

**MOORPARK CITY COUNCIL
AGENDA REPORT**

TO: Honorable City Council

FROM: Jessica Sandifer, Management Analyst 

DATE: July 9, 2013 (CC Mtg. July 17, 2013)

SUBJECT: Consider Release of Request for Quotation (RFQ) for Purchase of a Plug-in Hybrid Electric Vehicle

BACKGROUND

Staff recently conducted research on the feasibility of purchasing an all-electric vehicle versus a plug-in electric hybrid for use as a pool car or other use as determined necessary. Research focused on four commercially available all electric plug-in vehicles: the Ford Focus Electric, Honda Fit EV, Nissan Leaf, and Mitsubishi MiEV and two plug-in electric hybrids: the Chevrolet Volt and the Toyota Prius-Plug in. Based on this research, staff believes that a plug-in electric hybrid would be better for the City's use at this time.

DISCUSSION

Battery-Only Electric Vehicles: When comparing battery-only electric vehicles (EV) to each other they all have similar mileage ranges at the high end and similar charging times when paired with a tier two charger (such as the charger recently installed at City Hall). The exception being the Mitsubishi MiEV which has a longer charge time and a lower mileage range than the other three cars reviewed. The pricing is similar, however the Ford Focus Electric and Honda Fit EV are on the higher end of the spectrum with the Nissan Leaf and Mitsubishi being at the lower end. Motortrend magazine noted that dependent upon selected options, the average EV owner is paying \$31,000 (before federal and state tax credits.)

There are some negatives to EV use in a City application, either as a pool car or other use. The most important thing to note about EV's is that the listed top mileage is only achieved under optimal conditions. Meaning a pleasant spring day, not too hot, not too cold, with a conservative driver behind the wheel and on a flat road. When these are not the conditions the vehicles travel range can get as low as 25 miles. This lack of stability in driving ranges is known in the industry as "range anxiety". When reading test drive

reviews many reviewers noted the sense of stress they felt when driving the vehicle and watching the on-board driver notification systems indicate that battery range was fluctuating from 25 miles of range to 45 range and back again causing test drivers to wonder if they would make it to their destination. As a pool car, an EV would have to be limited to use within Ventura County. Any use beyond this County would entail mapping out charger locations prior to travel, to make sure the locations existed. Which brings us to the other negative: lack of charging infrastructure. Although the installation of public chargers is making great strides, it can still be difficult to find them and they are not always convenient to the route you want to take. For example, when driving a battery-only electric vehicle to the County Government Center, there are 13 blink point and chargepoint chargers within Ventura, but they are located mostly around the harbor and beach areas, plus having a three to four hour charge window can lead to loss of productivity if an employee has to charge the vehicle prior to the return trip.

In terms of difference between the EV's, the Ford Focus Electric vehicle has a liquid cooled/heated battery which is intended to stabilize the range of the EV. As noted above, temperature can have an effect on the range output of the EV batteries, the liquid cooling and heating is intended to keep a steady temperature around the battery, hence stabilizing range. This technology is new, so it is unclear if it will have the range stabilization effect once the general population starts logging EV miles, however, when tested the results were very promising.

Plug-in Electric Hybrids: A plug in electric hybrid vehicle (PEHV), has the ability to run exclusively on battery power and when that runs out, some type of gasoline powered motor takes over. The two most popular PEHV's are the Chevrolet Volt and the Toyota Prius Plug-in. The Volt differs from the Prius Plug-in because the Volt is run entirely by electric motors. When the battery runs out of power a gasoline generator kicks in and runs the electric motors and continues powering the vehicle. The Prius Plug-in has a larger battery that allows it to operate on all electric mode up to 62 mph (vs 30 mph in the traditional Prius), before the gasoline engine (the same as found in the traditional Prius) takes over. The all electric range of the Volt is reported to be 38 miles and the all-electric range of the Prius is 15 miles. (Again, as noted with the EV's above this range varies depending upon driving conditions and driver). However, both vehicles can be driven as gasoline powered vehicles and post an average of 45 to 50 mpg when driven with gasoline. The benefit to these vehicles is when they are used on short trips around town, they run on all electric power, but due to their gasoline options, the use of the vehicle does not have to be confined to the surrounding County. The Prius Plug-in is slightly cheaper than the Volt and has a shorter charging time than the Volt, primarily due to the low all electric range. If the Prius had the same all electric range as the Volt, the charging time would likely be the same.

