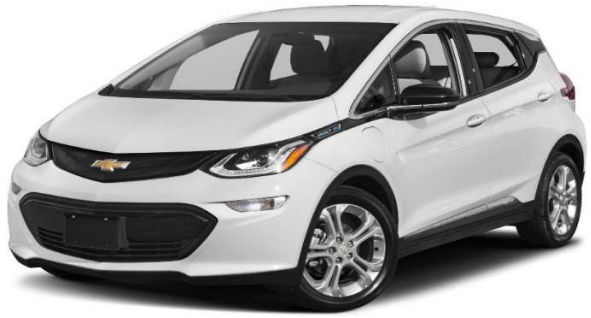
City of Auburn

Greenfleet

Electric Vehicle Update

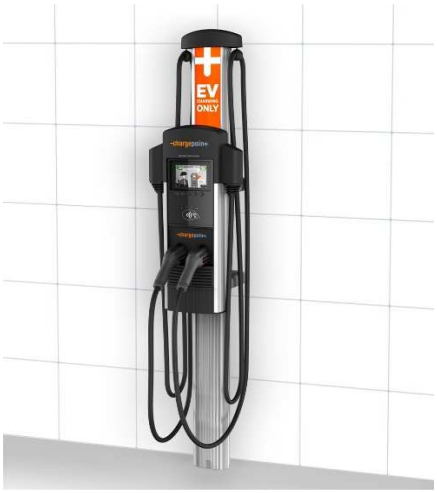
- In May of last year we discussed the purchase of four Electric Vehicles to replace our aging Prius/Hybrid vehicles, to be used as pool vehicles. Today I would like to update you on the progress.

The vehicle that was selected is the Chevrolet Bolt



- The Bolt has a range of 238mi on a single charge and includes a range estimator located in the center touch screen to give an accurate amount of miles left to drive before needing a re-charge
- Holds 5 total occupants
- Very roomy and accommodating interior and is well equipped with all the comforts we are accustom too like power windows and locks, backup camera, and Bluetooth operation
- A full charge is about 9.5 hours, however a fast charge can occur in about 1 hour
- Current delivery date is towards the end of April

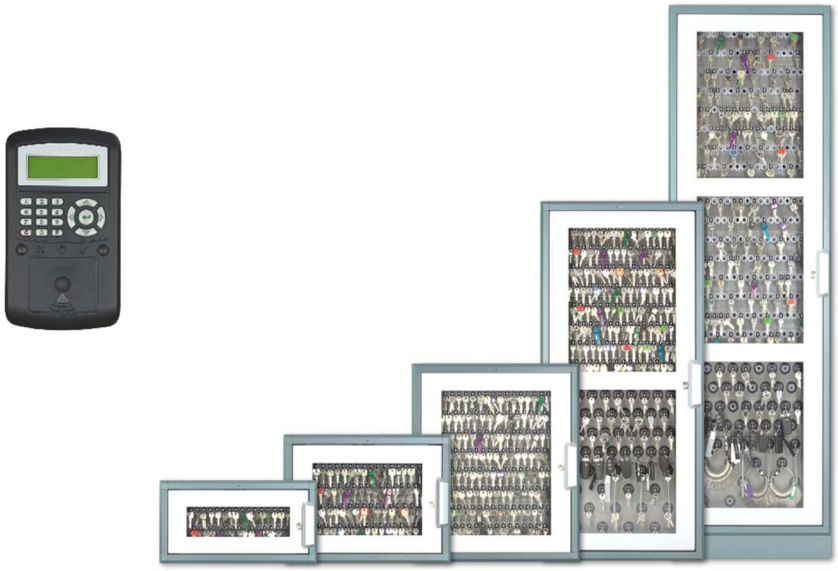
The Charging station that was selected is the ChargePoint CT4000 Dual Charger



- Each Charge station can provide charging capabilities for two vehicles
- Each Charger is a level 2 240V charger
- After parking the vehicle simply grab the charge cord and plug in the vehicle by opening the charger access door which is like a fuel door on the side of the vehicle. To unplug the charging cable simply remove from charging port on the side of the vehicle and hang at the charging tower similar to a fuel pump.

