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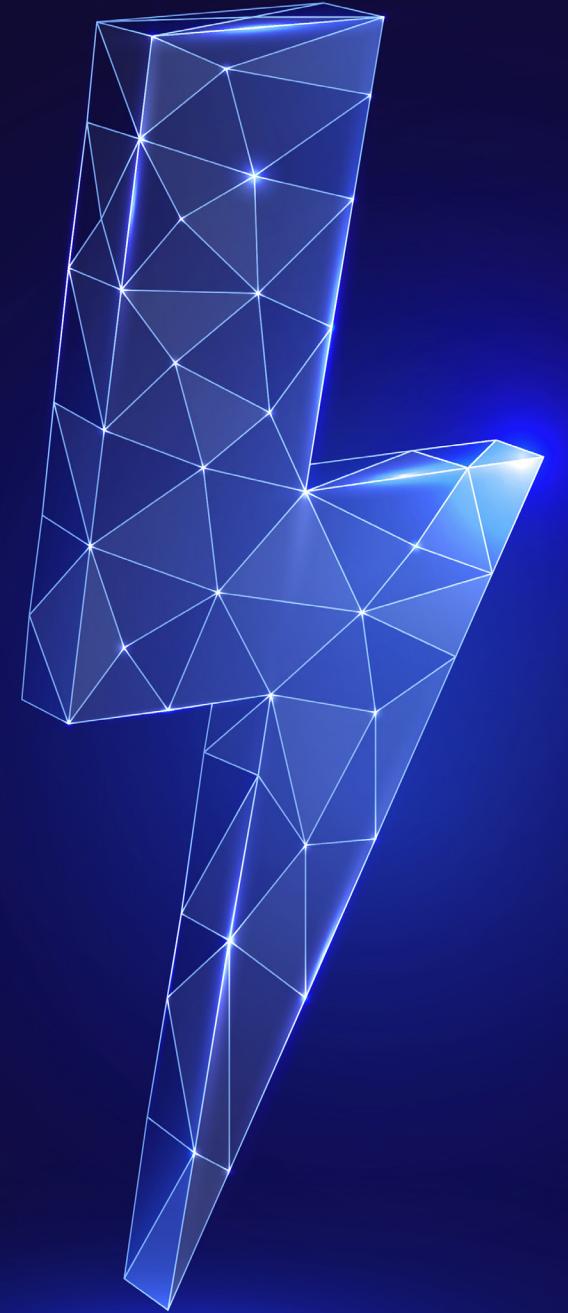
Battery-powered equipment continues to be embraced by the green industry.

By Kim Lux and Jimmy Miller

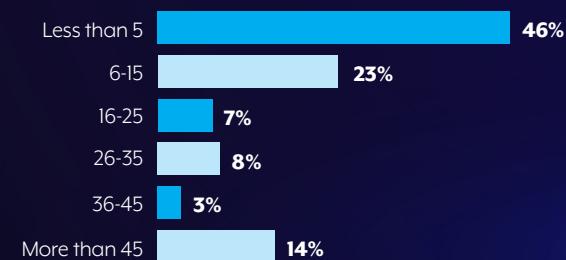
While gas prices have lowered as of mid-July, it's still pretty expensive to fill up. But it was another aspect of fuel that tied into why people use battery-powered equipment, according to our survey results. Lack of fumes was one of the higher-ranking positive aspects of using the equipment. And compared to last year's research, more landscapers are using the equipment. Last year, 42% said they don't use any battery-powered equipment, compared to 30% this year.

As far as barriers to the equipment, run time being too short was again at the top of the list, but expense was second this year, while recharging time ranked in that spot last year.

These results come from 282 landscape contractors. Please note that not all numbers will add to 100% due to rounding.



How many **EMPLOYEES** do you have?



What was your company's **OVERALL GROSS REVENUE** for 2021?



PHOTO © ADORBE STOCK



WHAT BATTERY-POWERED/ELECTRIC EQUIPMENT DO YOU USE AT YOUR LANDSCAPING OR LAWN CARE COMPANY?

Check all that apply

3%

Vehicles

4%

Autonomous mower

16%

Riding/walk-behind/stand-on mower

29%

Chainsaw

30%

Don't use any battery-powered/electric equipment

37%

Edger/string trimmer

43%

Hedge trimmer

54%

Blower

Other: Backpack sprayer



JESSE FULLER

Owner, Fullers Company

OAK BLUFFS, MASS.



