



CITY OF ALBANY CITY COUNCIL AGENDA STAFF REPORT

Agenda Date: April 1, 2024
Reviewed by: NA

SUBJECT: Battery-Powered Landscaping Equipment Purchase – Request for Funding Appropriation from Public Works Reserve (Fund 2210)

REPORT BY: Razzu Engen, Public Works Manager
Devora Zauderer, Program Manager
Mark Hurley, Public Works Director/City Engineer

SUMMARY

The Public Works Department has completed investigation of electric alternatives for gas-powered landscaping equipment, as a way of reducing the City's reliance on fossil fuels for frequently utilized equipment. Multiple vendors were reviewed, and equipment options were selected for maximum utility and reasonable cost.

As projected in the Biennial Operating Budget, staff is now seeking Council authorization for appropriation of Public Works Equipment Reserve funding in the amount of \$25,000 for the purchase of battery electric landscaping equipment to replace the current stock of gas-powered equipment.

STAFF RECOMMENDATION

That Council adopt Resolution No. 2024-18, appropriating \$25,000 from the Public Works Reserve (Fund 2210) toward the purchase of battery-powered landscaping equipment.

BACKGROUND

Per the California Air Resources Board, gallon for gallon of gasoline used, the small gasoline engines found in lawn mowers, leaf blowers, and other power equipment pollute at a higher rate than other equipment and vehicles.

The City of Albany's Public Works Department, similar to other public works departments, uses a variety of small gas-powered equipment for use in landscape maintenance and other operations. Over the years, staff has looked to transition the City's stock of small gas-powered equipment to electric when there is a suitable battery-powered replacement to ensure ability for sustained use over the course of the workday/project underway.

In 2018, the Council adopted Resolution No. 2018-15 authorizing participation in the Bay Area Air Quality District's (BAAQMD) Lawn and Garden Equipment Exchange Program. Public

Works worked with the BAAQMD and identified six pieces of gas-powered equipment (a weed eater, a blower and two chainsaws and two brush cutters) that qualified for replacement under the grant program.

Assembly Bill No. 1346, signed into law by Governor Newsom in 2021, authorized the California Air Resources Board to prohibit the sale of new gas-powered lawn and garden equipment. That prohibition has gone into effect as of January 1, 2024. While the City can still use existing gas-powered equipment, staff has researched replacements for gas-powered equipment and is prepared to transition most remaining equipment to battery electric. This transition was planned for in the current biennial operating budget.

DISCUSSION

The intent of this transition is to reduce our dependency on fossil fuels by switching to electric or battery-powered equipment when a suitable replacement is available. Experience has been gained through the utilization of battery-powered equipment obtained through the BAAQMD grant. Of the equipment purchased through the grant, the battery-powered chain saws (Stihl) perform very well and are regularly used. The weed eater (Stihl) and blower (Stihl) are useful on smaller projects but are unable to perform the full range of work needed to maintain the City's landscapes. The brush cutters (Mean Green) are not suitable replacements for the gas-powered equipment and have limited use. The deficiencies in the equipment are primarily a lack of power and battery life. In the past several years, battery technology has improved and other performance improvements to these tools have reduced such deficits. However, performance still lags with larger pieces of equipment such as riding mowers, large chainsaws and specialty equipment.

In researching this proposed purchase, staff engaged with other agencies, small engine shops that supply and maintain battery-powered equipment, and major tool manufacturers. Demo days were arranged with Stihl and Husqvarna, two leading manufacturers of battery-powered landscape equipment.

A key consideration in selecting equipment is the battery cost and charging. To maintain operations and for emergency response, additional batteries are required for each piece of equipment and these batteries are expensive. Also, each manufacturer has their own proprietary battery system, incompatible with tools from other manufacturers. Both for efficiency as well as ease of use, staff considers it important to select a platform so that multiple tools that can take the same batteries, instead of separate batteries for each piece of equipment.

After evaluation, the landscape equipment that is most suitable for maintenance operations is primarily provided from Husqvarna, except for chainsaws, which will be provided from the Stihl platform. Stihl's line of battery chainsaws had better performance and battery life than the equivalent Husqvarna saws. Husqvarna had better tool and battery performance (including weight) across the variety of other small tools Public Works regularly uses. While selecting a single manufacturer/battery platform for all these tools would be preferable, the performance difference with the chainsaws was significant enough to warrant the additional complexity of having a separate battery system for the saws.

Upon appropriation of the requested funds, staff will purchase the following tools and will decommission the equivalent gas-powered equipment:

• Husqvarna 230iB Blower	6
• Husqvarna 520iHT4 Hedge trimmer	1
• Husqvarna 525iLST String trimmer	8
• Husqvarna 530IPT5 Pole saw	1
• Husqvarna 522iHD60 Hedge trimmer	1
• Husqvarna W520i Mower (push mower)	1
• Stihl MSA 300 Chainsaw	2

Additionally, staff will purchase a Towa Smart Charging system, which will allow batteries for multiple tools to be plugged into a single 20 ampere circuit. This system detects the current draw requirements for each battery and manages the power distribution for a bank of battery chargers without overloading the circuit. This system will allow the new battery powered tools to be charged as needed, in a safe and convenient way without requiring upgrades to the electrical system at Public Works.

This purchase will result in retirement of most of the gas tools used by Public Works. In the short term, some gas-powered equipment will need to be retained. This includes two larger chainsaws, two riding mowers, a post driver and several vibrating compactors and portable generators (portable generators are exempt from the sales prohibition). This remaining equipment consists of tools that are less frequently used and/or for which no suitable battery replacement is currently available. Staff will continue to monitor technological improvements as well as funding opportunities for replacing these items with electric equipment in the future.

SUSTAINABILITY CONSIDERATIONS

This change is being driven by State mandates, intended to reduce emissions. As referenced above, these small engine tools are among the most polluting equipment. Approval of this purchase will not only reduce pollution but will protect the health of the community who can be exposed to exhaust fumes. Additionally, battery-powered tools are much quieter than their gas-powered equivalents and can therefore reduce noise pollution.

SOCIAL EQUITY AND INCLUSIVITY CONSIDERATIONS

In discussing the prohibition on gas-powered equipment, Richard Corey (at the time the executive director of the California Air Resources Board), pointed out that the ban will provide significant health benefits for Californians, including those in low-income neighborhoods which tend to experience the highest exposure to pollutants.

CITY COUNCIL STRATEGIC PLAN INITIATIVES

This purchase will help fulfill two of the Council's Strategic Plan Initiatives:

- GOAL 1: Advance Climate Action & Adaptation
- GOAL 6: Increase Public Health, Safety & Resiliency

FINANCIAL CONSIDERATIONS

Twenty tools, chargers, extra batteries, the smart charging system, and accessories such as a harness and a backpack battery adaptor plate will cost approximately \$25,000. Funds for this purchase will be appropriated from the Public Works Equipment Reserve, no ongoing budget adjustments will be required.

Attachments

1. Resolution 2024-18