



**SUBJECT: Single Source Report – Hyundai Kona Electric Vehicles**

**TO: Environment, Infrastructure & Community Services Cttee.**

**FROM: Roads, Parks and Forestry Department**

Report Number: RPF-08-21

Wards Affected: Not applicable

File Numbers: 465-12

Date to Committee: April 8, 2021

Date to Council: April 20, 2021

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### **Recommendation:**

Approve the single source purchase of four 2021 Hyundai Kona electric vehicles to Weins Canada Inc., 3120 Steeles Ave, East, Markham, Ontario L3R 1G9 at a purchase price of \$177,858.40 including HST; and

Approve the purchase of additional 2021 Hyundai Kona vehicles through this single source in 2021 should condition analysis and operational needs require them, to a maximum of 6 vehicles.

### **PURPOSE:**

In order to comply with Procurement By-law 19-2014, Section 14.8, Council approval is required for purchases with a value of \$100,000 or more. The purpose of this report is to seek approval to proceed with a single source purchase agreement for four 2021 Hyundai Kona electric vehicles. The purchase will coincide with the disposal/auction of four existing pickup trucks that have reached their optimum life cycle of eight years and has met replacement criteria through a condition assessment (operations & maintenance) by Fleet Services staff. These vehicles will support By-law Enforcement operations and align with the City's green fleet strategy.

### **Vision to Focus Alignment:**

- Support sustainable infrastructure and a resilient environment
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## **Background and Discussion:**

In 2008, Burlington City Council endorsed the City's first green fleet strategy to significantly improve the environmental sustainability of City operations. Staff continue to implement, support, monitor and continuously improve upon the implementation of green fleet initiatives across all services with fleet assets. The City of Burlington also declared a climate emergency in April 2019 to further emphasize and direct staff to ensure a climate lens is applied to all decision making. This request will mitigate the use of gasoline resulting in lower greenhouse gas emissions from city operations. This decision will also help the City meet its strategic goal to be net carbon neutral by 2040.

### **Strategy/process**

Fleet services received approval through the 2020 budget to replace three pickup trucks operated by By-law Enforcement. In the 2021 budget, one additional replacement was approved. A condition assessment was completed for each asset to confirm the replacement requirement. Fleet Services then engaged with the end users to determine how a green vehicle might meet operational needs. Vehicle use data was analyzed. Criteria was established for the replacement of these vehicles including maximizing range, sign storage, ground clearance and charging time. Given that electric vehicle technology is evolving so quickly, Fleet Services would like to ensure that we buy the best range/charging technology available at the time of procurement to ensure that the vehicle will continue to meet business needs throughout its lifecycle.

### **Options Considered**

#### **Gasoline Powered Vehicles**

These vehicles were considered as an option to replace the existing pickup trucks. Given that these vehicles make a larger impact to the City's carbon footprint, a zero-emission vehicle is preferred to align with the City's strategic goals. Given the lifecycle of these assets, the upfront cost of acquisition for an electric vehicle is higher however the total cost of ownership is estimated to be less based on data modeling for fuel consumption and maintenance. This total cost of ownership savings over the life of the asset for these vehicles is estimated at \$14,000 per vehicle or \$56,000 for four vehicles.

#### **Hybrid and PHEV's**

Both traditional hybrid and Plug-in Hybrid Electric Vehicle (PHEV) options were considered for these replacement vehicles however similar to the traditional gasoline powered vehicles, these options still make a larger impact to City emissions. Given the

range available from the Hyundai Kona (415km) and the current daily and weekly usage patterns from By-law Enforcement (200-400km's/week), the Kona will meet these needs while having the greatest reduction in greenhouse gas emissions, fuel consumption and maintenance costs. There is no federal government rebate for traditional hybrids and the rebate for PHEV's is \$2,500 per vehicle versus \$5,000 which will be realized on these full electric vehicles.

#### Other fully Electric Vehicles

Market availability in Canada for fully electric vehicles is limited within given the operational needs of By-law Enforcement staff for range and storage. Smaller electric vehicles were considered however limited the ability for By-law Enforcement staff to pickup signs and would increase the need for vehicle downtime to charge given less vehicle range. The Hyundai Kona was compared with the Kia Niro and the Kia Soul given it's price point, ground clearance, storage capabilities and range. The Hyundai met all criteria and also had the largest range by 30 km and the best price.

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### **Financial Matters:**

Funds are available to replace these vehicles through previously approved capital budgets vehicle depreciation reserve funds.

The approved budget for the purchase of the four vehicles was based on the acquisition of gas vehicle replacements. Given the increased cost of acquisition, \$45,000 of surplus vehicle depreciation reserve funds from other replacement fleet assets will be reallocated and used to support this strategic replacement and cover the upfitting costs.

### **Total Financial Impact**

From an operating budget perspective, this vehicle is the best choice given it is expected to have a lower cost of ownership as compared to others. Electric vehicles have less moving parts and therefore maintenance is expected to be less. The risk of unforeseen or large repair work is also mitigated through the use of warranties. Given the vehicles are fully electric, no fossil fuels will be required however some hydro is needed to charge the vehicle. Charging infrastructure will be installed at Aldershot arena to support vehicle needs through a separate approved capital account.

Based on data modeling, we expect to achieve a lower total cost of ownership for these electric vehicle as opposed to the traditional fossil fuel option while significantly reducing greenhouse gas emissions.

## **Climate Implications**

Based on industry best practice for lifecycle analysis on electric vehicles, it is anticipated that these vehicles reach their optimum replacement at 225,000 kilometers. A traditional fossil fuel vehicle reaches its optimum lifecycle at approximately 150,000 km. Given the lifecycle of each asset type, each electric vehicle is assumed to result in greenhouse gas emissions savings of approx. 41 tons of carbon gasoline emissions while travelling 75,000 km further than the fossil fuel option. The sum reduction for four vehicles is 164 tons of carbon gasoline emissions.

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## **Conclusion:**

Based on the information and analysis above, Fleet Services in consultation with Procurement Services and By-law Enforcement Services conclude that the Hyundai Kona EV through Weins Canada Inc., 3120 Steeles Ave, East, Markham, Ontario L3R 1G9 the best available unit in the market of its type that will meet City criteria and requirements as identified in this report.

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Respectfully submitted,

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## **Report Approval:**

All reports are reviewed and/or approved by Department Director, the Chief Financial Officer and the Executive Director of Legal Services & Corporation Counsel.