

ADMINISTRATIVE MEMORANDUM

TO: All Departments **FUNCTION:** Finance
FROM: Viki Copeland, Finance Director
Tom Bakaly, City Manager **NO:** F-17
SUBJECT: **Clean Fleet Policy and Action Plan – Adopted June 11, 2013**

The City of Hermosa Beach has established and is aggressively pursuing a Carbon Neutral goal for municipal facilities and operations. Carbon neutral may be generally defined as “net zero greenhouse gas emissions” to be achieved by a specified date. Thus, the gap between greenhouse gas emission reductions achieved and zero greenhouse gas emissions would need to be “netted out” through the purchase of greenhouse gas offsets from activities outside the City or other measures such as generation of excess “green electricity” or carbon sequestration (the process of removing carbon from the atmosphere and depositing it in a reservoir).

The City Fleet Policy should be consistent with and balance the following directives in the Council’s Strategic Plan (Attachment 1):

- Reduce the carbon footprint and become carbon neutral as a municipal corporation
- Increase the use of alternative energy sources
- Carbon neutral municipality as an example of “best practice”
- Incorporate sustainability principles in city decisions, budgets, facilities and plans
- Evaluate the environmental return on City investments and decisions
- Monitor the condition of the environment and evaluating the impacts of City decisions and actions

This policy establishes a clean vehicle and fleet policy that requires progressive transition to alternative fuel and zero and low emission vehicles and on- and off-road equipment as well as improved fleet management and operations. These measures will advance a carbon neutral goal and accelerate greenhouse gas reduction, improve air quality and health, reduce petroleum dependence and increase energy security in Hermosa Beach and beyond.

Policies apply to procurement, lease, retrofit and use of City fleet vehicles and equipment. Contractor vehicles providing city services should be held to the same standards through contractual provisions to the maximum extent possible.

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| 1. Maximize the use of alternative fuel and low emission vehicles used to supply city services, including the City fleet and contractor vehicles. |
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- A. Zero and low emission vehicles shall be acquired or used whenever feasible, taking into account vehicle function and specialized needs, vehicle miles traveled and other relevant factors.

- B. Select the most efficient vehicle for each day's use by matching duty requirements to the lowest greenhouse gas emitting vehicle possible. Seek to meet occasional vehicle needs that cannot be met with alternative fuel vehicles through alternative arrangements (pooling, rentals, etc.).
- C. Retrofit existing vehicles and equipment to reduce emissions when practical.
- D. Manage overall fleet composition to achieve the aggregated lowest greenhouse gas emissions reasonably feasible, taking into account vehicle miles traveled.
- E. Strictly adhere to California Air Resources Control Board Fleet Rules and South Coast Air Quality Management District fleet, vehicle and equipment statute, rules and guidelines requiring low-emitting gasoline or alternative-fuel vehicles and other air toxic control measures. Apply standards to categories below required thresholds where feasible.
- F. Include minimum fuel efficiency standards and alternative fuel types for each vehicle class in procurement specifications. Consider purchase timing and retrofit potential as technology evolves when acquiring vehicles and equipment with long life spans that currently have limited alternative fuel options.
- G. Environmental priorities and potential reduced operation and maintenance costs of alternative vehicles are valid return on investment considerations when costing alternative fuel vehicle purchases.

Target:

The City fleet is one of the few areas in which the City has control over its assets (comprising most of the 11.4% of emissions under direct control of the City in 2005) and therefore a rigorous goal should be set. As indicated by the action plan above, the realistic potential over time based on expected technology and City fleet demands should be performed before setting targets. However, staff believes an interim target can be set with the objective of evaluating the potential and timeline to meet this interim target along with a long-term net carbon neutral goal.

Interim: Determine feasibility of 50% emissions reduction for City fleet and 20% emissions reduction for contractor service vehicles (implemented with new contracts, or with amendments when feasible).

Long-term:

- **Net zero greenhouse gas emissions for City fleet.**
- **Alternative fuel used for 100% of contracted city service vehicles.** This is a lesser goal in that it is not a net carbon neutral goal.

Determination of the potential, cost and timeframe to achieve these targets would be undertaken as specified in the Actions outlined. Net zero means no petroleum-based fuels are used to power the vehicle or equipment unless offset by energy production or other means.

Actions:

1. Update the City fleet greenhouse gas emissions inventory: 2013/14
2. Prepare a master plan and determine the target date for carbon neutrality: End of FY 2013/14
 - a. Establish a standard protocol and conduct a comprehensive review of the fleet demands, composition and conversion opportunities. The above "Guidelines for Vehicle Purchase and Replacement" developed by city staff is a starting point and should be reviewed for consistency with the Policy and adjusted as technology changes.
 - b. Evaluate the potential for vehicles retrofits.

