

MIAMI BEACH

City of Miami Beach, 1700 Convention Center Drive, Miami Beach, Florida 33139, www.miamibeachfl.gov

COMMISSION MEMORANDUM

TO: Mayor Philip Levine and Members of the City Commission

FROM: Jimmy L. Morales

DATE: May 17, 2017

SUBJECT: **DISCUSSION REGARDING THE INSTALLATION OF TESLA ELECTRIC VEHICLE CHARGING STATIONS AT THE PENNSYLVANIA AVENUE PARKING GARAGE OR OTHER UNDERUTILIZED CITY GARAGES AS RECOMMENDED BY THE SUSTAINABILITY AND RESILIENCY COMMITTEE**

BACKGROUND

On April 19, 2017, the Sustainability and Resiliency Committee made a motion referring a discussion to the City Commission, with a favorable recommendation, regarding the installation of Tesla electric vehicle charging stations at the Pennsylvania Avenue parking garage or other underutilized city garages.

At the Sustainability Committee on April 25, 2017, a Tesla representative provided information on the benefits of Tesla's SuperChargers electric vehicle charging stations. The Tesla representative briefly mentioned that the company has worked with other cities to install SuperChargers at their cost. However, during that presentation, he did not delve into details of the agreements Tesla currently has with other municipalities. The Sustainability Committee passed a motion supporting the City's efforts to begin discussions with Tesla for the installation of electric vehicle charging stations in City garages.

Additionally, for background, on January 13, 2016, the City Commission adopted an ordinance standardizing the design of EV parking spaces and requiring new commercial and multi-family residential developments to have a minimum amount of parking spaces dedicated to EVs. The number of dedicated EV parking spaces required is a minimum of 2% of the required off-street parking spaces, with a minimum of one parking space. While these spaces are not required to have EV stations, they must be constructed with the electrical infrastructure needed for future EV station installation.

In addition to these private property requirements, the City currently has two EV stations available at the 13th Street parking garage, as well as a non-exclusive agreement with Blink Network, LLC to expand the EV stations network across the City's parking facilities. As part of this agreement, Blink is responsible for supplying, installing, operating, maintaining, and managing self-service AC Level 2 and potentially DC Fast Charge (DCFC) EV charging stations, including any additional ancillary property and improvements necessary for the installation and safe operation of the EV stations. For the initial five-year term of the agreement,

the City will be reimbursed for electricity used to power these stations and will receive 15% of net revenues (minus credit card fees and Federal, State, or City sales tax). Blink EV charging fees in Florida vary from \$0.39/kWh to \$0.49/kWh, depending whether the user is a Blink member or a guest user.

Depending on the EV's charge rate and the state of its battery, an AC Level 2 charger can deliver between 10 to 25 miles per hour of charging. DCFC stations offer faster charging times. However, DCFC are not typically compatible with all electric cars, while AC Level 2 can charge any electrical vehicle model.

ANALYSIS

The availability of strategically placed charging stations throughout the City promotes electric vehicles by making their use more convenient. Benefits to the City from increased electric vehicle (EV) use include improved air quality, quieter and more livable streets, and decreased dependency on fossil fuels. However, one of the inherent challenges for this technology to gain mainstream acceptance is analogous to the "chicken or the egg" conundrum. If EV charging stations are not readily available, the driving public is hesitant to invest in an EV due to "range anxiety" resulting in trips that are in close proximity to only known EV charging stations points. The expansion of EV charging stations is necessary in order to establish a network of stations that will allow this technology to flourish.

In order to reduce "range anxiety" for Tesla users by enabling distance travel, including road trips between cities, Tesla developed the SuperChargers (Picture 1). SuperChargers are EV stations with connectors that charge a Tesla vehicle in minutes as compared to the hours it takes to charge a Tesla using a traditional AC Level 2 station. Tesla works with cities and businesses to strategically place SuperChargers stations at locations that minimize stops during long distance travel and are near restaurants, shopping centers, and Wi-Fi hot spots. Tesla provides unlimited fuel for trips without any recurring costs for Tesla users. It should be noted that non-Tesla EVs cannot be fueled using SuperChargers.



Picture 1: Tesla SuperChargers

In addition, Tesla works within communities to address other fast charging issues common to EV owners, including:

- Apartment dwellers without their own charger;

- Travelers who circulate within their destination city, but do not want to leave town just to charge; and,
- City residents with unexpected needs for an immediate refill.

Addressing these demands can further dissolve the differences in convenience between gas and electric.

City staff has initiated discussions with Tesla and proposed a turnkey SuperChargers station pilot program at the Pennsylvania Avenue garage (1623 Pennsylvania Avenue), where Tesla would be responsible for all the equipment, permitting, installation, operation, maintenance and other costs related to the installation of the station. In turn, the City will provide the minimum required 10 parking spaces, as requested by Tesla, on the top (or second from the top) floor for one station with several connectors. The City is still discussing and refining this proposal with Tesla representatives.

CONCLUSION

The following is presented to the members of the Mayor and City Commission for discussion and further direction. In regards to a potential pilot program with Tesla, Blink Network has a non-exclusive agreement with a provision to revenue share with the City. If the direction is to proceed with a pilot program with Tesla, the Administration is seeking discussion and direction with regard to the pilot program agreement and potential financial return to the City. The Administration recommends continuing negotiations with Tesla and, if a positive agreement is reached, placing the item on the next available Commission meeting agenda.

SMT/MKW/FCT