



**2024** State Of The Battery-Powered  
Equipment Market

# POWER PLAY

EVERY YEAR, THE STORY EVOLVES, AND IN 2024, LANDSCAPE CONTRACTORS ACROSS THE COUNTRY ARE MORE INVESTED IN BATTERY-POWERED EQUIPMENT.

By **Kristen Hampshire**

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*Note: Survey results are based on more than 400 respondents. Data was collected May 20-22, 2024. Due to rounding, not all percentages will equal 100.*

**P**eter Novak’s gut told him moving from gas-powered equipment was a must. “I knew battery-powered equipment was going to be the future, so I started interfacing with manufacturers,” says the president of Serpico in Hayward, Calif.

This was eight years ago, and some of the brands he partnered with to learn about handheld, battery-powered models are not around anymore. “We started field testing the equipment,” he says, describing a year of trial and error that ultimately resulted in working directly with manufacturers to provide R&D-focused feedback.

“We learned how not durable it was back then, and we learned the pain points of charging inefficient batteries — and we also learned what we need in terms of durability, power, charge time and ergonomics,” Novak says.



Peter Novak

The verdict: “Legitimately, I could not put a backpack blower on our landscapers and expect them to do their jobs when it weighed 10 times more than what they were used to and the run times weren’t there,” Novak says.

So, he waited on the sidelines for battery technology to advance, continuing to foster relationships with manufacturers.

By 2021, Novak gained confidence that battery-powered equipment had reached a commercial-grade capacity. He started the entire testing process over again, running another year-long round of field trials of several makes and models of hand-held equipment, riding mowers and walk behinds.



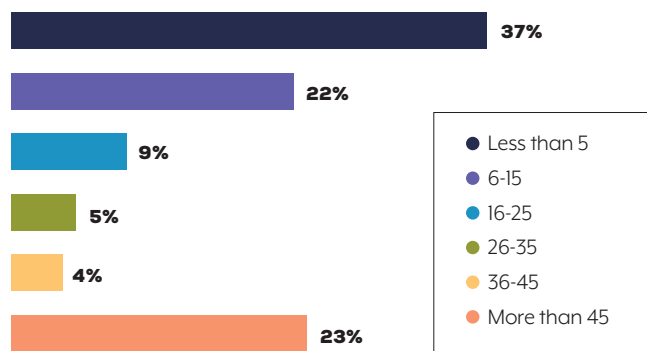
Customers and crews alike enjoy the low noise level of battery-powered equipment.

ALL HEADSHOTS COURTESY OF RESPECTIVE COMPANIES / MAIN PHOTO COURTESY OF SPARKLAWN / TRUCK PHOTO COURTESY OF SERPICO



As the technology advances, electric vehicles are also increasing in popularity throughout the industry.

**How many employees do you have?**



What was your company's overall **gross revenue** for 2023?



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What do you see as **positive aspects of battery-powered/electric equipment?**  
Check all that apply.

**67%**  
Decibel level

**57%**  
Easy to maintain

**53%**  
Ease of use

**42%**  
Environmental impact

**39%**  
Weight of the equipment

**21%**  
Easy to repair

**13%**  
Better ROI over time

**10%**  
Availability



Mike Kowalski

When Ford rolled out its PowerBoost hybrid truck with a 7.2-kilowatt on-board generator, “that is the moment we knew we were ready to convert,” Novak says.

Since then, Serpico has been gradually phasing out its gas-guzzling trucks to the hybrids, realizing double the gas mileage while attaining on-the-road charging capabilities that Novak deemed essential for running a battery-powered business.

Today, about 45% of Serpico’s equipment fleet is battery-operated and he estimates complete conversion by 2030, mostly due to production lag time on the trucks.

“It’s very robust equipment,” he says. “The crews don’t expect it to be so powerful and robust, but it is. The mowers have steel bodies and a heavy-duty feel. They are all zero-turn and we run sizes from 36 to 72 inches.”

Mike Kowalski launched his battery-only crew in 2022 and it operates on residential maintenance properties throughout Ann Arbor, Mich., where Great Outdoors is based. From mowers to blowers, everything plugs into the trailer, and the electric truck charges in a station at the shop.

Each of the company’s 18 crews is equipped with at least one electric blower following Ann Arbor’s passing of a ban on gas-powered blowers, effective June 1.