- c. Evaluate the return on investment of various fleet vehicle scenarios (marginal cost per metric ton of carbon reduction) versus cost/benefit of implementing strategies in other sectors (building, water, waste).
 - d. Factor in the City's environmental priorities value of 'leading by example' together with lifecycle costs (fuel, maintenance costs, etc.) when considering overall priorities and strategies for conversion to alternative fuel vehicles.
 - e. Determine the maximum feasible greenhouse gas reduction possible by 2018 (5 years) taking into account functional needs, projected technology, vehicle miles traveled, etc. along with long-term strategies.
3. Revise the City's contract template to require alternative fuel or ultra low greenhouse gas emissions for all vehicles contracted to provide city services: 2013
 4. Include minimum fuel efficiency standards and alternative fuel types for each vehicle class in procurement specifications. Consider retrofit potential as technology evolves when acquiring vehicles and equipment that have limited options: 2013/Ongoing.

Monitoring:

End of FY 2013/14 and then review annually as part of mid-year budget review process.

2. Reduce vehicle emissions through efficient fleet management and operations.

- A. Efficiently operate fleet vehicles maintaining proper tire inflation and timely vehicle maintenance.
- B. Enforce and accelerate state and regional laws, rules and guidelines to reduce air toxics. Consider local rules when not in conflict with state law.
- C. Reduce vehicle miles traveled by using alternative modes for intercity and intra-city trips (walk, transit, bike, carpool), eliminating excess trips, combining trips, employee use of alternative fuel vehicles to reduce employee commute emissions, using videoconferencing and other online tools, and other techniques.
- D. Increase driver efficiency.

Target:

Reduce vehicle miles traveled using petroleum-fueled vehicles as part of a comprehensive strategy.

Actions:

1. Identify and strictly enforce CARB, SCAQMD and other laws, rules and guidelines designed to improve efficiency, reduce air toxics, and accelerate conversion to alternative and low emission fuels, such as anti-idling, installation of diesel filters, etc. Identify areas in which the City should apply standards to its own fleet (and contractor vehicles): 2013/14
2. Establish a procedure to check tire pressure monthly on all vehicles: 2013
3. Conduct a systematic review and implementation of options for reducing vehicle miles traveled: Part of Master Plan
4. Work with the IT department to implement online meeting tools (teleconferencing, etc.): 2013/14
5. Incorporate provisions into City service provider contracts templates to implement the above measures: 2013
6. Educate and incentivize employees to fully and consistently implement these practices: 2013/14

Monitoring:

Review annually as part of budget process.

3. Facilitate infrastructure to support alternative fuel vehicles.

- A. Expand and facilitate the increased utilization of publicly available alternative fuel infrastructure in the City.
- B. Prepare for new vehicle technologies on an ongoing basis.

Target:

Locally convenient infrastructure to support a range of alternative fuel vehicles.

Actions:

- 1. Evaluate needs and plan for electric vehicle charging without reducing the availability of the city's charging infrastructure for public use: Part of Master Plan
- 2. Integrate into CIPs consideration of elements to facilitate new technologies. When repaving sidewalks or parking lots, bury electrical conduit to allow for future plug-in parking spaces. When designing or remodeling buildings, provide 110 volt outdoor outlet plugs near parking spaces and size circuits for future installation of 240 volt charging.
- 3. Evaluate installation of a CNG charging station in the local area.¹ May involve a partnership and serve City fleet, city contractors, etc. The outcome of the evaluation may affect the desirability of obtaining more CNG vehicles.
- 4. Fully utilize funding, partnerships and demonstration program opportunities that advance the above goals: Ongoing.

Monitoring:

Review infrastructure needs annually as part of the CIP program.

4. Evaluate opportunities to offset greenhouse gas emissions from City fleet and contracted service providers through green energy production or other offsets.

Target:

Offsets to achieve net carbon neutral goal for City fleet.

Actions:

- 1. Explore photovoltaic generation to offset electric charging demands and emissions of petroleum fueled vehicles: 2013/14
- 2. Consider whether city provision of alternative fuel infrastructure used by the general public may be counted as an offset: Part of Master Plan.

Monitoring:

Review infrastructure needs annually as part of the CIP program.

¹ Building a CNG refueling station - <http://www.socalgas.com/innovation/natural-gas-vehicles/business/station-building.shtml>;
Exploring the Total Cost of CNG, Government Fleet
<http://www.government-fleet.com/article/print/story/2013/04/exploring-the-total-cost-of-cng.aspx>

City of Hermosa Beach
Guidelines and Criteria for Vehicle Purchase and Replacement, 2013

1. Review Existing Vehicle Replacement Schedule

- a. Establish maximums for mileage (120k) and/or hours (varies by type of equipment).
- b. Consider years in service, suggest minimum of 8 years and maximum of 15 years.
- c. Do vehicle repairs exceed depreciated value, irrespective of age?
- d. Do repairs on a vehicle involved in accident(s) exceed 80 % of the depreciated value of the vehicle?
- e. Evaluate and finalize the justification for the replacement or extension of a vehicle's life.

