



Staff Analysis

Electrification of Fleet

170322

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January 25, 2018

CITY OF GAINESVILLE STAFF ANALYSIS

Legistar No: 170322
Title: Electrification of Fleet
Sponsor:
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Summary of Issue

City of Gainesville-Fleet Management is moving towards an electrification of fleet with the purchase of six (6) motor pool vehicles that will be stationed at City Hall and Thomas Center.

History/Background Information

During the preparation of FY 18-19 Fleet vehicle replacement in February 2017; Fleet Management decided to start replacing our In-Town Motor Pool vehicles with pure electric vehicles. We have (6) units that are due for replacement in 18 and (5) in 19. Fleet Management was asked in August 2017 to discuss Electrification of Fleet by Commissioner Hayes-Santos during a GPC meeting.

Options

A. Electrification of Fleet

Pros

- Quick and quiet improved ride quality compared to similar internal combustion engine vehicle.
- Higher resale value.
- Lower cost to operate
- Less maintenance and repairs.
- More original manufactures committing to produce more models and increase production in coming years.
- Battery technology getting better and less expensive.
- No tailpipe emissions.

Cons

- Limited range.
- Long charging time compared to refueling combustion engine vehicle.
- Higher cost per vehicle and need to purchase charging stations.
- Lack of choice of vehicles currently available.
- Battery pack deterioration currently is around 5 years depending on usage and very expensive to replace.
- Lack of available charging stations.
- Lack of using vehicle on trips longer than their range if traveling where charging stations are not available.
- Disposal of battery once vehicle is salvaged or if battery replacement is needed.
- The financial impact of adding a charging station to the Fleet Facility.

Staff Recommended Option

Implementation of Electrifying City's Fleet

Start in fiscal year (FY18) by replacing six (6) in-town motor pool vehicles with pure electric Nissan Leafs; two (2) at City Hall and four (4) at Thomas Center. For fiscal year 2019 replace five (5) pool vehicles, three (3) at City Hall and two (2) at Thomas Center. These replacements are part of Fleet Management's budget for FY 18-19 and will have the In-town motor pool vehicles completed by fiscal year 2019.

For fiscal year 2019 evaluate other City vehicles that could be replaced with pure electric vehicles for those scheduled to be replaced. In following fiscal years, continue to evaluate as more manufacturers of vehicles have a larger selection of vehicles and types of pure electric vehicles, such as trucks, vans and SUV's. Fleet will have the availability to start replacing these types of pure electric vehicles when the application would work best for pure electric.

References

U.S. Department of Energy Clean Cities Plug-In Electric Vehicle Handbook (Fleet Managers)

U.S. Department of Energy Clean Cities Plug-In Electric Vehicle Handbook (Public Charging Station Hosts)

U.S. Department of Energy & U.S. Department of Transportation---Guide to Federal Funding, Financing, and Technical assistance for Plug-in Electric Vehicles and Charging Stations

Fleets for the Future (U.S. Department of Energy Clean Cities Program –Electric Vehicle Procurement Best Practices Guide

Miami Dade County plan to install Electric Vehicle Charging Stations to Serve the General Public May 30, 2017

Charge Point Charging Stations

Volkswagen Settlement Miami Dade County plan to install Electric Vehicle Charging Stations to Serve the General Public May 30, 2017

- **Electric Vehicle Charging Roundtable held 10/17/2017**

<http://www.psc.state.fl.us/ElectricNaturalGas/ElectricVehicles2017>

- **Department of Energy’s Alternative Fuels Data Center**

<http://1.usa.gov/29avJe>

- **Electric Vehicle Infrastructure Training Program**

www.eere.energy.gov/cleancities/evitp.html