



City of Richmond

Report to Committee

To: Public Works and Transportation Committee **Date:** October 9, 2019
From: Suzanne Bycraft
 Manager – Fleet & Environmental Programs **File:** 02-0780-01/CL Vol. 02
Re: **Award of Contract 6503P - EV Charging Infrastructure and Management Provider**

Staff Recommendation

That Contract 6503P – Electric Vehicle Charging Infrastructure and Management Provider be awarded to Forseeon Technology for a five-year term for an estimated total value of \$1,506,322, and the Chief Administrative Officer and Acting General Manager, Engineering & Public Works be authorized to negotiate and execute a service contract with Forseeon Technology incorporating the key terms outlined in the staff report dated October 9, 2019.

Suzanne Bycraft
 Manager, Fleet & Environmental Programs
 (604-233-3338)

| REPORT CONCURRENCE | | |
|--|-------------------------------------|--|
| ROUTED TO: | CONCURRENCE | CONCURRENCE OF GENERAL MA NAGER |
| Purchasing | <input checked="" type="checkbox"/> | |
| Law | <input checked="" type="checkbox"/> | |
| Sustainability | <input checked="" type="checkbox"/> | |
| REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE | INITIALS: | APPROVED BY CAO |

Staff Report

Origin

The City has installed eighteen level two electric vehicle charging stations for designated public and corporate vehicle fleet use. These stations provide a total of thirty two charging points. A detailed list of current City-provided charging station locations is provided in Attachment 1.

The City also continues to add charging infrastructure capacity to promote expanded community adoption as well as replace its corporate fleet with electric vehicles where feasible to align with mandated vehicle emission reduction targets under the Community Energy and Emissions and Green Fleet Action plans. A list of approved and future planned stations for installation is detailed in Attachment 2.

To maintain and replace existing stations at the end of their useful life and to install approved and future planned installations as the electric vehicle market transition expands, Contract 6503P – Electric Vehicle Charging Infrastructure and Management Provider was issued to the marketplace. This report presents a summary of the bids received and recommends award of the contract to Foreseeson Technology.

This report supports Council's Strategic Plan 2018-2022 Strategy #2 A Sustainable and Environmentally Conscious City:

Environmentally conscious decision-making that demonstrates leadership in implementing innovative, sustainable practices and supports the City's unique biodiversity and island ecology.

2.2 Policies and practices support Richmond's sustainability goals.

This report supports Council's Strategic Plan 2018-2022 Strategy #6 Strategic and Well-Planned Growth:

Leadership in effective and sustainable growth that supports Richmond's physical and social needs.

6.2 "Green" and circular economic growth and practices are emphasized.

Analysis

Contract 6503P – Electric Vehicle Charging Infrastructure and Management Provider was issued to the marketplace on May 2, 2019 and closed on May 30, 2019. The scope of this contract includes:

- *Hardware Costs:* includes physical components such as the provision of stations and cable management;
- *Installation Costs:* includes installation and activation;
- *Operating Costs:* includes subscription data management services which allows for use to be measured and reported. This service also allows for fees to be charged to users,

should Council wish to exercise this option. This component of the work includes design and construction management support on an hourly basis, if required.

The proposal is structured for a five year term, with the option to renew for a further five years, at the mutual agreement of the parties. As this is a unit price contract, the number of total projected charging station installations in the initial five-year term was estimated at 112 stations to provide an order of magnitude for the service demand.

There were four respondents; however, not all were able to provide the full scope of services requested as noted in Table 1.

Table 1: Contract 6503P - EV Charging Infrastructure and Management Provider Summary of Responses

| Description | Respondents Quoted Pricing Based on Approximately 112 Stations (Over Initial 5 Year Term) | | | |
|--|--|-------------------|-------------------|-------------------|
| | Foreseeson Technology | RAM | Flo | Charge Lab |
| | Hardware Costs | \$1,028,962 | \$1,174,142 | \$909,811 |
| Installation/Activation Costs | \$71,500 | Did not bid | Did not bid | \$822,400 |
| Existing Software Subscription Fees | \$35,420 | \$22,490 | Did not bid | Did not bid |
| Planned and Future Software Subscription Fees | \$295,440 | \$296,955 | \$186,750 | \$188,955 |
| Engineering, Design, Consultation, & Construction Fees | \$75,000 | \$72,000 | Did not bid | \$55,000 |
| Total Estimated Over 5 Years | \$1,506,322 | Incomplete | Incomplete | Incomplete |

Foreseeson Technology is the only responsive and responsible bidder that met all the requirements identified in 6503P and provided competitive rates in each cost category, and therefore is recommended for this contract award. Foreseeson Technology provides Chargepoint stations, which is consistent with that currently used at various locations. The consistent station type offered under this proposal supports more efficient administration due to consistency in parts and station management subscription services. Staff note that the City has past experience with Foreseeson Technology, and their services and performance have provided good value to the City.