Given the facts noted above, staff feels that at this time it is not practical to use a battery-only electric vehicle for a pool car. The potential for employees to be stranded due to uncertain vehicle ranges is high. Also the fact that it can take three to four hours (depending on battery depletion) to fully charge the vehicle, may mean it is only available for one trip per day, depending on driving conditions and distance traveled.

For use as a pool car, it appears most practical to select a plug-in electric hybrid, so that the majority of the power used in the vehicle would be electric, but in instances where the vehicle runs out of battery power, or is needed to go the distance the option of converting to gas power is available.

The Toyota Prius Plug-in is less costly than the Chevrolet Volt, however, in terms of selecting a vehicle that runs in all electric mode for a longer time period, the Volt would be the better choice. The fact that it has a longer all electric range and uses a gas-powered generator to run electric motors, makes it a closer cousin to the battery-only electric vehicles than the Prius Plug-in and makes it a natural next step for the City towards a battery-only electric vehicle.

FISCAL IMPACT

PEHV's are expensive, and each year new technologies are developed that make them drive further distances and charge faster. Staff feels that moving towards low or carbon neutral vehicles for the City's fleet, is a solid way to lower the City's carbon footprint as well as the operation and maintenance costs for fleet vehicles. The following is a breakdown of the estimated 36 month lease/purchase operation cost of the Volt, a regular hybrid vehicle such as the Prius currently used, and a standard gasoline car. The breakdown assumes the following for all three vehicle types: 10,000 mile per year operation, average \$4.00/gallon gasoline costs, and the same oil change costs, and tire needs based on current pool car maintenance practices. All assumptions relevant to the Volt and electricity use are estimates based on manufacturer assumptions about vehicle performance:

STANDARD GASOLINE CAR

Purchase Cost: \$14,655
Gasoline costs approximately \$1,332/year x 3 years=\$3,996
Oil changes at 3 per year = \$210/year x 3 years = \$630
Tire Change once every three years= \$300
Brakes once in a 3 year period =\$200
TOTAL 3 YEAR COST TO PURCHASE/OPERATE: \$19,781

TOYOTA PRIUS HYBRID

Purchase Cost: \$21,198
Gasoline costs approximately \$888/year x 3 years = \$2,667
Oil changes at 2 per year = \$140 x 3 years = \$420
Tire Change once every three years = \$300
Brakes \$0*
TOTAL 3 YEAR COST TO OPERATE: \$24,585

CHEVROLET VOLT

Estimated Lease Cost: \$12,240
(estimates assume 8,000 miles on battery power and 2,000 miles on gasoline power)
Gasoline costs approximately \$160/year x 3 years = \$480
Electricity costs approximately \$378/year x 3 years = \$1,134
Oil Change once per year \$70/year x 3 years = \$210
(Oil changes could be once every two years per manufacturer)
Tire Change once every three years = \$300
Brakes \$0*
TOTAL 3 YEAR COST TO OPERATE: \$14,364

**The regenerative braking on hybrids makes for long wearing brakes, neither of the current hybrid Prius's has had a brake service to date.*

The assumptions about the Volt are based on manufacturer claims and test drive data. Unfortunately, the Volt has not been in operation long enough to compile data regarding true costs of ownership. In consideration of this fact, staff is recommending a closed-end lease of the vehicle. For less than half the cost of the vehicle MSRP, a lease will allow the City to see if the PEHV actually costs less to operate and test the reliability and usability of the vehicle, to determine whether or not it would be a good option to pursue for future fleet car use, without committing to the vehicle for an extended term. The mileage constraints of a lease are not a concern considering the low overall mileage of the City's pool cars. Only one pool car was driven 10,000 miles last year, the remaining pool cars were 4,000 miles or less for the year. Staff is estimating that the cost of a 36-month lease with downpayment and fees to be around \$12,240 for the term of the lease. Traffic System Management (TSM) Funds (2001) are proposed to be used for the lease cost.

