Transportation Advisory Board

of the Metropolitan Council of the Twin Cities

TO: TAB Programming Committee

FROM: Kevin Roggenbuck, TAB Coordinator

DATE: October 6, 2011

RE: Compiled list of questions asked by TAB members following the September 21 TAB meeting.

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1. Is there any research data to support MPCA's theory that public installation of charging stations is necessary to permit potential buyers of electric vehicles to overcome "range anxiety" and result in increased purchases of EVs?

2. During the 1990's, California installed electric charging stations in response to a state statute that mandated a % of vehicle sales had to be emission-free. What lessons were learned from that experience? Did that increase the number of electric vehicles that were purchased and used? How much were the stations actually used?

3. Assuming vehicle manufacturers are successful in selling lots of EVs, does MPCA intend to continue public installation of charging stations statewide? Does MPCA have a plan to increase private development of these stations?

4. Would $250K or some other amount and a scaled down project still be acceptable?

5. Could the MPCA or the City of Minneapolis to explain why their units are so much more expensive on a per unit basis than any other location?

6. Could the MPCA explain why the units are so heavily concentrated in the core cities with very little presence in the suburbs?

7. Does 104 electric auto trips at 0 emissions = 31kg reduction? Therefore, we are eliminating the equivalent of 104 car trips per day? How does this significantly affect metro emissions compliance? The graph provided leads to this simplistic conclusion. Please clarify.

8. How many kg per day do our newest, most efficient buses generate in an 18 mile trip? Looks like each car generates .30 kg or 323.10 grams per day on an 18 mile trip?

9. Can someone "disconnect" a car during the day and plug in another car, or does it lock somehow?

10. Does the location map take into account major employers that would probably also provide some plug in's?

11. Do we create a perceived issue if we don't supply enough access at each location so that it in effect becomes a deterrent?

12. Are there any plans by Excel to "participate" in this cost?

13. Are any major employers willing to participate for locations near them or on the route to them?

14. If we can get business on board to clean up the roadsides, why not ask them to sponsor a plug in for free advertising?

15. Is it safe to assume that costs will go down as the technology is more available (should we wait)?

16. Is there any potential that the technology will change format (ala Beta/VHS) and we will be using the wrong format?

17. If the cars are not here yet, why not just do an advertising campaign now saying we will support them in the future?

18. Regarding the map of planned and proposed charging stations, what kind of charging stations are they and are these all located at places where there are a lot of people like a park and ride, or are some of these free standing, out there on their own?

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TO: Transportation Advisory Board

FROM: Kevin Roggenbuck, Transportation Coordinator

DATE: October 6, 2011

RE: Pros and Cons of funding the MPCA electric vehicle recharging proposal.

Several pros and cons were identified by the technical committees in Action Transmittal 2011-60 that was sent to the TAB. Combined with comments made at the September 21 TAB meeting and with additional questions and comments submitted after the meeting, staff offers the following list of pros and cons to funding the EV recharging proposal:

EV Recharging "Pros"

- This project will be an incentive for people to buy and use electric vehicles, which produce zero emissions at the tailpipe.
- Electric vehicle manufacturers will make cars available in the markets that are most ready for them. The objective of this project is to make the Twin Cities ready for electric vehicles.
- This project does not qualify to compete for CMAQ funds the way the solicitation is set up at present. The TAB has funded other projects outside the traditional competitive solicitation process before.
- Compared to other CMAQ projects, the EV recharging project is cost effective expressed in the cost per kilogram reduced per day ($18,769/Kg/day).
- This project is not outside the realm of the government's job, in order to build a robust economy. The federal government has provided funding to certain areas of the country for electric vehicle infrastructure.
- Although future funding is uncertain, $500,000 is a relatively small amount of money. Allocating this amount to the EV recharging project will not adversely affect any other project in the TIP.

EV Recharging "Cons"

- Programming these funds in 2012 would run counter to the procedure set by the TAB in August to delay existing projects if funding is not available.
- Allocating federal funding outside of the normal process is less acceptable in times of financial uncertainty.
- Allocating CMAQ funds to this project feels like supporting a specific industry that should support itself.
- A program for charging electric vehicles is needed, but perhaps it is too early, and too costly ($500,000) at this time.
- Compared to other CMAQ projects, the EV recharging project has a relatively low reduction in air pollutants expressed in kilograms reduced per day (31Kg./day)
- It is unclear how the EV driver would pay for the electricity used during recharging or for the special parking space for the recharging unit.
- Electric vehicle do not contribute tax funding to roadway trust funds the way gasoline powered cars do.
- There are still a number of questions and uncertainties about the implementation of this project and the exact benefits it will provide.

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TO: TAB Programming Committee

FROM: Kevin Roggenbuck, TAB Coordinator

DATE: October 6, 2011

RE: Summary MPCA request for $500,000 in CMAQ funding for the purchase and installation of electric vehicle recharging infrastructure in the Twin Cities: Summary of the discussion at the September 21 meeting and list of additional questions from the Board.

On September 21, 2011, The Transportation Advisory Board discussed the request from the Minnesota Pollution Control Agency (MPCA) for $500,000 in Congestion Mitigation Air Quality (CMAQ) funding from the 2011 regional solicitation pool for the purchase and installation of electric vehicle recharging infrastructure in the Twin Cities area. The request came to the TAB after extensive review and discussion among the technical committees and from the TAB Programming Committee that provide advice and recommendations the TAB.

MPCA staff presented information about the electric vehicle recharging proposal and answered a number of questions. The TAB voted to hold over action on the request until the October 19 meeting when the MPCA could answer further questions raised by the Board. The TAB Coordinator was directed to summarize the discussion from the September 21 TAB meeting and to solicit the membership for further questions and comments, including the pros and cons of the two decision options. The discussion summary and the list of additional questions have been forwarded to the MPCA so they can prepare a response at the TAB Programming Committee meeting on October 13 and the full TAB meeting on October 19.

Summary of the discussion at the September 21 TAB meeting:

- The average cost of each charging station and the number proposed to be built does not seem match with the amount of CMAQ money requested ($500,000).
- The Mall of America has 16 stations that were not funded by the government and not being used, so other cars are taking these parking spaces. It is not the government's place to provide the charging stations, the market for EVs could provide them.
- A program for charging electric vehicles is needed, but perhaps it is too early, and too costly ($500,000) at this time.
- There are many more projects (example: Cedar Ave BRT) that this money could be used for.
- The tax credits given to electric vehicle buyers are not going into the pool of money used to improve roads. Electric vehicles do not contribute to tax money the way gasoline burning vehicles do.
- The issue of how we fund roadway improvements will have to be answered on a larger stage, in Congress and in state legislatures.
- This region could be found in non-compliance with federal air quality standards for ozone and the cost of non-compliance is much higher than the cost of staying in compliance.

- Does the presence of recharging stations outside the home really provide an incentive to EV buyers?
- The cost of installation seems high.
- The timing is important; this project does not qualify for CMAQ funds the way the CMAQ is set up at present. Electric Vehicle manufacturers will make cars available in the markets that are most ready for them.
- The objective of this project is to make the Twin Cities ready for electric vehicles.
- The most compelling case to use government money for electric vehicle charging stations is to incentivize the use of cleaner vehicles.
- The federal government has provided funding to certain areas of the country for electric vehicle infrastructure.
- This project is not outside the realm of the government's job, in order to build a robust economy.