


Background

- On August 6, 2018 City Council Member Brenden brought forth an Agenda Item to direct the City Manager to issue a Request for Proposal to expand the City's electric vehicle charging infrastructure in public places.
- The amended action taken by the City Council was to return to City Council with recommendations on information to include within a Request for Proposal document (type, scope, size, locations, etc.) for the expansion of the City's electric vehicle charging infrastructure in public places, adding additional charging stations for public use at City facilities.

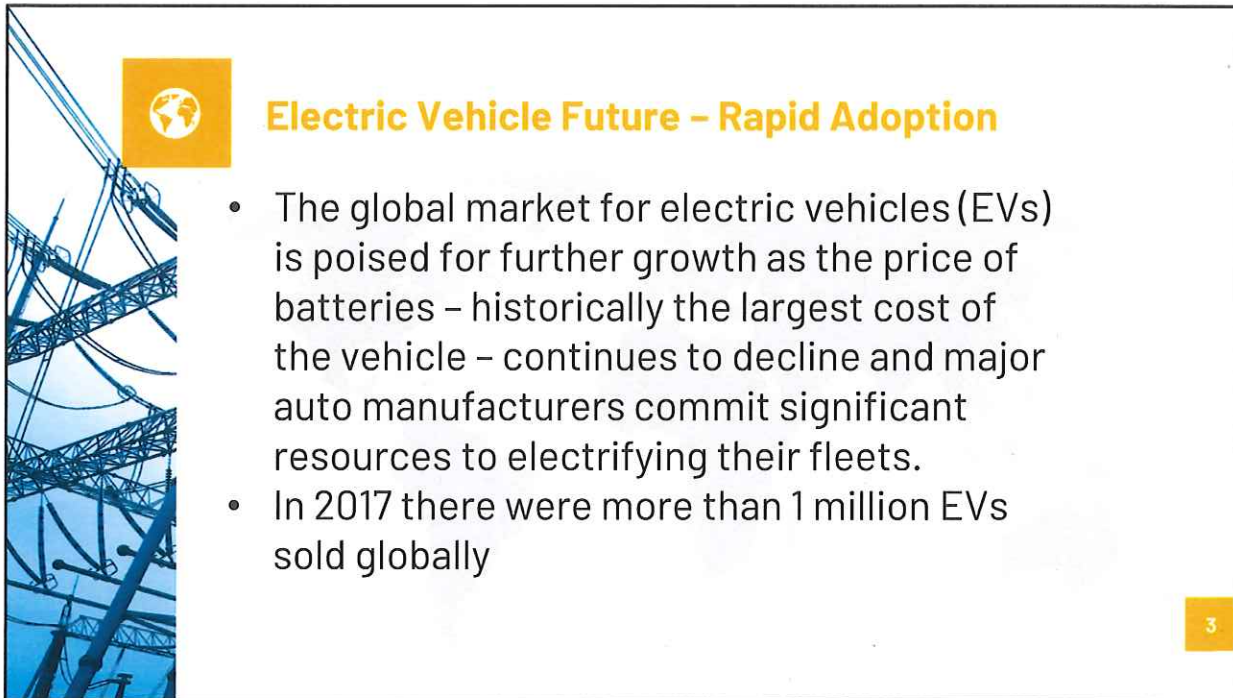



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SUPPLEMENTAL COMMUNICATION

Meeting Date: 9.17.18

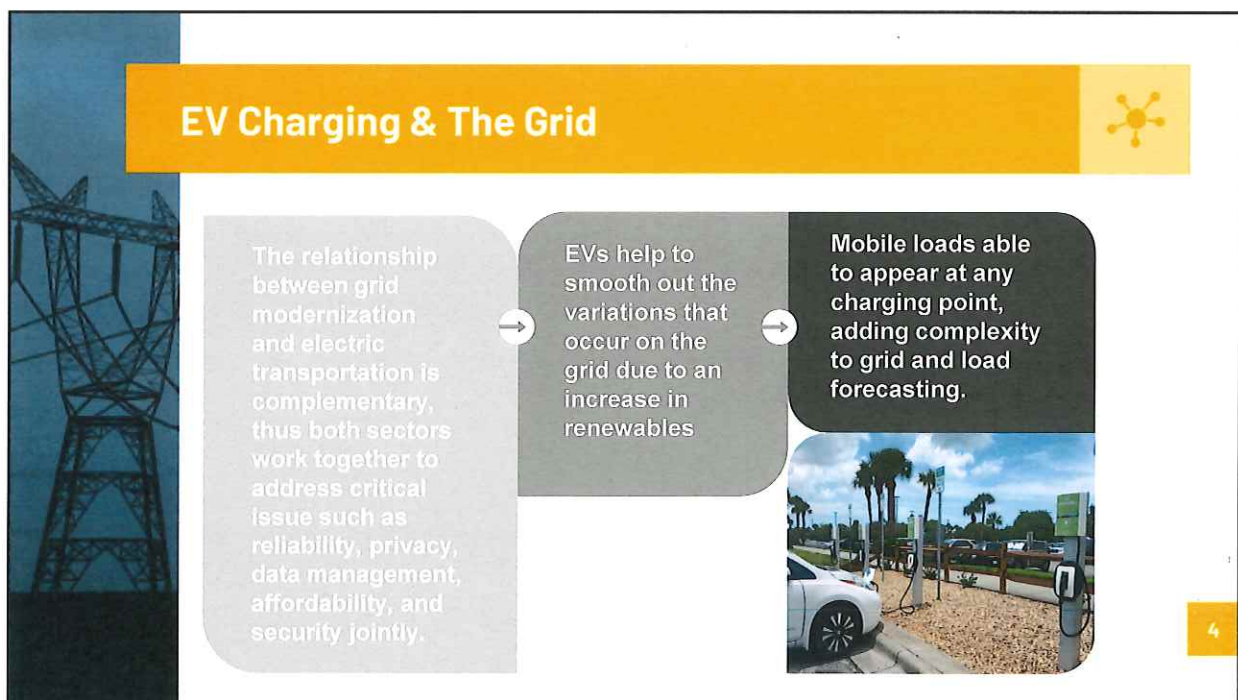
Agenda Item No.: SS#2 (18-255)




