

**OFFICE OF FACILITIES AND ADMINISTRATIVE SERVICES
OFFICE OF THE SECRETARY**

**ELECTRIC VEHICLE CHARGING STATION
SURVEY REPORT**

**Employee survey conducted on the feasibility of installing electric
vehicle charging stations at the Main and South Interior Buildings**

Survey conducted in January 2014

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I. BACKGROUND AND SURVEY GROUP

As part of the Department's commitment to help reduce greenhouse gas emissions and energy consumption, the Office of Facilities and Administrative Services (OFAS) was asked to research electric vehicle charging stations. The focus of this research was to better determine the feasibility of installing stations at the Main and South Interior Buildings for the benefit of employees.

As part of determining current EV ownership by employees, and interest in this endeavor, a survey was developed with ten (10) questions focused on gathering employee feedback .

Questions asked in the survey focused on identifying employees who currently own or plan to purchase an electric vehicle; commuter usage for those who own or plan to purchase and E.V; and interest in vehicle charging at the workplace for either of the above mentioned groups.

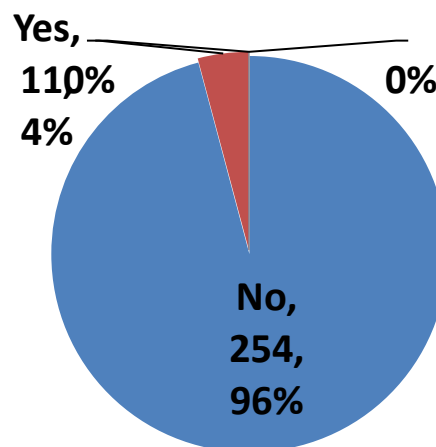
Another goal of the survey was to determine if, by investing in this infrastructure improvement, there would be an incentive for employees to purchase an E.V.

The target audience for the survey was all employees within the Main and South Interior Buildings; however the responses received indicate that employees from other locations also responded.

II. SURVEY RESULTS

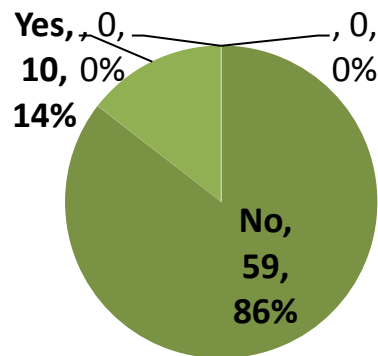
The below pie graphs represent how employees responded to each of the ten questions in the survey.

1. Do you currently own a fully electric or plug-in hybrid vehicle?

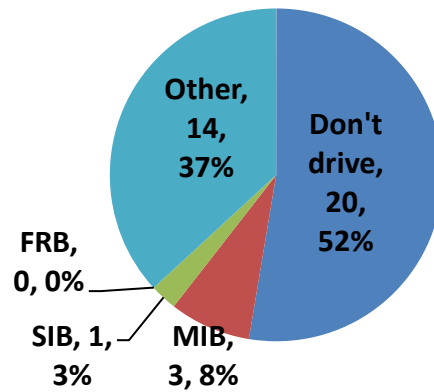


SURVEY RESULTS (Continued)

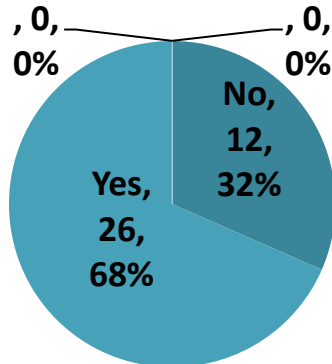
2. Do you use electric or plug-in hybrid vehicles to commute to work?



3. If you use your electric or plug-in hybrid vehicle to drive to work, where do you currently park?

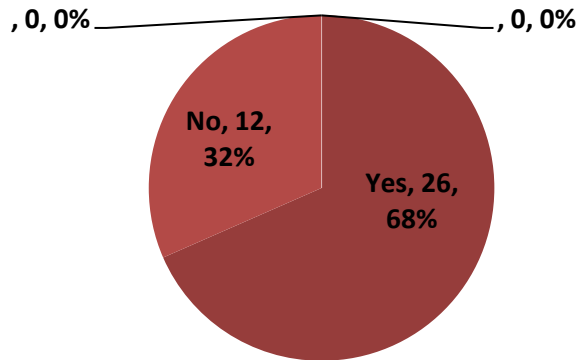


4. If you use your electric or plug-in hybrid vehicle to drive to work, would you be interested in having a charging station at work?