Key terms of the service contract will include:

1. Services: hardware including provision of charging stations, including installation, activation and maintenance. Engineering design, consultation and construction fees are also included. Ongoing operating costs including software services such as data and network operational management services, warranty integration, monitoring and system support.
2. Subscription/Monitoring: Service provider to provide ongoing station monitoring and data reporting to the City, including usage, transactions information, etc.

3. Term: Five year term, plus a five-year renewal term at the mutual agreement of the parties. Should the five-year renewal term be desired, staff will report back to seek Council approval for the extension.
4. Unit price contract: Costs are based on a per unit amount as tendered for hardware, software and engineering costs, therefore total value will vary based on the actual number of stations installed/replaced, etc.
5. Cost Escalation: Provisions and structure to be included.

Financial Impact

The estimated total value of work to be awarded under this contract over the 5 year term is \$1,506,322. This is a unit price contract and is based on installing and operating a maximum of 112 stations over the five-year contract term. Costs will vary depending on the actual number of units installed.

Funding for the hardware and operating costs associated with this service contract would be accommodated through previously approved capital projects and future capital and operating budgets. The award of this contract will allow staff to immediately implement installations of approved projects including: Level 2 corporate fleet charging stations at the Annex, Level 2 and Level 3 installations at City Hall and the Richmond Olympic Oval, King George Park and the Richmond Ice Centre.

Future charging stations and the associated capital and operating costs will only advance with subsequent Council approval.

The costs presented with this report are reflective of total potential costs for the purposes of transparency in administering the proposal award to allow for additional stations, as they are approved for installation and activation. To manage operating, capital and staffing costs for publicly-accessible chargers, staff are under direction to bring forward a bylaw for collecting parking fees for dedicated parking stalls offering EV charging. Bylaw changes are forthcoming to the December Public Works and Transportation Committee meeting for consideration. Costs for fleet-specific chargers are anticipated to be recovered through adjustments to the fleet operating budget described in a forthcoming capital request.

As the infrastructure for the electric vehicle charging stations expands, additional resources will be required to manage various aspects including installation coordination, maintenance, repairs, data analytics, electrical capacity needs assessments, station damage investigation/replacement issues, etc. Resource needs will be identified and included through the annual budget process.

Conclusion

This report presents the proposal bid summary results for Contract 6503P – Electric Vehicle Charging Infrastructure and Management Provider. It is recommended this contract be awarded to Foreseeson Technology, at the unit rates quoted, for a five-year term, with the option to renew for an additional five-year term with Council approval, and the Chief Administrative Officer and

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General Manager – Engineering and Public Works be authorized to negotiate and execute a service contract with Foreseeson Technology based on the key terms as outlined.



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Existing Level 2 EV Charging Stations for Public and Fleet Vehicles

| Station Name | Address | No. of Stations | No. of Ports | Public Use | Fleet Use | Activation Date/s |
|--|--------------------|-----------------|--------------|------------|-----------|-------------------------------|
| Public Use – Charging Stations | | | | | | |
| City Hall | 6911 No. 3 Rd | 1 | 2 | ✓ | | 03/2013 |
| Firehall 1 | 6960 Gilbert Rd | 1 | 2 | ✓ | | 09/2018 |
| Thompson CC | 5151 Granville Ave | 1 | 2 | ✓ | | 03/2013 |
| Steveston CC | 4111 Moncton St | 1 | 2 | ✓ | | 03/2013 |
| Cambie CC | 12800 Cambie Rd | 1 | 2 | ✓ | | 03/2013 |
| Minoru Centre for Active Living | 7191 Granville Ave | 2 | 4 | ✓ | | 10/2019 |
| TOTAL | | 7 | 14 | | | |
| Corporate Fleet – Charging Stations | | | | | | |
| City Hall Underground | 6911 No 3 Rd | 2 | 2 | | ✓ | 11/2017 |
| City Hall Annex | 6900 Minoru Blvd | 4 | 8 | | ✓ | 03/2015 01/2019 |
| Works Yard | 5599 Lynas Ln | 3 | 6 | | ✓ | 03/2013 03/2015 01/2019 |
| RCMP Charger | 11411 No. 5 Rd | 2 | 2 | | ✓ | 07/2017 07/2018 |
| TOTAL | | 11 | 18 | | | |
| GRAND TOTAL | | 18 | 32 | | | |

Current industry average expected lifecycle of these electric vehicle charging stations is 10 years.