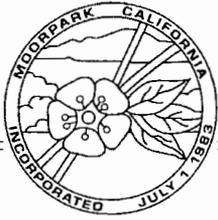
Staff has prepared a Request for Quotation (RFQ) for a Chevrolet Volt. In general, the RFQ requests a cost for a 36-month low-mileage lease for a standard white Chevrolet Volt with tan interior. Staff has also included a request for an optional monthly lease payment that would include standard vehicle maintenance during the lease term, as long as the service location is within five miles of the delivery location. An appropriation of funding is not needed at this time.

Honorable City Council
July 17, 2013
Page 5

STAFF RECOMMENDATION

Approve release of the RFQ for lease of a Chevrolet Volt.

Attachment: RFQ for Chevrolet Volt.



ATTACHMENT 1 *City of Moorpark*

PARKS, RECREATION & COMMUNITY SERVICES DEPARTMENT
799 Moorpark Avenue, Moorpark, California 93021 (805) 517-6227 fax (805) 532-2550

July 23, 2013

REQUEST FOR QUOTATION FOR LEASE OF A CHEVROLET VOLT

The City of Moorpark is interested in leasing the following:

- **ONE (1) 2013 CHEVROLET VOLT**

BID DUE DATE:

Please submit your sealed bid (along with supporting materials) on the Bid Form enclosed. All bids shall be received prior to **9:00 a.m. on Tuesday, August 6, 2013** according to the official time at Moorpark City Hall, at which time they will be publicly opened and read. Bids shall be sealed and marked "**Sealed Bid: Volt - DO NOT OPEN WITH REGULAR MAIL.**"

If you should have any questions regarding these bid documents, please contact the undersigned at (805) 517-6225.

Sincerely,

Jessica Sandifer
Management Analyst ~ Sustainability Coordinator
Community Development Department
799 Moorpark Avenue
Moorpark, CA 93021

INSTRUCTIONS TO BIDDERS

1. BID INFORMATION

Vendors may bid on the following item(s):

In recognition of the rapidly changing technology in the electric vehicle market, the City is interested in leasing the specified vehicle. Lease terms should be:

- 36 month term
- Closed end lease
- Low or no initial down payment
- Low-mileage Lease (8,000 to 10,000 miles/year)

The delivery and lease arrangements are to commence June 27, 2013. Bidder proposal is to include a copy of the vehicle lease financing terms including any required down payments and additional mileage fees that may be assessed if the vehicle is driven over the allotted mileage amount.

Vehicle Specifications

Vehicle should come equipped as follows:

- Exterior Color – Summit White
- Interior Color – Jet Black
- All standard vehicle options
- Full Warranty

****Option****

- Include an optional lease rate that includes Vehicle Standard Maintenance Plan for lease term. Maintenance to include oil changes, tire rotations, and other standard maintenance not covered by the warranty.

Delivery requirements:

- Vehicle must be clean when delivered with a full charge and a full tank of gas and all stickers removed. City to receive a copy of the MSRP window sticker for its files.
- Bidder agrees to provide training on the vehicle to selected City personnel.
- The City will provide insurance for the vehicle as required by the lease documents.

2. GENERAL REQUIREMENTS

- A. Bids should be submitted on the Bid Form attached. Additional sheets may be

attached for the purpose of itemizing or clarifying the bid, but the total bid amount shall be shown on the City Bid Form.

