Committee Report

To:	Warden Hicks and Members of Grey County Council
Committee Date:	June 23, 2022
Subject / Report No:	TR-CW-21-22
Title:	Fleet Review and Green Fleet Strategy
Prepared by:	Pat Hoy, Director of Transportation Services Linda Swanston Manager Climate Change Initiatives Jim Nicoll, Maintenance Manager
Reviewed by:	Kim Wingrove, CAO and Randy Scherzer, Deputy CAO
Lower Tier(s) Affected:	
Status:	

Recommendation

1. **That Report TR-CW-21-22 Fleet Review and Green Fleet Strategy be received; and**

2. **That an RFP to complete a feasibility study of electrical upgrades at Grey County facilities to accommodate conversion to battery electric vehicles be issued; and**

3. **That funding for the feasibility study be taken from any surplus in the Transportation Services budget, or if no surplus is realized, the funds be transferred from the Transportation General Reserve.**

Executive Summary

The Grey County Fleet Review and Green Fleet Strategy provides recommendations to improve the County's costs and utilization of vehicles. Another key recommendation is that preparations for full battery electric vehicle (BEV) implementation over the next 10 to 15 years should begin with completing a feasibility study to determine what electrical upgrades are required at each County facility. A detailed investigation is required to determine the number of chargers and required equipment charging times, and also to verify the estimated $1.8 million investment to provide the chargers noted in the report. The analysis will support *Going Green in Grey*, Grey County's recently adopted Climate Change Action Plan which sets a corporate net-zero greenhouse gas emissions target by 2045 and plans for the County fleet to be zero emissions by 2040.

Since it is unclear when various types of vehicles, especially medium and heavy-duty trucks will become available, Grey County Transportation will review the purchase schedule of Heavy-Duty Tandems used for snowplowing once there is more information on the battery range and charging requirements. Smaller vehicles such as half tons are available to order, and Grey County Transportation Services will be ordering two battery

electric half tons in 2022 for delivery in 2023. These two 1/2 tons will be used to determine range and charging times. Two one-ton trucks are scheduled to be purchased in 2024 but the replacement may be extended until these vehicles become available in a BEV model.

Background and Discussion

Fleet Challenge was contracted in September 2021 to review Grey County Fleet Services and prepare a comprehensive report covering the following.

- Review current best practices and identify potential areas of improvement
- Review fleet services staff complement and make recommendations on number of staff, location of shops or alternate locations.
- Review Grey County charge-out rate for internal and external equipment repairs
- Recommendations on optimal asset lifecycle for vehicles/equipment and attachments
- Review of current vehicle/equipment inventory and provide recommendations
- Review and make recommendations on the preventive maintenance programs to ensure best practices in terms of quality, frequency, cost, and warranty maintenance specific to in house maintenance and third-party provider
- Evaluate the current fleet equipment use and function, appropriate number of vehicles and specific models based on service level standards for each division
- Provide recommendations for future capital equipment/vehicle purchases/leases based on current service level standards for each division
- Investigate and make recommendations for greening the fleet and reducing carbon footprint

The review of current best practices determined that the new fleet management information system be electronic to make tracking of labour, equipment and material easier for fleet staff. This system will keep track of Routine A and B checks, oil changes and will allow for precise scheduling. This will also incorporate records of operator drivers' licenses and vehicle CVORs.

Mechanic Staffing and Charge Out Rates

The review of staff complement determined that due to a growing fleet in response to a growing population, one mechanic could be added to the staff complement. Fleet Challenge is also recommending two garage bays be added. When Grey County builds the new Patrol D depot at Flesherton, a garage bay will be added. In the meantime, a set of lifts could be purchased for the Ayton yard to service ambulances in the Durham and Hanover areas. A mechanic bay at the south end of the County should result in cost savings as the existing shops are in Clarksburg and Chatsworth.

The electronic Fleet Management Information System noted above, should be capable of tracking all costs and enable improvements to the current chargeback system. Keeping track of every cost to charge an internal stakeholder takes a lot of time. To make it less time consuming for staff, we are suggesting Fleet Services own the equipment and charge a monthly/yearly internal rate for a piece of equipment. Internal stakeholders don't always have funding for equipment repairs and this would distribute cost more evenly and make

budgeting for stakeholders easier. This would be based on the price of the equipment depreciated over the life cycle and include a historical average cost for maintenance.

Asset Lifecycle and Inventory

In reviewing the optimal asset lifecycle, it was determined Grey County is on par with other Counties with similar sized fleet. Fleet Challenge recommended increasing the life cycles on tandems by one year from 12 to 13 years and ½ tons from 7 years to 9 years. Grey County is a large county geographically and kilometres are higher after 7 years for ½ tons, than Counties with similar sized fleet. Transportation Services staff think that 7 years is appropriate for replacement of ½ tons keeping in mind when the conversion to BEV occurs, the lifecycle on some gasoline vehicles may be extended to align with vehicle availability. With tandems, it depends on the condition of the truck at the 10-year mark to determine if it should be replaced in year 12. This decision is left up to the Fleet Supervisor. Transportation Services is investigating when battery electric tandem plow trucks will be available. Currently battery electric large trucks do not have the range for a full day of plowing snow.