“We are migrating in this direction, and I don’t feel it’s a bad thing,” Kowalski says, adding that technicians like the quiet nature of equipment and clients are amazed they don’t hear the crew coming.

“I like being ahead of the curve,” he says, expecting to have two all-battery crews running by early spring next year.

**‘QUITE AN ENDEAVOR.’** From charging strategy to addressing a learning curve with crew member training, plus learning battery lingo like amperage draw, shifting to battery is “quite an endeavor,” Kowalski says.

“The first thing I wanted to know was, ‘Is this really viable?’” he says. “Can we get in a full day’s work when most of the batteries for handhelds say they last 45 to 50 minutes? We just wanted to make sure this would actually work, and when we got the (truck) and realized we can drive around, pull a trailer and get enough power from the truck, we knew a battery crew would work.”

Kowalski didn’t spend for the truck with larger electric charge capacity. The “normal range” is about 220 miles. On a daily basis, the crew uses half of its power.

Gradually acquiring and testing equipment, he built the battery crew one piece at a time. Its focus is residential lawns, and because the mowers reserve power while idling, there’s plenty of charge to manage the route.

For smaller equipment with limited run times, Kowalski invested in multiple batteries so the crew can simply switch them out and dock the depleted batteries on the truck’s charger to reboot.

During the past couple of years, Kowalski has adopted battery-powered equipment in other categories such as chainsaws, cut-off saws and hedge trimmers.

Investment is the operative word because the equipment and trucks do cost more. Kowalski hasn’t exactly figured out the return on investment, but the mower he purchased in 2018 is

Are you aware of any **existing or developing efforts to ban gas equipment** in your community or state?

YES  
**46%**  
NO  
**54%**

Are you aware of **any hour restrictions when using gas equipment** in your state or community?

YES  
**43%**  
NO  
**57%**

still running strong. “That’s six years, and longer than I typically keep gas-powered mowers,” he says.

FormLA in Los Angeles, Calif., only uses people and electric-powered equipment — meaning crews prefer elbow grease to gas and batteries over rumbling engines. “The costs associated with going electric are outweighed by the health benefits alone,” says Oscar Ortega, landscaping maintenance care manager.



Oscar Ortega

Some clients with asthma or allergies seek out FormLA “because they know the impact of having cleaner air near their home,” Ortega says.

Also, the crews feel better at the end of the day. “We learned working behind a gas-powered mower or blower takes a long-term toll on lung and heart health. What’s remarkable is we can actually feel the difference in our day-to-day health,” he says.

Ortega adds, “Most of us prefer to sweep or rake for the exercise and more aesthetic results, but the battery-powered blowers help in expansive spaces or on difficult materials like gravel.”

FormLA’s use of mowers is somewhat limited. Most clients cultivate grassy-meadow lawns. “Our battery-powered mowers are used on the few sites that still have turf and where clients prefer a more tailored look,” Ortega says.

For Jesse Smith at Royal Greens in Frederick, Md., sampling battery-powered sprayers and blowers for his lawn care business began about eight years ago. Back then, the equipment was clunky, and the entire unit had to be plugged in to charge vs. the battery packs they use today.

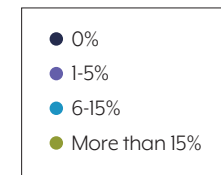
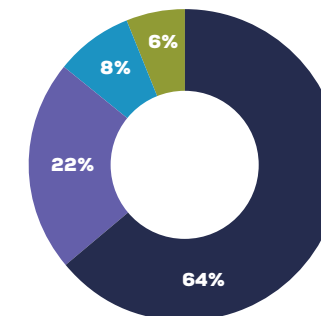
The switch has been positive for productivity and reduced callbacks.

The alternative is hand-pump sprayers, and those are no good for crews, he says.

“We are using materials more effectively because of the way they are uniformly pumped out,” Smith says. “We’re getting



What percentage of your customers **have requested crews that use battery-powered equipment?**



“We had clients comment on how quiet the crew is and one person put up an online review saying, ‘I hope you start another crew like this,’” he says. A crew member remarked that he no longer has to feel guilty about arriving at a property at 7:30 a.m. to beat the heat because no one resting indoors will hear a growling gas mower.

Ortega says when FormLA first started using battery-powered equipment, a crew showed up at a client’s site — and he was waiting for the team’s arrival. He missed it altogether because the machines were so whisper-like he didn’t realize they were maintaining the property until he walked outdoors after they were gone and saw the manicured results.