Fuller has two kids, one in high school and another in middle school. As he runs his eight-man team in Oak Bluffs, Massachusetts, he keeps them in mind. He wants to operate a business that not only makes money but is one that his whole family can respect. That's why the Fullers Company uses battery-powered equipment as much as possible. Whether it's a commercial zero-turn or it's an electric steel saw, they have jumped so far into the technology that they have a box truck complete with banks for charging the equipment on the go.

But for Fuller, it's not about firing first and asking questions second; it's about looking before you leap into new technology.

"It's something I always wanted to do," Fuller says. "When I first started my business 25 years ago, I wanted to be as green and as natural as possible, but it had to make sense as a business decision. Every time I see something new that's electric that comes out, we try to convert over whenever it's possible."

That said, he hadn't noticed technology that could handle commercial work capably until roughly three years ago; by and large, it had all been small residential equipment that could work with batteries. And even then, he had issues keeping batteries charged long enough for substantial work to get done.

Fuller has a background in solar work, so the idea of buying a solar-powered truck to recharge equipment came naturally.

"As a commercial business, you'd have to have five million batteries on board," he says. "The only way to do that was to do something with a solar lawn truck."

Fuller recommends that anybody who's interested in battery-powered equipment do some research on their own. How many minutes can you get on one charge? How much do replacement or extra batteries cost? And when might you see a return on investment? These are all valid questions, ones that Fuller asked himself as he made the decision to buy.

Fuller also believes that the technology will continue to improve, increasing battery charge and runtime. For example, he's noticed that electric blowers are less powerful than the gas ones, so even as someone who's fully onboard with electric equipment, he sometimes needs to revert back to the old ways.

"If you've got a wet, rainy day," he says, "we've still got to break out the gas ones, but we try not to."



JOSEPH CERBONE

President, JLC Landscape Services

WESTHAMPTON BEACH, N.Y.

In Westhampton Beach, N.Y., Cerbone has just started his 10-person team on battery-powered blowers.

Cerbone admits it's largely born out of necessity. It's not that he's unwilling to switch to battery-powered equipment over gas-powered; he'd love to help reduce his environmental impact as much as he can. But even after years of seeing promised improvements, he said the commercial-grade equipment still falls short.

"I still don't feel as if the technology has caught up with how much we use the equipment in an eight-hour workday," he says. "If the technology is there, then I'd find a way to do it."

In his area, Cerbone says city officials recently decided to ban gas-powered blowers in certain parts of town. In the estate part of town, the ban is permanent; in other areas, the ban is only in effect annually from May to September.

For as quickly as his team pivoted, Cerbone says they've still hit this snag where the batteries are depleted of power after 90 minutes. He gives each crew an extra

ARE YOU AWARE OF ANY EXISTING OR DEVELOPING EFFORTS TO BAN GAS EQUIPMENT IN YOUR COMMUNITY OR STATE?

37%

YES

63%

NO

battery, too, but after three hours, they will still use gas-powered equipment if the job's not done.

"The guys are very smart about knowing which towns they need to use the (electric) blowers. I think the first offense, which I haven't seen them enforce it yet, is like a \$250 fine," Cerbone says. "And I'm like, 'You're going to start fining crew members for using (gas) blowers? At least at the end of the day, they have to have (electric blowers) on the truck.'"

Cerbone says his teams are skeptical about the gas-powered bans. "They were kind of laughing like, 'How are we going to do this?'" he says, adding that he reminds his crews to use battery-powered as much as possible. If anyone ever pulls his teams over for using the gas equipment, he says they should demonstrate that they tried using electric first. If they are still getting flack, they should put Cerbone on the phone.

Cerbone believes the electric blowers he uses are heavier and more awkward than their lightweight gas components. Plus, to keep his batteries charged, he thinks it's ironic that the sound and emissions of a charger could be just as cumbersome to communities as the gas-powered equipment in general.

That's not to say he won't keep his mind open. Cerbone has often made smaller changes in less dramatic fashion that are more environmentally conscious, like recycling his grass clippings or using low-risk organic fertilizers. But, between being forced into this move and not feeling like the technology's ready, Cerbone begrudgingly has gone from an outspoken skeptic to cautiously cooperative.

"They almost seemed like they had their mind made up," Cerbone says. "That's just my opinion. Everyone has their own opinions on what happened, but either way, they imposed the law. I really could've been a proponent of it, but I haven't seen technology catch up with the demand."

ZACK RULLI Co-owner, Dirt and Stone Landscaping, NEWINGTON, CT.

FOR RULLI THERE'S A LOT TO CONSIDER

before diving deeper into battery-powered equipment.

