

**MEMORANDUM - CITY OF PASADENA
DEPARTMENT of TRANSPORTATION**

Date: November 29, 2012
To: South Lake Parking Place Commission
From: Mike Bagheri
Re: Item VII (A) - Electric Vehicle Charging Stations

RECOMMENDATION:

Install four Electric Vehicle (EV) Charging stations at Shoppers Lane Surface Lots

BACKGROUND:

EV Charging Stations MTA Grant:

In April 2009, the Department of Transportation applied for and was awarded a 2009 Metro Call for Projects grant in the amount of \$717,275 to update the current EV infrastructure of 23 chargers to current standards and to expand the system to a total of 43 chargers. The shopper lane surface lots were identified as potential EV charging station sites.

Proposed EV Charging Stations Deployment Plan:

DOT has identified charging technologies to be deployed and has developed a deployment plan that addresses the estimated demand for EV charging in Pasadena. The deployment plan includes installation and upgrade of charging stations at public garages/surface lots and private properties and is being implemented in the following phases:

Phase I –Existing EV charging stations at city-owned facilities will be upgraded and new chargers will be installed at facilities without chargers.

Phase II –Grant funds will be used to incentivize partnerships with local businesses and property owners to upgrade or install new charging stations at private facilities.

EV Charging Cost Recovery Models:

Staff undertook an evaluation of available cost recovery models for EV charging stations (Attachment A) and recommends use of the credit card charging model for shoppers lane surface lots.

MTA Grant will pay the estimated cost of \$30,000 to install the EV chargers and the required infrastructure. However, the district would be responsible for ongoing maintenance cost of approximately \$250/charger/year and power costs. For a hypothetical scenario of 16-hr continuous charging, the estimated power cost (\$0.13/KWHR) for each charger is about \$200 to \$400 per month at 3.3 to 6.6 KWHR charging rate, respectively.

Attachment A – Cost Recovery Model Evaluation

MB:mb

c: Fred Dock, Director

Attachment A – Cost Recovery Model Evaluation

A summary of the findings of the evaluation of the cost recovery models follows:

1. Networked Managed Service

- A system wherein a third party turnkeys the charging station access – users would need to belong to the network to use the charging facility.

Pros	<ul style="list-style-type: none"> • Turn-key operations • Captures usage data
Cons	<ul style="list-style-type: none"> • Proprietary, third party billing systems • Requires sign-up with the provider • Registration is required for each provider • Most expensive solution for users

2. Pay-by-phone

- The user would call in to the charging system provider and receive an access code

Pros	<ul style="list-style-type: none"> • Lower cost alternative to proprietary, third party billing systems • Costs less than managed network solutions
Cons	<ul style="list-style-type: none"> • Requires creating an account with Pay By Phone parking providers such as ParkMobile • No data collection¹

3. Cred Card Charging

- A card reader is provided at the charging station and the user would select from a menu of time and power options.

Pros	<ul style="list-style-type: none"> • Simple • No sign-up required • Costs less than pay-by-phone and managed network solutions
Cons	<ul style="list-style-type: none"> • No data collection¹ • Third party billing system

4. Complimentary Charging

- No charge would be made for the electric power (the City's parking funds would subsidize the charging activity).

Pros	<ul style="list-style-type: none"> • Simple • No sign-up required • No Cost to the user • Portrays Pasadena as an eco-friendly city
Cons	<ul style="list-style-type: none"> • No data collection¹ • No power cost recovery • Equity issues – free power for some, but not all