- B. The Specifications for the items, which have the appropriate affirmative statement or clarification next to each item, shall become a part of the bid.
- C. The total lease price shall be quoted F.O.B. Moorpark (all transportation charges fully prepaid). The bid shall include California sales tax.
- D. The deadline for submittal of bids is **9:00 a.m. on Thursday, June 27, 2013.**
- E. All bids shall be sealed and marked **"Sealed Bid: Volt- DO NOT OPEN WITH REGULAR MAIL"**
- F. All bids received shall be firm offers, good for sixty (60) days from the date of the bid opening.
- G. Each bid will be submitted and received with the understanding that the acceptance by the City of Moorpark of the bid to furnish and deliver the items bid shall constitute a contract between the successful bidder and the City which shall bind the successful bidder on his part to furnish and deliver at the price(s) bid and in accordance with the provisions of these Instructions and the Specifications for those items bid.
- H. The City reserves the right to accept or reject any and all bids and to award a contract to the bidder who best meets the needs of the City. This may include waiver of minor irregularities or discrepancies, or nonconformity to the specifications. Purchase shall be on a best buy basis after due consideration of all relevant factors, including, but not limited to, workmanship, accessibility of parts and service, known evidence of manufacturer's responsibility and record, durability and known operational record of product, price, delivery time, and suitability and conformity to City needs and requirements.
- I. As with other items listed in the specifications, the bidder may adjust the date of delivery. However, bidders are advised that the award of the contract shall be based upon several factors including both price and the date of delivery.
- J. All "Standard Equipment" shall be considered included in the bid price. The successful bidder shall supply all items advertised as "Standard Equipment" even if such items are not stipulated in the specifications, unless otherwise clearly excepted in the bid.
- K. All applicable sales tax shall be included in the bid price.
- L. All materials, workmanship and finish entering into the construction of the equipment must be of high quality and must conform to the character of the

equipment and the service for which it is intended to be used and shall be produced by use of current manufacturing processes. "Seconds", factory rejects and substandard goods are not acceptable.

- M. The successful bidder shall adhere to the delivery date in the specifications as stipulated or adjusted by the bidder. Failure to meet said delivery date may result in the cancellation of the contract.
- N. These instructions shall become part of each bid submitted and shall be considered a part of the purchase contract for the items selected.

**CITY OF MOORPARK
BID FORM**

June 27, 2013

Bidder: _____ Date: _____
Address: _____ Contact: _____
_____ Phone: _____

2013 Chevrolet Volt

Vehicle Price \$ _____

Fees \$ _____
(including tax, finance fees, doc., lic., delivery)

Required downpayment, if applicable \$ _____

Monthly Lease Rate* \$ _____
**attach copy of finance/lease documents with bid*

Optional Monthly Lease Rate \$ _____

Annual Mileage Limit _____

Delivery Date (21 days or less preferred) _____

Remarks: _____

The undersigned hereby stipulates that he/she has read and understands the terms and conditions set forth in the Instructions to Bidders and the Specifications for the items bid, and if selected by the City of Moorpark, will supply the items bid for the total cost stated herein.

Company: _____

Sales Agent: _____

Signature: _____

Date: _____

GENERAL

- _____ All pre-delivery service and warranties shall be provided (attach a copy of applicable guarantee provisions).
- _____ Vehicle must be equipped with air pollution and exhaust emission control apparatus, meeting current Federal and State of California requirements.
- _____ Vehicles and accessories shall conform to the California Vehicle Code, Department of Transportation, and if applicable, to the Safety Orders for the Division of Industrial Safety, and current requirements of OSHA.
- _____ Vendor shall furnish three copies of billing invoice and application for registration of new vehicle.
- _____ Vendor shall fill out application of new vehicle per sample attached.

_____ DELIVERY SHALL BE MADE WITHIN TWENTY-ONE (21) DAYS OF THE DATE OF PURCHASE.

_____ Delivery: City of Moorpark
 Ashraf Rostom
 627 Fitch Avenue
 Moorpark, CA 93021
 (805) 517-6362