 **Electric Vehicle Future – Rapid Adoption**

- The global market for electric vehicles (EVs) is poised for further growth as the price of batteries – historically the largest cost of the vehicle – continues to decline and major auto manufacturers commit significant resources to electrifying their fleets.
- In 2017 there were more than 1 million EVs sold globally

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EV Charging & The Grid 


The relationship between grid modernization and electric transportation is complementary, thus both sectors work together to address critical issue such as reliability, privacy, data management, affordability, and security jointly.

→

EVs help to smooth out the variations that occur on the grid due to an increase in renewables

→

Mobile loads able to appear at any charging point, adding complexity to grid and load forecasting.



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How do EV Charging Stations Work?



- EV charging stations are an integral part of owning an EV .
- All-electric cars don't have a gas tank – rather than filling your car up with gallons of gas, you simply plug your car into its charging station to fuel up.
- The average EV driver does 80 percent of their car charging at home.

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Types of EV Charging Stations



- **Level 1** – use a 120 V AC plug and can be plugged into a standard outlet. Deliver two to five miles of range per hour of charging and are most often used at home.
- **Level 2** – Used for both residential and commercial, uses a 240 V or 208 V plug and unlike level 1 they can't be plugged into a standard wall outlet. Offer 10-60 miles of range per hour of charging, they can fully charge an electric car in as little as two hours.
- **Fast/DC Charging** – Can offer 60 to 100 miles of range in just 20 minutes of charging. However they are typically only used in commercial and industrial applications.

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History of EV Charging Stations in City



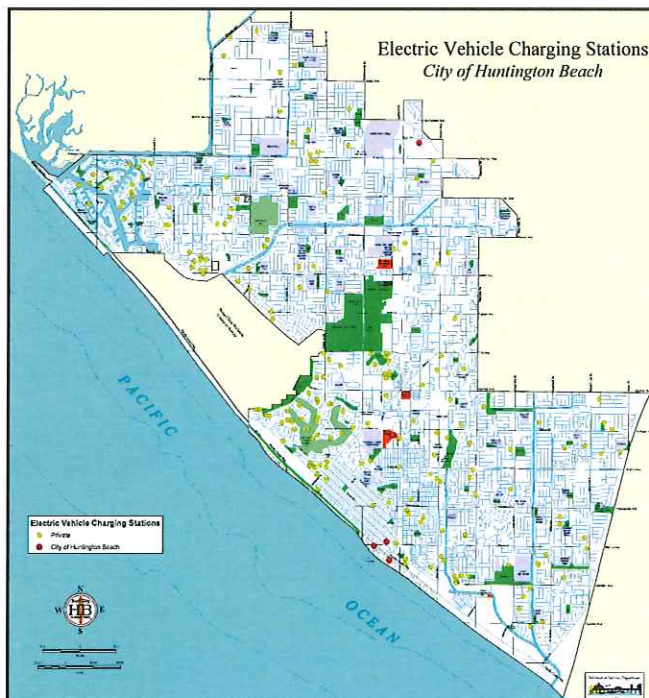
In September of 2012, the City Council approved a Master Services Agreement with ChargePoint to establish an Electric Vehicle (EV) charging program at various locations throughout the City.

Twelve ports and installation were provided free of charge through grant funding.

Free charging was provided to users from 2012 – 2014.

On February 3, 2014 City Council authorized a renewal with Charge Point and Adopted Resolution No. 2014-05 establishing a EV charging rate of \$0.22 per kWh for use of the EV charging stations.