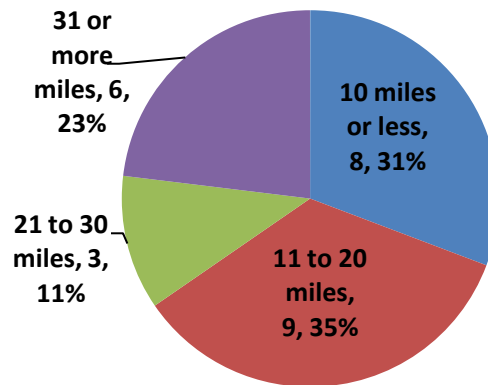


SURVEY RESULTS (Continued)

5. If made available at work, would you use a low-voltage “slow” vehicle charger that may take up to 8 hours for a full charge?



6. Approximately, how many miles is your commute from home to the office one-way?

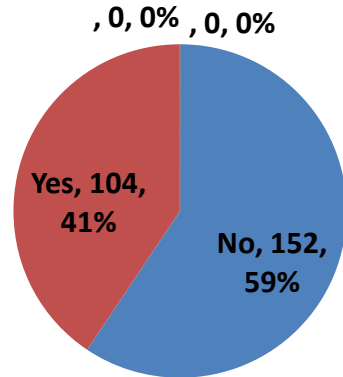


7. What is the approximate range (in miles) of your electric or plug-in hybrid vehicle?

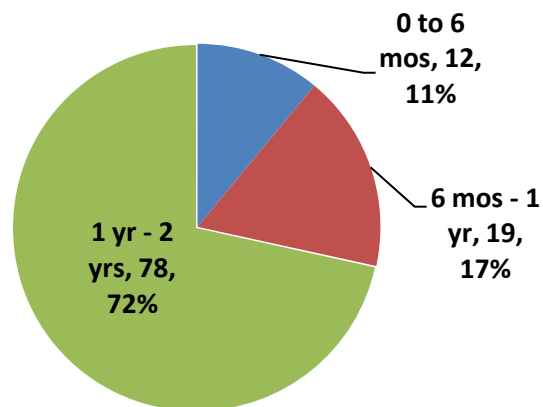
Item	Survey Responses (10 Total)
1	200 miles
2	75 miles on a 80% charge
3	10 miles
4	15 miles
5	21 miles
6	100 miles
7	90 miles in ideal conditions. Less in winter
8	80 miles
9	300 miles
10	70 miles

SURVEY RESULTS (Continued)

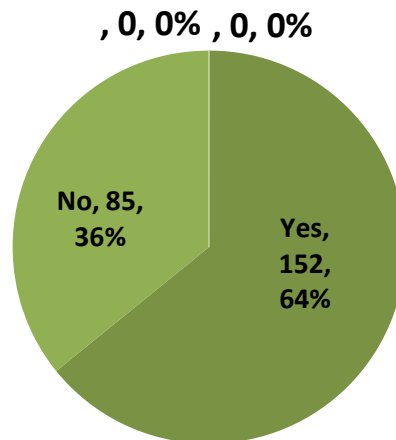
8. If you do not currently own an electric or plug-in hybrid vehicle, are you considering the purchase of an electric vehicle?



9. If yes, when would you likely purchase it?



10. If you were able to obtain a parking space and use an electric charging station at work, would you be more likely to purchase an electric vehicle and drive it to work?



III. SURVEY COMMENTS

Responses in support of EV charging station installation at MIB/SIB:

- Thank you for doing this survey! I have a regular Prius and the main reason I did not buy the plug in version was because there was no plug in station at work. If you had a plug in station, the next car I purchased would be plug in.
- I'd love this option (currently I bike or bus in to work). I'd particularly love it if I could join an electric carpool with someone else and not have to buy the vehicle.
- It would be great if DOI and other agencies in the area had a social networking site for folks to hook up with other commuters to arrange such things.
- Glad you are considering it. I live only 2 miles from the MIB, so walk/bike/bus is my best option.
- I don't own an electric or plug-in hybrid, however the NPS does and it would be helpful to be able to plug in the vehicle if traveling to MIB.
- If DOI has fleet vehicles and converted the fleet to plug in, I would greatly encourage the installation of plug in stations, but not for individuals.
- While I do not have plans to purchase an EV or PHEV, I strongly endorse the Department's plans to install charging infrastructure!
- Although I do not anticipate having an electric vehicle at MIB, I think the Department should provide charging station capability for those that do. It's the same principle as the transit subsidy I receive.
- Some of us prefer buying used autos that are in very good working condition for commuting to and from the work place. It is expected there may be an increasing number of used electric or plug-in hybrid vehicles available for purchase in the next few years. Obviously a factor in deciding whether or not to buy a used electric vehicle will very likely depend on availability of electric power plugs located near appropriate number of parking spaces of the work place parking lot.
- I currently work at the BOEM/BSEE Atrium Building in Herndon VA. I ride my bicycle to work 5x/week, about 30 minutes each way. HOWEVER, I fully applaud the DOI efforts to fully support electric or plug-in hybrid vehicle use and move the government toward a smaller carbon footprint. The more the government leads, this will give incentive to the non-government drivers and private sector, which has fleets of cars and trucks, to follow suit.

- Please get them. I cannot use mine as it does not have the range due to the need to recharge while I am at work.
- Although I'm not currently in the market for a car, this would be an important consideration for me if I was.
- Electric cars should get priority for a parking space at Interior.
- Anything to encourage more use of electric vehicles seems a good idea. As an energy savings agency, we need to support the move to electric vehicles and encourage the purchase by already having the infrastructure in place. We would not need more than 10 or so.
- I am not convinced that electric vehicles are cost effective at this point. With that said I think it is a good idea and availability of plug-ins should be encouraged.
- Thank you for pursuing this! You are doing the right thing in the name of sustainability.
- We should do this. I bought a Nissan Leaf, which is a zero emission, 100% electric car in December 2013. While I take the metro to the office typically, when I need to drive to work, I would appreciate having a charging station. Trickle charge with a dedicated 15 Amp, 120 Volt outlet works fine given that the car will be parked for hours while I'm working.
- Hope you can get this done - I would not have to use an gas to commute if a charger is available. Also a good thing to do to encourage use of electric vehicles - if there was a charger here maybe some would convert. Thanks for doing the survey.
- This is a fantastic idea!! Please make this happen. I know several people who would make use of this option or carpool with an electric car owner. This issue has been the ONE impediment stopping me from leasing or buying one. Exciting!
- I would like to also see them at other DOI sites like Reston, VAI fully support this and would use it if made available.
- Although I do not currently own an electric vehicle, I will strongly consider such a purchase in the future. Furthermore, because of its mission to preserve natural resources, DOI must be a leader in sustainability. Installing EV charging stations - even if they are not heavily used at first - would be a sign of that commitment. Please ensure that any electricity usage of the charging station is paid for by the vehicle's owner, not the department.
- The only thing holding me back from buying a solely electric vehicle and commuting to work in it is the unavailability of a charging station.
- I strongly support having a plug-in parking space at DOI. Currently drive a gas-electric hybrid vehicle. This is a powerful and efficient motor

- I use an electric scooter, for mobility issues, to commute to areas in the DC area. Presently duty stationed at NAMA HQ - an electric charging station would be most beneficial. Will the "charge" be deducted from our pay?
- USGS also needs charging stations! Who would pay for the installation of the charging stations, the maintenance of the charging stations, and actual electricity that the charging stations provide to the vehicle?
- Electric cars do nothing but make a person feel like they are saving something. I nevertheless think it is a good idea to have an electric charging station in the garage. I live in the city and take the metro. I rarely drive, but if I lived further out, I would certainly consider an electric vehicle for my next car, and a charging station (and parking space) at work would increase my desire to do so.

Responses in opposition to EV charging station installation at MIB/SIB:

- I wouldn't use an electric car if it was given to me. I currently use public transportation and do not plan on driving to work in the future.
- I do too much non-work traveling by car for an electric car to be practical for me. not right now The issue isn't so much that the vehicle cannot make it to work and back, but rather that with only 30 (best case) safe miles left on the car, there aren't many other things I can do with it. This is especially poignant if one has an additional night job.
- I do not have the finances at this time to purchase an electric vehicle regardless of the perks and interest I would have in an electric vehicle.
- Mopeds and scooters also conserve energy and reduce greenhouse gas emissions. You should consider free or drastically reduced parking fees for those vehicles.
- You may want to include the M street office location for this type of service. The first floor of the garage in our building already has these (not sure if suitable for cars) but they are for the building engineers and their electric carts, I think.
- I have a hybrid and am strongly considering a plug in for my next car. I support this technology, but is this really the best way to spend our limited resources? We should be spending more to encourage public transportation not individuals driving and adding to grid lock. Plus as a tax payer, do I want my tax dollars going to pay for the electricity used by an individual for their personal use? If you have enough money to buy a plug in car, you have enough money to buy a charging station for your home.
- In my opinion, public transportation is abundant in the DC Metro area and the use of it should be encouraged even over the use of personal electric vehicles. It also would look like a special privilege is being given to a small minority of commuters by supplying costly electricity and special spaces.

- How much would it cost to install a charging station, and how much to run it annually? For the benefit of less than a handful of people? And the Department ran out of money to finish the building renovation? How could this possibly be a cost-effective measure?
- Even if I get an electric or hybrid, I would be unlikely to drive it to work regularly (I'm a committed bicycle and bus commuter)
- I don't support this particular solution. Less cars on the road is better; this is not just a pollution issue, it's also a 'sitting in DC traffic' issue. I put a higher value on public transit and BikeShare. Also, what is the guarantee that people who respond positively to this survey today will be at Interior in the future to use the benefit? The survey needs to capture additional info about the respondent's demographic and tenure. I agree that these charging stations would be attractive to folks who are considering employment at DOI but this will change the dynamic of who parks in MIB 'permanently' (career and political) or temporarily. My temporary passes are almost always for the Federal Reserve so I need to ask: is a similar study being undertaken at FRB? Finally - I don't want to presume you mean inside the MIB garage - are you considering if DC will allow us to dedicate street parking spaces for this purpose so no special permits will be required?
- The U.S. Geological Survey headquarters in Reston should establish a relationship with the car sharing companies Zip Car and Car to Go. I would be extremely likely to use these services if there were cars available at our work site location. I cannot currently afford to buy a hybrid or smart car but often use the services provided by these companies when I'm in locations where the cars are available.
- Are the charging stations first come first server? So if there are to be 100 electric vehicles, will there be 100 charging station parking spaces? Will there also be a subsidized gasoline station for those that do not have an electric vehicle? Is this at the new building? If so, that is 1.5 miles from my house. I will probably walk. I take Metro and walk to work.
- Taxpayers really shouldn't be shelling out so government "high-grades" can have the luxury of recharging their cars at the office.....OMG. Do you know how electricity is produced?
- This initiative seems like it would encourage people to use a personally owned vehicle to commute to work instead of using public transportation. DC is trying to decrease the number of vehicles on already clogged roads and this may have the opposite effect.
- DOI should not provide free electricity to those who own an electric vehicle any more than they should provide gasoline to traditional vehicles. With our current tight budgets don't we have better things to do with our money????????? Just what we need; another subsidy for our employees. Counter to this is the parking issue at MIB and SIB? who gets priority? If a SES and GS 5 both get electric vehicles, who gets the spot? Does this bump carpool spots? Do you have to pay a monthly fee for parking?
- We do not plan to purchase an electric vehicle since there are no charging stations in our condo development, and it's unlikely there will be any in the near future.

