



The Corporation of the City of Courtenay

Briefing Note

To: Council
From: Manager of Parks Services
Subject: Battery Powered Landscape Equipment Conversion

File No.: 1240-01
Date: July 31, 2024

PURPOSE:

To inform Council on the Operational Services Department's conversion from gas-powered small equipment to battery.

BACKGROUND:

As part of the City's commitment to achieving a 45% reduction in community-wide GHG emissions from 2016 levels by 2030, 100k from the Growing Communities Fund was allocated for the electrification of the City's current inventory of small gas-powered equipment. This one-time investment will allow the City to convert nearly 80% of its existing small gas-powered equipment to battery-powered in 2024.

Technology and therefore public trust for battery-powered equipment has increased in recent years, as evidenced in the retail sector, where most home improvement and landscape equipment suppliers now offer a wide variety of battery-powered tools for both domestic and commercial use.

DISCUSSION:

In response to Council's direction, staff embarked on a detailed review in an effort to better understand the impacts of converting from gas-powered to a battery-powered small equipment. Operations in collaboration with our Procurement Team actively researched product options and secured product demonstrations from various suppliers over the past year to learn how a transition to battery equipment could be successfully managed while continuing to meet the communities' service level expectations, all within current budget and staffing allocations.

Considering the above factors, the Operational Services Department will take a significant step forward in the conversion of small gas-powered equipment to battery for the 2024 season. This leapfrog approach in equipment conversion is expected to have a multitude of positive impacts both on staff and the environment. Benefits from this change will include a reduction in noise pollution, improvements in ergonomics or health and safety, and a reduction in the City's annual GHG production, in the amount of 7.93 tCO₂e¹ (tonnes of carbon dioxide equivalents).

Based on product trials, a survey of various suppliers and manufacturers, and a recently completed public tender process, Operational Services will convert nearly 80% of its existing small gas-powered equipment to battery-powered by the end of the 2024 fiscal year. This conversion will be phased in over the coming months to allow for staggered battery purchases with the Parks Service Division's equipment being the primary focus of this year's conversion effort.

¹ 7.93 tCO₂e equates to an annual reduction of 3.2% of the City's total fuel (gas) consumption.

The following chart highlights the number of pieces that are being converted:

Equipment Description	Current Fleet Gas	Converted Fleet Battery	Retained Gas	Retired Gas
Backpack Leaf Blower	10	8	2	8
Handheld Leaf Blower	9	9	0	9
String Trimmer	11	9	2	9
Brush Cutter	2	2	0	2
Chainsaw	6	3	3	3
Hedge Trimmer	5	5	0	5
Lawn Mowers	3	3	0	3
Snow Blower	2	2	2	0
Pressure Washer	1	1	1	0
Generator	1	1	1	0
Total	50	43	11	39

FURTHER ACTIONS AND CONSIDERATIONS:

While the industry has made significant strides in developing new products, there is still hesitation around the overall function and longevity of these tools in commercial settings, as is the case with some of the City's Operational tasks. i.e. potential concerns include battery life, reduced run times, and power levels, depending on the type of equipment considered.

It is important to recognize that for some equipment noise outputs have been significantly reduced, however in some cases, particularly in the case of leaf blowers, these battery-powered counterparts still produce a significant amount of noise as compared to their gas predecessor.

While the City remains committed to the conversion from gas-powered tools, Operations will retain a small number of gas-powered pieces for use in situations where the battery-powered replacements may be ineffective (e.g., heavy wet leaves during the fall months). It is expected that this usage will be phased out over time as the performance of battery-powered options improves.

RECOMMENDATION: THAT Council receives the Battery Powered Landscape Equipment Conversion briefing note for information.

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