



DATE: July 20, 2021

TO: Mayor and City Council

FROM: Director of Public Works

SUBJECT: Adopt a Resolution Supporting the Goal for 100% Zero Emission Vehicle Sales in California by 2030 (ZEV2030)

RECOMMENDATION

That the Council adopts a resolution (Attachment II) declaring the City of Hayward's support for the goal of reaching 100% zero emission vehicle¹ (ZEV) sales in California by 2030 and urging Governor Gavin Newsom, the State Legislature, and the California Air Resources Board (CARB) to adopt the 100% ZEV by 2030 standard in order to meet our climate goals for reducing heat-trapping greenhouse gas (GHG) emissions.

SUMMARY

According to the Intergovernmental Panel on Climate Change (IPCC), we have until 2030 to transform our economy and the way we live in order to avoid the most catastrophic and irreversible effects of the climate crisis. The transportation sector now constitutes the largest portion of California's GHG emissions, making up 40% of all GHG emissions in the state. This portion is even higher in Hayward, accounting for more than 60% of all GHG emissions in the City. The resolution would support and recommend an acceleration of Governor Newsom's Executive Order from September 2020 to mandate all new cars and passenger trucks sold in California be ZEVs by 2035.

Review by Council Sustainability Committee – On July 12, 2021, the Council Sustainability Committee (CSC) considered this item and voted unanimously to bring a recommendation in support of the ZEV2030 resolution to Council.

BACKGROUND

California Greenhouse Gas Emission Goals and Policies: According to the IPCC, in order to avoid the worst of the climate crisis, we have until 2030 to transform our economy and make rapid and far-reaching transitions in land, energy, industry, buildings, and transportation.

¹ ZEVs include fully electric vehicles, as well as hydrogen-fueled vehicles.

California has established ambitious targets to reduce GHG emissions 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050.²

To help reach these goals, Governor Brown signed Executive Order B-55-18 in September of 2018, committing California to carbon neutrality by 2045. In addition, California has taken specific steps to reduce GHG reductions in the energy sector, including but not limited to:

1. Moving the state to 100% clean energy by 2045;³
2. Requiring the state to double the rate of energy efficiency savings in buildings by 2030;⁴
3. Extending the state's cap-and-trade program until the end of 2030.⁵

While there has been significant momentum in the energy sector to achieve GHG reduction goals, the transportation sector now constitutes the largest portion of California's GHG emissions, making up 40% of all GHG emissions in the state (as of 2018 GHG emission inventory data).⁶

GHG Reduction Policies in the Transportation Sector: In January 2018, Governor Brown signed Executive Order B-48-18, adopting several targets to reduce GHG emissions in the transportation sector:

1. Setting a goal of 5 million ZEV by 2030;
2. Installing 250,000 electric vehicle (EV) charging and 200 hydrogen fueling stations by 2025.

In September 2020, Governor Newsom signed Executive Order N-79-20 mandating that all new cars and passenger trucks sold in California be ZEVs by 2035. Medium- and heavy-duty vehicles shall be 100% zero emissions by 2045 where feasible, with a mandate going into effect by 2035 for drayage trucks.

Staff strongly supports Governor Newsom's mandate to phase out new gasoline-powered cars by 2035. The proposed resolution expresses support for the state's transition to 100% ZEVs and further recommends an accelerated timeline to reach this goal by 2030 instead of 2035.

Lifecycle Impacts of EVs and Batteries: The use of EVs eliminates tail-pipe emissions that would otherwise come from the use of gasoline and diesel, but creates emissions from electricity generation to charge batteries. However, producing and recycling EVs involve higher emissions than producing internal combustion engine (ICE) vehicles. The overall lifecycle emissions of an EV depend on many factors, such as energy used to produce the battery (coal-powered versus renewable energy-powered, etc.) and carbon intensity of the electricity used to charge the battery over the EV's lifetime (solar, natural gas, coal, etc.).

² Senate Bill (SB) 32 from September 2016, see more at:

https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32

³ SB 100 from September 2018, see more at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100

⁴ SB 350 from October 2015, see more at: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160SB350

⁵ AB 389 from July 2017, see more at: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB398

⁶ CARB's 2018 GHG emission inventory: https://www3.arb.ca.gov/cc/inventory/pubs/reports/2000_2018/ghg_inventory_trends_00-18.pdf

Based on a 2020 *Nature Sustainability* article,⁷ the researchers found that current and future life-cycle emissions from EVs were on average lower than those of ICE vehicles. Even if future end-use electrification is not matched by rapid power-sector decarbonization, the use of EVs almost always reduces emissions in most world regions. Additionally, President Biden has included a push in battery recycling within his EV plan,⁸ which would further reduce overall lifecycle emissions of EVs as the need for virgin rare earth metals such as lithium and cobalt would be reduced for new EV batteries and old EV batteries would avoid the landfill.

