



## GAS VS ELECTRIC LEAF BLOWERS OPERATING AND MAINTENANCE COST COMPARISONS

Electric blowers and batteries can cost more than gas blowers up front, they provide significant savings and an excellent return on investment (up to 50% ROI) over their lifetime.

Best practices for landscapers using battery powered equipment is to charge at residents' properties. Eversource's on-peak cost per Kilowatt hour is \$0.14.<sup>1</sup> Electric landscapers we interviewed reported that the cost for each battery charge is less than \$0.20. On average, gas leaf blowers need to be refilled after every hour of use. The American Green Zone Alliance, which tests and reviews electric lawn equipment conducted a three year cost comparison. Operating costs for the electric blower for 950 hours of annual use cost \$171/year. Operating costs for the gas blower came to \$807/year. Over the 4-year lifespan, the electric blower provided \$1,444 savings (see Table).

### American Green Zone Alliance Lifetime Cost Comparison

<b>Electric BGA 100 blower+AR3000L Battery+ AL300 Charger</b>			
Based on 950 hours of annual use	Upfront cost	Operating Cost	Lifetime Cost
Year 1	\$1700	\$171	\$1,871
Year 2	0	\$171	\$2,042
Year 3	0	\$171	\$2,213
Year 4	0	\$171	<b>\$2,384</b>
<b>Gas Echo PB770T</b>			
Year 1	\$600	\$807	\$1,407
Year 2	0	\$807	\$2,214
Year 3	0	\$807	\$3,021
Year 4	0	\$807	<b>\$3,828</b>

Source: Presentation by American Green Zone Alliance, Low-Impact Landscaping practices, Larchmont, March 2022

<sup>1</sup> <https://www.eversource.com/content/ct-c/residential/account-billing/manage-bill/about-your-bill/rates-tariffs/electric-supply-rates>

## Operating Cost and ROI of Electric vs Gas Blowers

MowGreen, an all electric CT based landscaper also reports savings with a 52% ROI in the first year of operation.



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650 CFM						
3 hrs/Day 8 mos.	Cost/hour	Hours/Season	Cost/Season	Savings	Cost Unit	Added Cost
Eblower	\$0.25	516	\$129	\$387	\$1,250	-\$750
Gblower	\$1.00	516	\$516		\$500	
ROI						
Investment:	-\$750					
Savings/Year	\$387					
Year 1 ROI	52%				5 Foot riding Mower:	

Source: Presentation by MowGreen, Conservation Commission webinar, March 1, 2022

Similar results have been found in other studies. In 2017, the University of Arkansas conducted a side by side comparison of its ground crews' use of gas vs battery lawn equipment to determine the capital, environmental, and societal benefits to their campus.<sup>2</sup> For leaf blowers, they found that with a ROI of 3.26 years the electric blowers were significantly cheaper than the fuel powered versions. They concluded, "After reviewing the current equipment that our grounds crew utilize, we've determined that they're not only more expensive and have higher emissions but they are bad for the health of students, faculty, and staff on campus."

The above studies were done before gas costs exceeded \$5/gallon, so savings with electric would be even greater in current conditions.

<sup>2</sup> [https://sustainability.uark.edu/outdated/get-involved/ofs\\_ua\\_battery\\_grounds\\_tools\\_report\\_20170927.pdf](https://sustainability.uark.edu/outdated/get-involved/ofs_ua_battery_grounds_tools_report_20170927.pdf)

## GAS BLOWERS: HIGH REPAIR, LABOR, AND MAINTENANCE COSTS

In addition to the cost of fuel, gas leaf blowers require significant maintenance and repair. Maintenance tips by professional organizations include:<sup>3</sup>

- Cleaning spark plugs and replacing when they get worn
- Draining used oil and adding fresh oil
- Disposing of used oil properly
- Cleaning and replacing air filter
- Replacing the fuel filter
- Cleaning the outside of the carburetor and fan blades
- Examining the fuel line, fuel filter, cables and connections
- For long term storage, draining the fuel system or adding a fuel stabilizer

In addition to the costs of the above maintenance, we must also consider the labor costs for time spent filling up at gas stations, mixing the fuel/oil mixture, and refilling gas blowers. The repairs required to keep gas-powered lawn equipment running are so extensive, that repairs alone have become the bread and butter that dealers rely on. In an interview with Pro Landscape Supply Co, the owner expressed concern that once electric tools become more mainstream, his business would suffer because such a large part of his supply business comes from the repair end.<sup>4</sup>

Because they do not have an engine and have fewer parts, electric leaf blowers are easier to maintain. Recommended maintenance includes:<sup>5</sup>

- Checking the air intake for dirt, debris and anything that might block air flow
- Removing the battery from the charger once it's at full capacity and storing battery at a specific level of charge or periodically charging it during the off season.
- Some batteries have cooling vents that need to be kept clear of dirt and debris.

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<sup>3</sup> <https://www.lowes.com/n/how-to/leaf-blower-maintenance>

<sup>4</sup> March 6 interview, Pete Masi, Pro Landscape Supply Co, LLC

<sup>5</sup> <https://www.lowes.com/n/how-to/leaf-blower-maintenanc>