2. Review Vehicle Selection with Department Staff

- a. Determine the necessary fleet functions and needs of the department.
- b. Determine if existing vehicles meet the need of staff and ensure new vehicle do not exceed requirements.
- c. Review requirements for Utility and Passenger vehicles, including cargo capacity, off road 4x4 capabilities, and towing capabilities.
- d. Assess vehicle usage: consider distance traveled and determine whether vehicle is driven home or out of town for training.

3. Alternative Green Vehicle Implementation

- a. Review each vehicle that has been approved for replacement and determine whether an alternative fuel vehicle is an option
- b. Review available green vehicles options including: electric vehicles, hybrids, CNGs, hydrogen, biodiesels, and any other emission reducing vehicles, and match with city needs
- c. Non alternative fuel vehicles shall be reviewed to determine lowest emission alternatives with equal performance.

4. Purchasing, Maintenance and Environmental Considerations

- a. Research available grants, dealer incentives, and organizational savings
- b. Review vehicle sales history, market sustainability, warranties and the history of mechanical and technical problems.
- c. Use of environmentally friendly materials.
- d. Review vehicle manufacturing environmental impact and environmental emission labels.
- e. Available dealer support and staff training for new technology.

5. Fuel Support and Saving

- a. Recognize and determine fueling needs.
- b. Apply for available charging station grants.
- c. Determine CNG fueling challenges and implement emergency procedures.
- d. Evaluate fuel cost savings that can be utilize for alternative fueling infrastructure.

6. Police Department Considerations

The Police Department researched alternative-fueled vehicles as options for vehicles utilized for police service. Based on current research, full electric vehicles and gasoline/electric hybrid vehicles were determined to be unsuitable to serve as either front-line police patrol vehicles or as unmarked detective vehicles.

Full electric vehicles: Full EVs are incompatible with needs of the department for the following reasons:

1. Certification – There currently are no electric vehicles that are certified by the manufacturer for use as police pursuit vehicles; the vehicle manufacturer will not endorse the use of any such vehicle as a police vehicle. Therefore, the utilization of such vehicles for use as front-line police patrol or detective vehicles presents several liability issues should they be operated in this capacity. The City would bear increased potential risk should the use of such vehicle in an enforcement action result in personal injury or property damage to either the public or to the City or City employee. The vehicle manufacturer will likely not honor any potential warranty claims due to the vehicle's operation outside of the parameters of its designed use.

2. Cost – Electric vehicles are considerably more expensive than gasoline-powered vehicles (or even hybrid vehicles, for that matter). AQMD funds are limited and may not fully offset the additional expense such that General Fund monies may be necessary. Although fuel costs would be lower, the savings would not be enough to offset the increased purchase expense.

3. Range – Electric vehicles do not have the necessary range to be utilized as either police patrol or detective vehicles. Police patrol vehicles (either front-line patrol or special service) are required to be driven or operated almost continuously throughout the officer's assigned work shift. This essentially requires the vehicle to endure from eight to twelve hours of near continuous heavy-duty operation. Currently, no electric vehicle exists that can perform this function without requiring significant (and time-consuming) recharging. In addition, officers (especially detectives) commonly have to venture out of the city to investigate cases and/or respond to incidents. Detectives can also be called upon to respond to remote locations at any time, day or night. This could result in these officers being potentially stranded in other areas where there are no charging facilities available.

4. Performance – It is sometimes necessary for front-line patrol or unmarked detective vehicles to engage in suspect pursuit or other similar activities (such as suspect vehicle surveillance or emergency response situations). Most electric vehicles simply lack the performance necessary to perform this function. The few electric vehicles that do possess the necessary performance capability are very expensive.

5. Size – Most electric vehicles are simply too small to adequately function as police vehicles. All police vehicles, whether marked or unmarked, require a certain amount of emergency lighting and safety equipment to be installed in them. In addition, detective vehicles must be of sufficient size to carry more than two persons in addition to the additional equipment carried by the individual detectives. Again, those few electric vehicles that are of sufficient size are prohibitively expensive.

6. Identification – Most electric vehicles are of unusual or uncommon design. As a result, they are highly recognizable and readily stand out from other vehicles. This inherent high visibility renders them useless by detectives as surveillance vehicles.

