892	924,581	-14.6%	-20%	-30%***	-55%***
<p>*GHG emissions are reported in this table as metric tons of CO₂ equivalent (MT CO₂e). CO₂e represents an amount of a GHG whose atmospheric impact has been standardized to that of one mass of carbon dioxide, based on the global warming potential of the gas.</p> <p>**This is based on predicted reductions due to enrolling residents in EBCE Brilliant 100.</p> <p>***This is a predicted percentage change compared to 2005 GHG emissions.</p>						

ENVIRONMENTAL REVIEW

The proposed General Plan Amendment is categorically exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15308 of the CEQA Guidelines, Actions by Regulatory Agencies for the Protection of the Environment.

However, the adoption of policies with local GHG targets can affect how City staff conducts environmental reviews for development proposals to ensure they do not cause a significant impact to the environment. All projects subject to CEQA are required to include a GHG analysis showing the project will be consistent with SB 32. Because the proposed 2030 goal aligns with SB 32, adoption of the recommended goal will not increase the documentation or effort required of developers as they demonstrate consistency with the General Plan.

Following the Planning Commission hearing, staff continued to research the CEQA implications of adopting more stringent GHG reduction goals and how development projects will be evaluated in light of the new General Plan policies. Once the City has updated and adopted a 2030 Climate Action Plan (CAP), development projects will be able to streamline their GHG emission analysis by tiering from the CAP's CEQA document. However, until the 2030 CAP is adopted, developers may be required to prepare an analysis without the benefit of guidance or a methodology that is specific to Hayward. Staff contacted three CEQA consulting firms and all three recommended that Hayward prepare guidance for developers that would include thresholds of significance against which a project could be evaluated. Such thresholds would require formal adoption by Council. The thresholds could be numeric or could be in the form of a checklist of best management practices.

Staff also reached out to other local jurisdictions to see how development proposals are being evaluated in light of SB 32 and/or local GHG targets. A few jurisdictions, including the City of San Luis Obispo and the County of Santa Barbara have hired consultants to develop local GHG thresholds for new developments in conducting GHG emission analyses.

Staff received three quotes for preparation of thresholds that would be specific to Hayward's current GHG emissions, development regulations, and projected growth. The cost to the City to prepare the thresholds range from approximately \$10,000 to \$28,000. Once the thresholds are prepared, the cost for a developer to prepare a limited GHG analysis would range from \$3,000 to \$8,000 depending on the details of the project. Without local thresholds in place, the cost for a developer to prepare a more detailed GHG analysis would range from \$6,000 to \$12,000 and the time to prepare the analysis can be two to six weeks longer. Having established thresholds could streamline development review both for the developer and for staff; however, the time and cost to develop the thresholds and have them adopted by Council must be considered. On average, the cost for a developer to have a CEQA document prepared is approximately \$45,000 and ranges from \$14,000 to \$100,000. Given that this level of CEQA documentation is required for on average 12 projects per year, staff does not recommend development of thresholds at this time. Staff recommends that City resources be directed toward updating the CAP.

ECONOMIC IMPACT

Meeting the ambitious GHG reduction goals outlined above will require significant investment throughout the community and has the potential to create new local jobs; however some necessary improvements are not currently cost-effective.

A 2016 study conducted by TRC for the City of Palo Alto estimates that retrofitting a single-family home to an all-electric package will cost the customer \$6,891 over 30 years compared to replacing their natural gas appliances (\$5,012 in up-front costs and \$1,880 in higher energy costs).⁷

There are currently no electrification rebates available to Hayward customers. BayREN and PG&E are both working to make rebates available in 2020. EBCE has made building electrification a priority and will likely offer existing building electrification rebates in the future; however how soon and to what extent is unclear.

Sacramento Municipal Utility District offers up to \$8,300 in rebates⁸ for residents who switch cooktops, space heaters, and water heaters from gas to electric. SMUD's rebates are seen as a first test to learn how electrification rebates are working and whether they are effective.

FISCAL IMPACT

The reductions in GHG emissions necessary to achieve the new goals will require significant leadership and coordination by the City, which will not be possible with existing staff resources. As new programs are developed to meet the City's sustainability goals, staff will identify specific resources needed.

STRATEGIC ROADMAP

This agenda item relates to the Strategic Priority of Combat Climate Change. Specifically, this agenda item aligns with the implementation of the following project:

Project 4: Adopt & Implement 2030 GHG Goal & Roadmap

SUSTAINABILITY FEATURES

Meeting GHG reduction goals is the primary objective of the City's Climate Action Plan. Meeting the goals will require reducing emissions in every sector and will entail improving energy efficiency in buildings, decarbonizing buildings, increasing the use of renewable energy, and reducing vehicle-related emissions. All these actions will result in cleaner air for Hayward residents and for the region. Adoption of a 2030 GHG reduction target is a priority project (Climate Change project #4) in the Citywide Strategic Roadmap adopted by Council on

⁷ <https://www.cityofpaloalto.org/civicax/filebank/documents/55069>

⁸ <https://www.smud.org/en/Rebates-and-Savings-Tips>

January 28, 2020.

PUBLIC CONTACT

Prior to the Planning Commission hearing on December 12, 2019, a Notice of Public Hearing was posted at City Hall and published in the Daily Review newspaper. In addition, notice of the proposed General Plan Amendment was provided to the following agencies: Bay Area Air Quality Management District, , East Bay Community Energy, Alameda County Waste Management Authority and Energy Council, City of Fremont, City of Union City, City of San Leandro, Alameda County Community Development Agency, Hayward Area Recreation and Park District, Hayward Unified School District, California State University East Bay, Local Agencies Formation Commission, Metropolitan Transportation Commission, Association of Bay Area Governments, Bay Area Regional Energy Network, Office of Planning and Research, East Bay Municipal Utility District, the Native American Heritage Commission, and Alameda County Flood Control and Water Conservation District.

An article regarding the proposed GHG reduction goals was published on November 26th on the City of Hayward's website and through the City's Leaflet⁹ newsletter, which has 3,500 subscribers. Staff received a letter of support from StopWaste (Attachment II).

NEXT STEPS

Upon direction from the Committee, staff will present the General Plan Amendment to Council. If funded in the FY21 budget, staff will begin the process of updating the City's Climate Action Plan to establish a roadmap for meeting the new targets.

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Approved by:



Kelly McAdoo, City Manager

⁹ <https://www.hayward-ca.gov/your-environment/the-leaflet>