Fleet Challenge was asked to review the current vehicle fleet inventory and provide recommendations. Their recommendation is to review equipment utilization through the fleet management system and adjust fleet based on underutilized vehicles. They also recommend buying proper sized equipment for the task since larger equipment uses more fuel.

The Fleet Management Information System will be key to ensuring vehicle maintenance is done at the proper time as well as making it easier to schedule when routine maintenance should take place. Transportation Services and IT staff are working to adapt Cityworks to a fleet management information system, however purchasing a fleet management system to help with inventory may be the best solution. Fleet Services is investigating various fleet management information systems.

Vehicle leasing was reviewed, and it is recommended that due to higher cost for leasing Grey County continue to purchase vehicles.

Fuel Alternatives

A recommendation was to implement the use of alternate fuels such as biodiesel, natural gas or E85 flex fuel. This is expensive to implement requiring extra fuel tanks or infrastructure at the yards. Biodiesel requires heated tanks to prevent it from gelling and plow trucks could not be stored outside. There are no local storage facilities for biodiesel or E85 fuel so this would require fuel being brought direct from the terminal when required. Flex fuel is expensive and doesn’t have the same range as regular gasoline. In discussion with Fleet Challenge, Grey County would prefer to allocate funds to the conversion to BEV rather than an interim step of fuel conversion.

Electric Charging Station Feasibility Study

Fleet Challenge recommended a cautious approach to greening the fleet. Full implementation should be carried out over the next 10 to 15 years. The first step is completing a feasibility study to review each facility to determine what is required to convert

to BEV. This would be an extensive study addressing all vehicle locations within the Grey County fleet including Transportation depots, the Administration Building in Owen Sound, and the paramedic bases. It will be focused on providing an analysis of providing charging stations for the Grey County fleet and not focus on public charging station programs. The RFP should include the following:

- Consultation with staff to determine which level of chargers would be required based on vehicles at each site, potential charging time and mileage requirements for each type of vehicle task.
- Evaluation of Grey County building electrical needs based on potential charging station scenarios.
- Cost estimates regarding upgrading of Grey County owned electrical supply infrastructure.
- Potential discussions with Hydro One regarding costs and/or timelines to upgrade electrical supply infrastructure.
- Evaluation of current on-site generator capacity and recommendations regarding generator upgrades for power outages

Grey County will be reaching out to other municipalities, including local lower tier buying groups, to get their input and perspective on conversion to BEV.

Legal and Legislated Requirements

The Federal government announced in March 2022 the plan for updated Zero Emissions Vehicle (ZEV) Mandates as part of the *2030 Emissions Reduction Plan* to support the *Canadian Net-Zero Emissions Accountability Act (S.C. 2021, c. 22)*. The Government of Canada ZEV sales mandates will require at least 20 per cent of new passenger vehicles sold in Canada will be zero-emission vehicles by 2026, and at least 60 per cent by 2030, on the road to 100 per cent by 2035.

The Government of Canada has launched a strategy to reduce pollution from medium- and heavy-duty vehicles (MHDVs) with the aim of having 35% of MHDVs sales be zero-emission vehicles by 2030. The Federal government is developing MHDV zero-emission regulations to require 100% MDHVs sales to be zero-emission vehicles by 2040 for certain types of medium- and heavy-duty vehicles.

Further details on the medium- and heavy-duty vehicles strategy will be announced over the summer 2022.

Financial and Resource Implications

Costs associated with hiring an electrical engineering consultant to review locations for BEV readiness will be taken from any surplus realized from within the 2022 Capital Construction Budget, or if a surplus is not available, from the Transportation General Reserve.

The fleet report indicates $1.8 million would be required over the next 10 to 15 years to install charging stations for the current vehicle inventory.

Grey staff will continue to investigate Federal or Provincial grants to assist with installation of infrastructure for BEV.

The Federal Zero Emissions Vehicle Infrastructure Program (ZEVIP) is a $680 million initiative ending in 2027 to support BEV charging infrastructure installations, including a stream to support Commercial and Public Fleets composed of on-road vehicles that are managed by common ownership. These fleets must be used in support of organizational or business operations and activities and can include municipal utility vehicles. The Canadian Infrastructure Bank will also invest $500 million in ZEV charging infrastructure.

Relevant Consultation

☒ Internal: Finance Department

☐ External:

Appendices and Attachments

Fleet Challenge – Fleet Review and Green Fleet Strategy