"Right now, we have a string trimmer, leaf blower, hedge trimmer and we're looking to add to that as equipment comes up for replacement," he says.

Rulli says the best way he's



been able to research battery-powered equipment is by testing them out firsthand.

"Any time a dealer has an open house, we go out and try everything," he says. "The biggest thing for us is getting it in our hands and trying it for ourselves... you realize it's not vibrating, it's not hot, it doesn't smell, and you don't have to sit there and keep pulling and pulling to try and start it."

In terms of power for the

battery-powered equipment, Rulli says it's taken some adjusting for him and his crews.

"Getting used to not having to go full throttle the piece of equipment has been a challenge," he says. "You get more battery life without having to go full throttle all the time... for crews it was an adjustment in power. ...When they'd run out of battery, you'd have to tell them to cut back. They finally trained themselves and got through it."

Rulli says the equipment is also nice during peak season when scorching temperatures used to make the old tools temperamental.

"When it's hot and humid they just don't run well," he says of gas-powered. "You don't have to worry about it stalling out. You don't have to worry about mixing the gas, or that hopefully someone remembered to mix the gas, and changing spark plugs, fuel filters and all that."

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ANDI CASEBERE

production training coordinator,
Mariani Landscape
CHICAGO, ILL.



When several Chicagoland neighborhoods started implementing leaf blower restrictions, Mariani Landscapes knew it had to come up with a way to continue providing pristine lawns to its clients. The solution — battery-powered equipment.

“We have seven communities we serve that have blower restrictions between May and October,” Casebere explains.

Casebere says the regulations are so strict the company is committed to 100% compliance at all times.

“The ban forced our hand,” he says. “There are some communities where the citizens will take a picture and send it in, and the police will be out to issue you a ticket.”

But Casebere says the battery-powered blowers and other hand tools have been working out great.

When it came to getting crews on board though, Casebere acknowledges that it took a little time. Some employees were skeptical of the level of power these machines had.

“A lot of these battery packs don’t last the whole day, so the one thing we had to focus on with training was changing how we did things,” he says. “We got really comfortable with high-powered, gas-powered blowers. But now we have to go and rake and broom things out of our way and then use the blower to detail. You’re always going to get

ARE YOU AWARE
OF ANY HOUR
RESTRICTIONS
WHEN USING GAS
EQUIPMENT IN
YOUR STATE OR
COMMUNITY?

42%
YES

58%
NO

some level of pushback and guys saying, ‘Do we really have to do that?’ But you just have to go out there, walk them through it and ensure them that it’s a process that isn’t overwhelming.”

Though the power level is comparable for the most part, Casebere admits it’s still nice to break out the gas-powered blowers when it’s allowed.

“Most communities allow us to use gas-powered blowers again when it comes to spring and fall cleanups, which helps,” he notes.

After the success of the battery-powered blowers, Mariani Landscape is ready to take it to the next level. Casebere says they’re going to be utilizing autonomous mowers very soon. After testing out several brands and trying them at local libraries and parks, the company has made the commitment.

Casebere says he expects it to take a little while to get customers on board with the machines though.

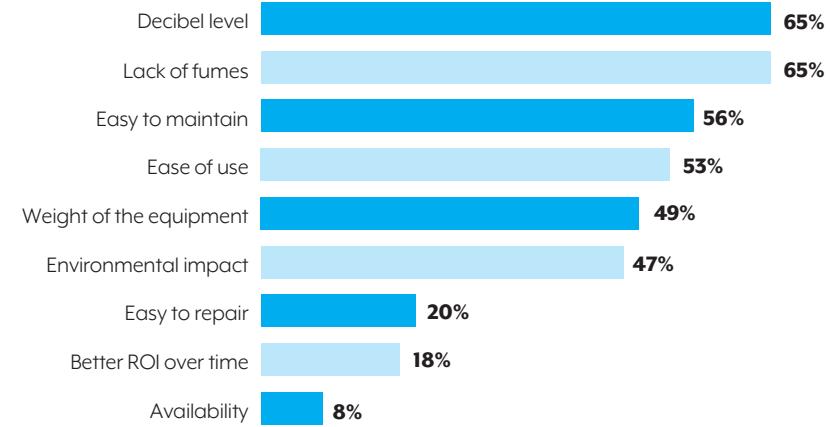
“The clients need to understand that it’s not going to make lines in the traditional way we would stripe a law,” he says. “But after a month of the operation, you don’t really see the lines anymore. You just see a nice, tight turf.”

