

MEMORANDUM

Date: July 24, 2024
To: Amanda Grogan, Budget & Performance Management Director
CC: John Mullis, Public Works Director
From: Don Reeves, Sustainability Coordinator; Matt Wetherell,
Facility & Grounds Manager; Bill Spare, Fleet Services Manager
RE: EV Charger Replacement Recommendation



The purpose of this memo is to provide Town Management with a recommendation for Electric Vehicle (EV) Charging Station models to be used for future installations at designated sites and for the replacement of current EV charging stations in need of repair. After analysis from Facilities, Fleet, and Sustainability staff, the current recommendation is to contract with Blink Charging. Blink offers a cloud network software system and a range of charging hardware that would suit the Town's current needs, as well as offering a hardware maintenance service agreement.

Background

Town Council's first objective in its strategic goal of Environmental Leadership is to "adopt clean energy and efficiency measures." Under this direction, several EV Charging Stations were installed at various Town properties to encourage EV use and reduce vehicle emissions. Smart technology has developed since those initial installations, and with older units needing replacement and new sites adding charging stations, it was concluded that a standard should be adopted for hardware units and software to track the usage of the charging units.

Discussion

Personnel from Facilities, Fleet, and Sustainability have been researching suitable options, and have met with the Senior Capital Projects Manager to discuss EV stations currently in use or set to be installed at various town locations. The main objective was to determine what options would provide the Town with the most stable and sustainable solution going forward. Facilities, Fleet, and Sustainability staff also worked with members of Finance and procurement to find vendor options that would allow for future expansions with potential grant funding.

The units that staff seek to replace immediately are the current EV stations at Apex Town Hall. These chargers are GE brand, have reached end of life and require repairs using parts that are no longer manufactured. These stations do not possess the necessary capability or features to capture data that can be processed to determine usage and functionality of the systems and are incapable of processing payments. The Saunders lot chargers were removed from the scope due to the scheduled start of Saunders parking project which will change the area and existing infrastructure. Staff is communicating regarding the installation of infrastructure for charging stations in conjunction with the project management team.

The new Mason Street Municipal Building has been designed to provide 13 charging spots in its parking area and is currently set to implement one ChargePoint Level 2 Charging Station. This unit was selected by the Senior Capital Projects Manager due to its cost of equipment, parts, and installation fees. However, ChargePoint utilizes proprietary software that, while marketed as Open Charge Point Protocol (OCPP) compliant, is in reality protected and restrictive. OCPP is an open standard communication protocol for EV charging stations and is an application protocol for communication between a charging station and the charging station management system. Any EV charging station that is OCPP-compliant can be configured to run any similarly OCPP-compliant software. ChargePoint systems exclusively run their own proprietary software and are restrictive with providing access to data produced by external stakeholders (in this scenario, the Town of Apex). Discussions with neighboring municipalities indicated that the company demonstrated inadequate customer service response time and that other, more beneficial solutions were available for infrastructure.

After several months of vetting and researching potential charging infrastructure options, Blink Charging was selected as the vendor to contract with going forward. This recommendation is based on Blink's OCPP cloud-based network, its range of available charging pedestals, its reliability in the EV charging industry, and their availability as a Sourcewell Awarded Contract. Blink's cloud-based platform provides a robust data capturing system and internal and external accessibility features. Factors for software that were considered when selecting Blink Charging were:

- **OCPP Compliance:** Capable of running on different hardware types and presenting data through an online dashboard.
- **Payment Control:** Capable of turning on and off payment requirements, setting rates based on peak hours, and exempting Town fleet from payment.
- **Dashboard Accessibility:** Capable of providing an intuitive, accessible, and manageable online dashboard for viewing, accessing, and exporting Electric Vehicle Supply Equipment (EVSE) data.
- **Communication:** Capable of recognizing and communicating hardware issues, such as damaged cords, loss of power, and communications connectivity problems.
- **Maintenance:** Capable of providing maintenance agreements/contracts for software.

Other factors for selecting Blink Charging include its diverse hardware selection and warranty plans. The company provides maintenance schedules for both software and hardware, and can also utilize other software platforms if necessary. Blink units met the following specifications that staff had prioritized when searching for a suitable hardware model:

- **Safety and Standards:** Units should have industry-standard J1772 Level-2 plugs for EV compatibility, 240/208-Volt, 40-Amp capability for energy-efficient charging, and an optional retractable cord management system to keep cords organized and reduce tripping hazards.
- **Security and Connectivity:** Units should have strict lockout and tagout capability to ensure system security, utilize wireless connectivity options such as cellular service, and have seamless payment transaction processing that provides payment options by mobile app or credit card.
- **Maintenance and Warranties:** Units should have a full warranty, maintenance plan, and quick component replacements to minimize system downtime effectively.
- **Certifications:** Units should comply with Buy America Act regulations and have Underwriters Laboratories (UL) Listing for safety and compliance with industry standards.

Blink Charging offers a maintenance service agreement for 5-years that will help ensure that the Town can maintain EV charging equipment and maximize uptime for Town fleet charging. The quoted price for one Blink Series 7, Level 2 Dual Port charger with the software subscription, data plan, and five-year warranty maintenance plan is \$8,175 with installation cost of \$6,500 (total cost of \$14,675 per dual-port charger). Therefore, the cost to replace the two dual port chargers at Town Hall totals \$29,350. For Fiscal Year 2025, Facilities has been allocated \$70,000 for EV Charging Stations so there is sufficient funding to move forward with the replacement of the two EV chargers at Town Hall. Staff will continue to evaluate additional replacement options with the remaining funding. Blink Charging is a Sourcewell Awarded Contract, which fulfills procurement requirements.

Summary

After comparing various models in the constantly evolving EV charging market, staff determined that Blink Charging offers a complete package of service that includes the installation of external hardware (Blink Series 7, Level 2 Charging units) and software, dedicated maintenance of stations, and detailed data collection.