Current Auto Manufacturers EV Goals: Many auto manufacturers have set goals to either go 100% electric or ramp up their ZEV production over the next decade. Below is a list of several auto manufacturers and their goals:

- Volvo: all-electric by 2030
- Land Rover: 60% electric by 2030
- Mitsubishi: 50% electric by 2030
- Kia: 40% electric by 2030
- Subaru: 40% electric or hybrid by 2030
- GM: all-electric (light-duty vehicles) by 2035
- Jaguar: all-electric by 2035
- Honda: all ZEV by 2040 (40% by 2030; 80% by 2035)
- Ford: carbon neutral by 2050
- Nissan: carbon neutral by 2050

DISCUSSION

According to the U.S. Energy Information Administration, California produces more renewable energy than any other state in the United States, including generation from hydroelectric power, solar, wind, geothermal, and biomass energy.⁹ Therefore, electrifying transportation in California is a logical and essential solution to reducing GHG emissions.

The ZEV2030 campaign is a coalition of organizations and local governments committed to implementing a zero-emission vehicle standard in California by 2030. Their mission is to advance the goal that by 2030 in California, 100% of new vehicle sales will be zero emission vehicles. The goal is focused on new car sales of light utility vehicles (passenger cars, SUVs, trucks).

Several cities and jurisdictions have already adopted the ZEV2030 pledge, including the City of Oakland, City of San Leandro, City of Berkeley, City of Richmond, City of Mountain View, City of Culver City, East Bay Community Energy (EBCE), and MCE (formally known as Marin Clean Energy). Outside of California, the UK has announced the intention to ban the sale of gasoline-powered vehicles in 2030.

Transportation Pollution Disproportionately Affects Communities of Color: Freeways, refineries, and other environmentally hazardous facilities are disproportionately placed in

⁷ March 2020 *Nature Sustainability* article "Net emission reductions from electric cars and heat pumps in 59 regions over time": <https://www.nature.com/articles/s41893-020-0488-7>

⁸ <https://www.reuters.com/business/autos-transportation/exclusive-bidens-electric-vehicle-plan-includes-battery-recycling-push-2021-06-04/>

⁹ <https://www.eia.gov/state/analysis.php?sid=CA>

and around communities of color and low-income communities, exposing members of these communities to higher levels of air toxins, air pollution, and water pollution. Zero emission transportation will reduce GHG emissions and especially benefit communities of color and low-income communities by improving local health outcomes, especially in communities located close to freeways and other high-traffic corridors with the elimination of tailpipe air pollution.

ECONOMIC IMPACT

While the average sticker price on an ZEV is currently higher than an average gasoline-powered vehicle, a recent study on the levelized cost of charging electric vehicles in the United States shows that a California EV owner can expect to save \$11,000 on fueling over a 15-year life span of a vehicle.¹⁰ With a ZEV mandate in California, we can also expect the economies of scale to reduce initial ZEV purchasing prices. Additionally, federal tax rebates, state incentives, and other initiatives can also increase the accessibility of low-emission vehicles. For example, California's Clean Cars 4 All program helps low-income people in communities with poor air quality turn in their old gasoline vehicles for a stipend of up to \$9,500 toward the purchase of an EV or hybrid car.¹¹

FISCAL IMPACT

Staff does not anticipate a direct fiscal impact with respect to vehicle purchases. Staff currently anticipates that between 2030 and 2035, thirty-three City passenger vehicles (i.e., sedans, SUVs, and light duty trucks) would be required to be replaced by a ZEV. The cost difference between an ICE passenger vehicle and a ZEV are not significant, especially when considering maintenance and fuel. Costs for new charging infrastructure may be significant, but it is possible that EBCE will provide support. With the added anticipated ZEVs to the City's fleet, an anticipated sixteen dual unit charging units would need to be installed. EBCE recently began a fleet electrification study for Hayward to prepare an actionable plan as well as to determine charging infrastructure needs.

STRATEGIC ROADMAP

In January 2020, Council adopted six Strategic Priorities as part of its three-year Strategic Roadmap. This agenda item is not specifically called for in the Roadmap, but it does support the priority of Combat Climate Change and the implementation of the following projects:

Project 1: Reduce Dependency on Fossil Fuels

Project 7: Reduce Carbon Emissions – transition 15% of total city fleet to EV/hybrid models

SUSTAINABILITY FEATURES

¹⁰ [https://www.cell.com/joule/pdfExtended/S2542-4351\(20\)30231-2](https://www.cell.com/joule/pdfExtended/S2542-4351(20)30231-2)

¹¹ <https://hayward-ca.gov/content/electric-vehicle-resources>

If adopted by Council, this resolution would renew Hayward's commitment to addressing climate change and would help guide the policies and programs to be included in the updated Climate Action Plan.

PUBLIC CONTACT

No public outreach was made for this item.

NEXT STEPS

If Council adopts the resolution, the City of Hayward would be added to the ZEV2030 Coalition.

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Recommended by: Alex Ameri, Director of Public Works

Approved by:

A handwritten signature in black ink, appearing to read 'Kelly McAdoo', is written over a horizontal line.

Kelly McAdoo, City Manager