Casebere adds he’s expecting this shift toward autonomous mowing to help with staffing issues and efficiency as well.

“Where labor is these days, wherever we can save monotonous time behind a machine and have all these well-skilled workers working on other things the better it is for us,” he says. “Our goal is to have our employees focused on different things...so we can do more work in a day out of that truck.”

WHAT DO YOU SEE AS POSITIVE ASPECTS OF BATTERY-POWERED/ELECTRIC EQUIPMENT?

Check all that apply



KAZWEL LEVANDOSKI

owner, Lone Goose
WINNIPEG, CANADA



The ease of maintenance is what drew Levandoski’s eye to battery-powered equipment when he started his business in 2017. Back then, he was a one-man operation.

“Gas-powered units require quite a bit of maintenance and as an owner-operator business time was of value,” he says.

“It started out with me not wanting to spend the time doing a bunch of maintenance on the machines plus with a desire to try something out that was a little bit more eco-friendly.”

Nowadays, the company is up to six employees servicing about 150 sites.

“And we’re doing well over 90% of that work with battery-powered equipment,” Levandoski notes.

One of the biggest blessings of the battery-powered equipment, Levandoski says, is the lack of noise pollution. It’s something he knows customers appreciate.

“Our clients love that they never hear us working,” he says. “We’re quiet, efficient and it’s cost effective.

He says crews appreciate the absence of droning engine noise, too.

“My staff have said they prefer the battery to the commercial gas mowers,” he says. “They can listen to their music and whatnot. The other aspect my crew really likes is that they are very lightweight. So, when we’re loading them in and out of trucks one person can do it no problem. And they’re very easy to operate.”

Efficiency has also improved because of the battery-powered equipment.

“Crew management is quite a bit more efficient,” he says. “Now I’m not worrying about staff running to the gas station to fill up jerrycans and stuff like that. There’s no downtime filling things up, it’s we pop out a battery, pop in a new one and go.”

Levandoski says he knows there are some challenges to running battery equipment, like the need to constantly be charging and a difference in power, but he says most problems are easy to get past. The type of landscape being maintained can also cause a challenge.

“The other real limitation I’ve seen is we have to make sure our blades are very sharp,” he says. “We swap out blades daily or every other day just to make sure the batteries don’t have to work harder. And because they have a little less power than gas-powered machines, the moment we get wet or tall grass the sharper blades are really beneficial.”

GERHART ARNDT founder, Sustainable Land Solutions, CONSHOHOCKEN, PA.

WHEN ARNDT STARTED HIS COMPANY two years ago, providing sustainable lawn care was his driving force. To achieve this, he made a large investment in battery-powered equipment.

Early on, Arndt knew there’d be limitations in terms of runtime when it came to the equipment. So, he went to his local bank and took out a loan to purchase two large batteries to continually power all his equipment throughout the workday.

“What I do to get all day runtime is have two big batteries

that go inside my vehicle...and I just plug my chargers in and charge my equipment batteries all day long,” he says. “I really only have two sets of string trimmer batteries. It gets used and then thrown on the charger. And then the other is used, and we swap back out.”

Arndt says procuring more power is essential when going



all electric. “Before this setup I couldn’t work a full day. I’d be able to do half a day and then I’d be out of battery,” he says. “That was a major gamechanger.”

According to Arndt, another advantage of the bigger charging batteries is he is no longer beholden to one brand of equipment.

“If you don’t have an on-the-go charging solution, you’re cornered into sticking with only one brand,” he says. “Whereas with on-the-go charging...I didn’t have to buy the entire line just

to have a massive amount of batteries.”

But while the bigger batteries may have been a major investment, Arndt says he still finds it more profitable than running gas-powered equipment.

This is especially important given how fuel costs continue to rise and fluctuate.

“It’s so much cheaper to run battery in the long run. I pay 10 cents per kilowatt,” he says. “I think I’m using like \$2 a day on my biggest days. That’s not even a half gallon of gas right now.”



WHAT ARE THE BARRIERS TO INCREASING YOUR USE OF BATTERY-POWERED/ELECTRIC COMMERCIAL EQUIPMENT?

Check all that apply

3%
I don’t know where to get the equipment.

5%
I don’t feel comfortable with them.

5%
Hassle of training the crew how to use.

11%
I’m not familiar with them.

11%
No barriers

11%
I don’t know how to perform maintenance or how to find a mechanic to service them.

42%
Not enough power

56%
Recharging the equipment takes too long.

59%
Equipment/battery are too expensive.

65%
Run time is too short.

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