- Chargers can only be used by the approved city vehicles, and the charging cord is not powered until securely attached to the vehicle to prevent risk of shock

The Key Management System that was selected is a product by Key Tracer



- The Key Tracer KTA-1 module can accommodate up to 16 keys
- Reservations for a vehicle can be done online or through an App
- Vehicle keys can be released using the City ID Badge
- Unit will be located on the far East side of City Hall just inside the stair way access door
- There is a host of parameters that can be set to prevent overlap of reservations, to many trips in one day on a vehicle, the number of vehicles that can be booked by a user, and accommodate for a late return

Timeline

- Everything is ordered
- The complete system should be operational by the second week of May
- To include a ribbon cutting for Mayor and Council

Additional Green Initiatives

- Transition from a traditional Petroleum Diesel Fuel to a R99 (Renewable Diesel Fuel)
    - R99 is a derivative of the manufacturing process of ultra-low sulfur diesel or ULSD (Ultra Low Sulfur Diesel), and is chemically similar to ULSD but is renewable and sustainable using animal fats and plant oils to manufacture.
    - R99 is now available in the Pacific Northwest Region
- There will be changes to EPA mandates in the near future, these mandates will require fleets to abide by specific greenhouse gas regulations that require agencies to lower its overall carbon footprint, R99 is called a drop in fuel in that it takes no infrastructure changes to use it, and can lower your Carbon Footprint by as much as 66% allowing the city to work towards being compliant with current mandates and future mandates.

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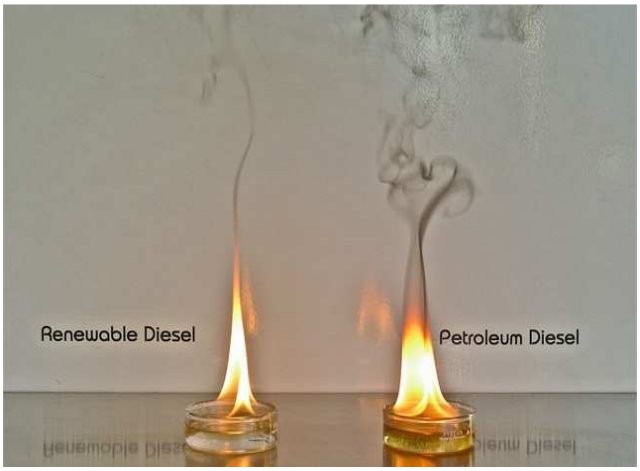

Pros

- Eliminating Tank Microbes = less tank cleaning
    - By running R99 it removes the components found in traditional ULSD that allow tiny Microbes to live in the diesel fuel. These microbes create by product that wreaks havoc on our in ground fuel system and the fuel systems of the fleet vehicles and equipment.
- Lowering Carbon Foot
- Easier on engines, and reduces need to run Regenerative Process
    - DPF (Diesel Particulate Filters) go through a regeneration process which removes soot and lowers the filter pressure. This fuel and exhaust gas mixture passes thru the Diesel Oxidation Catalyst (DOC) creating temperatures high enough to burn off the accumulated soot. Due to the City's working environment every time a vehicle needs to run through this process is has to be pulled from service and brought to the shop.

Cons

- Increase in cost per gallon
    - Although the costs are more per gallon overall it equates to a cost savings for the City
    - Currently the City pays for an annual Diesel tank cleaning, this is primarily due to the Microbes that can currently live in the ULSD that we purchase, and the bi-product they create. The annual cleaning is between $8000 to $12000.
    - Currently a vehicle that cannot go through the regenerative process while in service needs to be pulled from service or it will go into a power d-rate mode. This causes downtime for both operators and equipment with additional labor by the mechanics, the Street Sweepers are the most prone to this process. Many agencies locally running R99 are reporting that there vehicles no longer need to run the Regenerative Process due to how clean the fuel burns.