Gas/electric hybrid vehicles: These vehicles also incompatible as follows:

1. Certification – There currently are no gasoline/electric hybrid vehicles that are certified by the manufacturer for use as police pursuit vehicles; the vehicle manufacturer will not endorse the use of any such vehicle as a police vehicle. Therefore, the utilization of such vehicles for use as front-line police patrol or detective vehicles presents several liability issues should they be operated in this capacity. The City would bear increased potential risk should the use of such vehicle in an enforcement action result in personal injury or property damage to either the public or to the City or City employee. The vehicle manufacturer will likely not honor any potential warranty claims due to the vehicle's operation outside of the parameters of its designed use.

2. Cost – Hybrid vehicles are more expensive than gasoline-powered vehicles. AQMD funds are limited and may not fully offset the additional expense such that General Fund monies may be necessary. Although fuel costs would be lower, the savings would not be enough to offset the increased purchase expense.
3. Performance – It is sometimes necessary for front-line police patrol or unmarked detective vehicles to engage in suspect pursuit or other similar activities (such as suspect vehicle surveillance or emergency response situations). Most hybrid vehicles simply lack the performance necessary to perform this function. The few hybrid vehicles that do possess the necessary performance capability are more expensive.
4. Identification – Most hybrid vehicles are of unusual or uncommon design, or are given unique badges or other model-specific markings by the manufacturer in order to highlight their status as hybrid vehicles. As a result, they are highly recognizable and readily stand out from other vehicles. This inherent high visibility renders them useless by detectives as surveillance vehicles.

Full electric vehicles: These vehicles were also determined to be unsuitable to serve as police administrative vehicles or as special service patrol vehicles for the following reasons:

1. Cost – Electric vehicles are considerably more expensive than gasoline-powered vehicles (or even hybrid vehicles, for that matter). AQMD funds are limited and may not fully offset the additional expense such that General Fund monies may be necessary. Although fuel costs would be lower, the savings would not be enough to offset the increased purchase expense.
2. Range – Electric vehicles do not have the necessary range to be utilized as administration or special service vehicles. Police administrative officers commonly have to venture far out of the city to investigate cases, respond to incidents or for other administrative matters. In addition, these officers can be called upon to respond to such locations at any time, day or night. This could result in these officers being potentially stranded in other areas where there are no charging facilities available.
3. Size – Most electric vehicles are simply too small to adequately function as police vehicles. All police vehicles, whether marked or unmarked, require a certain amount of emergency lighting and safety equipment to be installed in them. In addition, administration and special service vehicles must be of sufficient size to carry more than two persons plus additional equipment carried by the individual officers. Again, those few electric vehicles that are of sufficient size are prohibitively expensive.

Gasoline/electric hybrid vehicles: Research has determined there are some gasoline/electric hybrid vehicle platforms that meet the Department's needs for use as administration and special service vehicles. Currently, however, there are not many gasoline/electric hybrid vehicle platforms from which to choose that meet these needs.

Despite constraints, the Police Department has been progressive in its use of alternative-fueled vehicles. The Department recently purchased an all-electric parking enforcement vehicle (Firefly) to replace a similar gasoline-powered vehicle (Go-4). It is the Department's intention to replace the other Go-4 vehicles with the Firefly vehicles as they are scheduled to be replaced. The Department employs a Ford Escape hybrid for use by the Volunteers-in-Policing (VIP) corps. The Department also employs two additional Ford Escape hybrids for use as general purpose beach patrol vehicles. (Unfortunately, Ford no longer manufactures the Escape SUV with a gasoline/electric hybrid powertrain. The Toyota Highlander is now the only option for use as an off-road capable special service vehicle available with a gasoline/

electric hybrid powertrain.) In addition, the Department utilizes two all-electric T3 personal mobility vehicles to supplement foot patrol operations.

Viki Copeland, Finance Director

Tom Bakaly, City Manager

Attachment 1
City Council – Strategic Plan – 2013 – 2018 – 2028
Carbon Neutral Goal: Directives Most Relevant to City Fleet Policy and Master Plan

HERMOSA BEACH VISION 2028

Principle 6: Commitment to Environmental Sustainability

2. Use of alternative energy sources within the City
6. Carbon neutral municipality as an example of “best practice”

HERMOSA BEACH MUNICIPAL CORP.: OUR MISSION

Principle 2: Be Environmentally Responsible

1. Incorporate environmental sustainability principles in city decisions, budgets, facilities and plans
3. Reduce the carbon footprint and become carbon neutral as a municipal corporation
6. Monitor the condition of the environment and evaluating the impacts of City decisions and actions
7. Evaluate the environmental return on City investments and decisions

PLAN 2013 – 2018

Goal 3. More Livable, Sustainable Beach City - Objectives

1. Reduce City carbon footprint
5. Increase use of alternative energy sources

Management Actions 2013

HIGH PRIORITY

- City Fleet Policy and Master Plan