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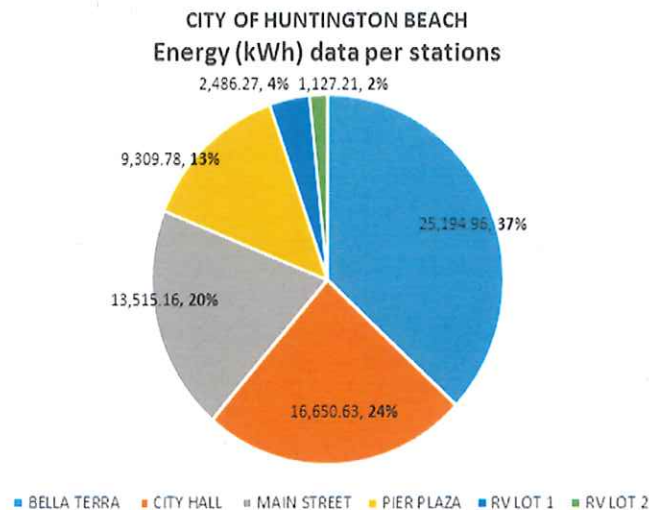


HB EV Charging Stations

- Bella Terra Parking Structure (2)
- Main Street Promenade Parking Structure (2)
- Pier Plaza Parking Lot (2)
- Sunset Vista RV Parking (4)
- Civic Center Visitor Parking (2)

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Utilization of Charging Stations – City Owned




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Private Charging Infrastructure Within the City

- Located on private property (e.g. shopping centers, industrial parks, etc.)
- Property Owners and the 3rd Party Vendors go through the City's permit and licensing process
- Existing Vendors in the City:
 - NRG
 - Charge Point
 - EVGo
 - Volta
 - Tesla Power Wall - 12 proposed Tesla Charging Stations at Bella Terra - In negotiations with property owner

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Charging Station Expenditures & Revenue




- The City maintains the existing charging stations
- Annual maintenance expenditures \$15,620 (includes electricity to power the charging stations)
- The City raised the charging fees from \$0.22 per kWh to \$0.29 per kWh
- Annual Revenue (FY 17/18) \$15,571

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Charging Station Models – Pay to Use



- Most common model
- Users are charged per kWh – often with a limit on how long they can charge.

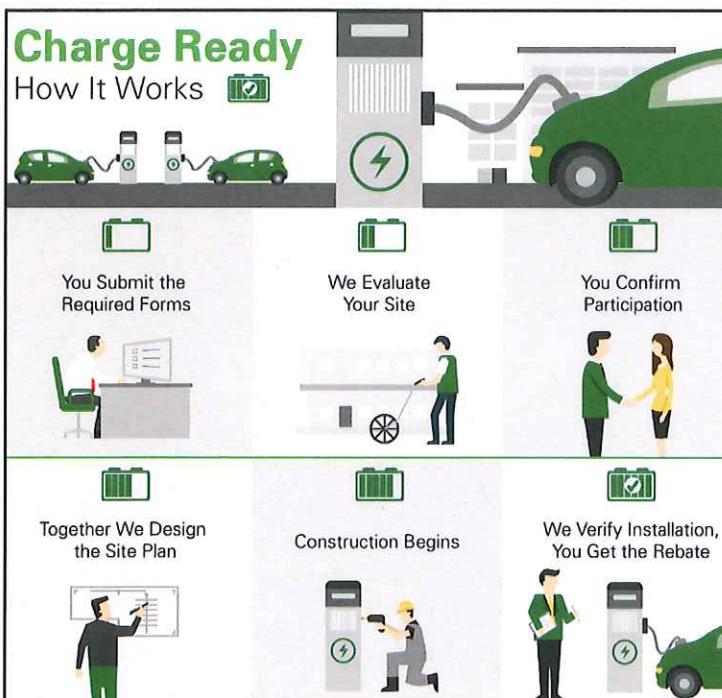
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Charging Station Models – Sponsor Model (Free Charging)

- Free Charging
- Vendors make money through sponsorship and advertising
- Must be located at high traffic locations

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SCE Charge Ready Program

In 2016, SCE launched Charge Ready, a 2 year pilot program designed to decrease GHG in the State by increasing the availability of EV charging infrastructure to communities and businesses within its service area.

City applied and was approved for 5 ports at the Central Library

City would be responsible for maintenance of the stations

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Assembly Bill No. 1236 (Chiu)

- Signed by the Governor in 2015
- The bill requires the City to approve an application for the installation of EV charging stations through an expedited process.
- Cities must adopt ordinances to streamline the permitting process.

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Potential City Sites for Expansion



- Murdy Community Center
- Edison Community Center
- 1st and Orange Parking lot
- 1st and Atlanta Parking Lot – 2 spots
- Central Library – 2 spots
- Civic Center – Additional 2 spots

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Challenges & Opportunities

Opportunities

- Infrastructure available to residents and visitors who drive electric vehicles – prevents “range anxiety”
- Revenue opportunities from adding additional charging stations through a competitive selection process
- Assists with Statewide goals – grid modernization, energy usage data management, and environmental goals
- Smart City Integration

Challenges

- The perception of giving up prime parking spots to charging stations
- Installation and maintenance costs

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Next Steps

- Staff will prepare a Request for Proposal to explore the feasibility of expanding charging station locations throughout the City.
- The RFP respondents will be evaluated on the cost/benefit to the city (cost vs. expense)

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Questions?

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