- I live too far away from work for current electric vehicle technology.
- If charging stations are put in at my work location, I would like a couple gallons of diesel fuel per day as an offset payment. I drive a diesel vehicle that gets 55 mpg and reduces green-house gases.
- I think the installation of electric vehicle charging stations would be a waste of agency funds that would only serve to benefit a few. The costs from installation of charging stations would greatly outweigh any benefits achieved from potential greenhouse gas reductions. For me industry would need to develop an electric or electric hybrid that has a single charge range of 150 miles since my round trip commute is over 120 miles without stops.
- How will the employee pay for the electricity consumed to charge their EV from a charging station installed at the MIB, Federal Reserve, or SIB? I'm not sure if we should be tempting people off mass transit. M street garage charges a lot of money for parking and I park on the street so would those with electric vehicles be forced to pay the garage fees or would there be a subsidy or exception.
- This is a waste of money and wrong. The Department should not be encouraging cars, no matter how they are powered. We currently have the worst traffic in the country. An electric car takes space on the roads and in parking the same as other cars and trucks. Currently, we have little for bike commuters. The only free place in MIB to shower after a bike ride in has no lockers, benches, toilets, mirrors or sinks - only showers. How are supposed to ride a bike in and get cleaned up and dressed for work when you cannot shower, use the toilet and sink in the same room? To spend money on electric cars is an insult when conditions for bike commuting are deplorable is hypocritical for a supposedly "green" federal department.
- I'm in the market for a car, but not an electric. My car is the road-trip car, so there needs to be more support in the region/country for us to go that route.
- We're probably not buying a hybrid even though gas mileage is a major decision factor. Seat comfort, actually, is my #1 deal breaker. I take metro.
- My family has been driving hybrid vehicles (Prius') since 2001. We initially did this because for the HOV tags and benefit of using the HOV lanes without having to pick up additional riders. We soon became aware of the other benefits of these vehicles, such as superior fuel mileage, much cleaner exhaust, and reduced requirement of buying fuel from regimes antithetical to the U.S. interests (funding terrorism through petrodollars). Now that the VDOT has gone to HOT lanes for pay, and the requirement to have three persons in the car to ride the HOV even if the driver has invested in higher priced hybrid or electric cars, I anticipate there will be much less reason for people to make this larger upfront investment in "new" technology, and I probably would not buy an all-electric only vehicle.

IV. SUMMARY OF SURVEY RESPONSES

More than 260 responses were received from the survey which indicates that the topic of E.V charging stations, and in the larger sense, EV technologies as a whole is a topic of interest to DOI employees.

The overall consensus of responders to the survey was sharply divided between those in support of charging station installation and those opposing it.

- Those in support of this initiative cite the following as reasons for the Department considering such an endeavor.
 - The Department should initiate this as another sustainability effort.
 - The stations would be a benefit to those employees who have a short commute to work.
 - Current EV owners who live too far away would be able to charge at work.
 - This could encourage employees to purchase an electric vehicle.
- Those in opposition to this initiative cite the following as reasons for the Department to not consider such an endeavor.
 - This is another entitlement offering for employees.
 - Tax-payer costs associated with implementing this.
 - Concern of where the charging stations would be located and who would have access.
 - Who would benefit from this and would it only be available to senior level employees?
 - Better to focus on use of public transportation, or bike commuting.
 - Suitable for fleet vehicles but not for individual employees.
 - Cost of E.V's is prohibitive at this time, maybe in the future costs will be more reasonable.
- Questions raised by employees were such things as:
 - How much would it cost to install and operate the charging stations?
 - How would employees be able to pay for the electricity used?
 - Would it be available on a first come, first serve basis?
 - Would the locations of the chargers prohibit all but senior level employees use?
 - What about other parking locations (Federal Reserve, USGS-Reston, M Street)?
 - Would street locations for charging also be made available?
 - How would this impact other parking assignments (carpool, vanpool, etc)?
 - Would offering an incentive for parking with an EV tempt people off mass-transit?

V. ANALYSIS OF SURVEY RESULTS

The responses received indicate that only 4% of DOI employees currently own an E.V. and 59% are not planning to purchase an EV in the future.

The findings from the survey do not indicate a clear consensus for implementing E.V, charging stations at the Interior complex for personal use by employees. The responses

provided in support of, or against electric vehicle chargers were equally divided with 26 responses in each group.

While some responders indicated a support for the technology, there were also mixed feelings on this being something that should be provided to the employees. The consensus felt that if this was to be offered, that employee's must be required to pay for all electricity used.

There were also concerns expressed, even from those in support of EV chargers on how the Department would be able to implement such an effort.

Many of the responses came from employees outside of the MIB and SIB complex, which were not part of the survey's focus group.

VI. NEXT STEPS

The GAO addressed a request for electric vehicle charging stations by the Architect of the Capitol (AOC) for use by employees, or Members of Congress. The decision was made in Sept 2010 that "appropriated funds may not be used to install battery recharging stations for privately owned hybrid or electric vehicles on Capitol grounds, nor establish a program where employees reimburse AOC for costs related to the use of recharging stations for employees' personal vehicles"

The GAO report goes on to say that "appropriations would be available for purchasing recharging stations to recharge and operate its official fleet". The report concludes, that "it is for Congress to set the statutory direction for AOC as well as for other federal agencies, as they address these or similar issues in the future. AOC may wish to seek statutory direction from Congress on how to proceed in this regard"

Future research will be conducted by Solicitor's Office to further interpret the legal requirements of installing charging stations.