To date, the City has approximately 14 battery electric (BEV) and 9 plug in hybrid electric (PHEV) vehicles in its corporate fleet and is continually evaluating additional opportunities for replacing existing fuel-powered vehicles with electric vehicles as the industry evolves. During the first quarter of 2019, 2,718 EVs were bought in BC. Zero-emission vehicles (mostly EVs), accounted for 6% of all passenger car sales in BC. Sales of EVs increased significantly with the introduction of new federal incentives in the second quarter of 2019, jumping to 6,582. EVs are now estimated to make up over 1% of the total passenger car fleet within Metro Vancouver. It is estimated that there are approximately 1,039 electric vehicles used in Richmond (as of the end of 2018).

Approved & Planned Future Stations for Public Use

| Station Location | Address | No. of Stations | No. of Ports | Type of Station | |
|---|---------------------|-----------------|--------------|-----------------|---------|
| | | | | Level 2 | Level 3 |
| Approved Stations (2017 Capital Budget - CE000025) | | | | | |
| City Hall | 6911 No. 3 Rd | 1 | 1 | | ✓ |
| City Hall | 6911 No. 3 Rd | 1 | 2 | ✓ | |
| Richmond Oval | 6111 River Rd | 1 | 1 | | ✓ |
| Richmond Oval | 6111 River Rd | 1 | 2 | ✓ | |
| Future Planned Stations | | | | | |
| King George Park ⁴ | 4100 No 5 Rd | 1 | 1 | | ✓ |
| King George Park ⁴ | 4100 No 5 Rd | 1 | 2 | ✓ | |
| Richmond Ice Centre ⁴ | 14140 Triangle Rd | 1 | 1 | | ✓ |
| Richmond Ice Centre ⁴ | 14140 Triangle Rd | 1 | 2 | ✓ | |
| Steveston Tennis Courts ⁵ | 4151 Chatham St | 1 | 2 | ✓ | |
| West Richmond Community Centre ⁵ | 9180 No 1 Rd | 2 | 4 | ✓ | |
| Britannia Heritage Ship Yards ⁵ | 5180 Westwater Dr | 2 | 4 | ✓ | |
| Garden City Park | 6620 Garden City Rd | 1 | 2 | ✓ | |
| Minoru Park (Arenas) ⁵ | 7551 Minoru Gate | | 2 | ✓ | |
| South Arm Community Centre ⁵ | 8880 Williams Rd | 1 | 2 | ✓ | |
| Blundell Park ⁵ | 6468 Blundell Rd | 1 | 2 | ✓ | |
| Hamilton Community Centre ⁵ | 5140 Smith Dr | 1 | 2 | ✓ | |
| TOTAL | | 17 | 32 | | |

⁴Matching funding (\$300,000) approved from Natural Resources Canada Electric Vehicle and Alternative Fuel Infrastructure Deployment Initiative (July 11, 2019).

⁵September 09, 2019 Council approved \$700,000 funding toward these stations. \$100,000 funding application to Natural Resources Canada Electric Vehicle and Alternative Fuel Infrastructure Deployment Initiative to be submitted.

Approved Future Stations for Fleet Use

| Station Location | Address | No. of Stations | No. of Ports | Type of Station | |
|--|------------------|-----------------|--------------|-----------------|---------|
| | | | | Level 2 | Level 3 |
| Approved Stations (2019 Capital Budget - CV00012) | | | | | |
| City Hall Annex | 6900 Minoru Blvd | 13 | 26 | ✓ | |

Note: Power Supply for Planned/Future Stations

A key challenge with selecting potential sites relates to power supply capacity concerns. For example, the City Works Yard site has reached maximum power capacity and additional charging stations cannot be added without appropriate expenditures to expand the electrical supply (to be included for consideration in the 2020 capital budget submission). The stations listed above have been selected, in part, based on sufficient power supply currently being available for the noted station infrastructure. Approved stations are those which have approved funding sources currently in place; whereas future planned stations include those where funding from federal grant programs has either been received or is in the application process.