“He emailed us with kudos,” Ortega says. “Even though he was listening for us, he didn’t realize we were there. He didn’t hear the noise. He didn’t smell the fumes.”

In many Los Angeles communities, gas-powered blowers are banned because of noise and pollution concerns, he adds. “Some landscapers risk fines on themselves and their clients,” he says. “We don’t, and it is noticed.”

Billy Courtney injected the noise factor into the tagline of Bentonville, Ark.-based SparkLawn: Go Green. Go Quiet.

“A lot of our residential clients work from home and the most common feedback is,

better weed control and using the battery sprayers is easier on the guys.”

**KNOCK OFF THE NOISE.** The flashing light indicating mowers are in operation is helpful since the machines’ purr is like “cruising around in a Tesla,” says Kowalski, noting that even the high-torque spinning blades operate in hush mode.

PHOTO COURTESY OF STIHL

**2024 State Of The Battery-Powered Equipment Market**



Impending gas-powered equipment bans in some municipalities has led to an increased use in battery-powered equipment.

'We didn't know you guys were there,' and that's the best thing," Courtney says. "They say, 'I was able to take my Zoom meeting and I didn't feel like I had to apologize to everyone on the call.' That is a consistent drumbeat."

On the commercial side with clients like Starbucks, car dealerships and banks where business is conducted outdoors, SparkLawn doesn't have to schedule early morning, late evening or weekend jobs to avoid disrupting business. "Most of the feedback is about noise," Courtney says. "What we haven't gotten yet overtly is, 'Thank you for doing your job to slow climate change,' or, 'Thank you for creating green jobs in our region,' though those are real benefits."

**SOMETHING DIFFERENT.** Before launching SparkLawn, Courtney worked in the media advertising and technology space, heavily focused on consumer-packaged goods. His location in Bentonville, home of Walmart, is a retailer's mecca.

Courtney worked with Walmart, Coca-Cola, Nestle and others selling ad-tech space. He made the switch to landscaping a year ago when he launched SparkLawn, desiring a "hyper-local venture that is literally tethered to the community."

SparkLawn is the area's only battery-only landscape maintenance firm serving residential clients and commercial property owners, including national brands. "We are forward thinking, and we knew there was a better way to do an everyday business, and that is why we made the decision," he says of the battery-exclusive organization.

Courtney drives a Tesla and equips his business with electric trucks. The commercial-grade battery mowers crews operate stand up in retail environments, he says. He found hand-held batteries to "wear out fast" and moved to a backpack system with attachments including string trimmer and blower, calling the configuration and power capacity "a huge win."

"We have the flexibility of running multiple devices, so on a big landscape cleanup day, we can trim shrubs, edge and blow debris on a single charge," Courtney says.

While SparkLawn had to "cycle through and test equipment" to find the right fit, partnering with a nearby dealer who can provide support and training has been invaluable. And the equipment quality has even been surprising in some cases now that he recognizes which pieces can hold up to commercial use.

For instance, the blade tip speed on mowers is fast, some achieving up to 18 miles per hour, he says. This translates to a clean cut even in especially thick or dew-covered turf. He has noticed improvements, too.

"There is a better weight-to-torque ratio, so it doesn't jump as much, and the manufacturer has done a nice job with the width of the tires and balancing the weight so it's more centered," he says. "You can see and feel the difference in the control you have."

What are the **barriers to increasing your use of battery-powered/electric commercial equipment?**

Check all that apply.

**74%**

Run time is too short

**69%**

Equipment/battery are too expensive

**61%**

Recharging the equipment takes too long

**48%**

Not enough power

**20%**

Don't think they are environmentally-friendly

**13%**

I don't know how to perform maintenance or how to find a mechanic to service them

**10%**

No barriers

**6%**

I'm not familiar with them

**5%**

Hassle of training the crew how to use

**2%**

I don't know where to get the equipment

**Comments:** "Our biggest challenge has been solving the charging infrastructure required for the batteries. We've done that this year and we're now full steam ahead in replacing all of our 2-cycle equipment, and will then work on replacing larger gas mowers with electric options."

PHOTOS COURTESY OF GREAT OUTDOORS

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**LEVEL UP.** “You can’t just buy a bunch of new, expensive battery-powered equipment, dump it on your crews and say, ‘Here, you’re going from gas to electric,’” Novak says. “They will revolt.”

Novak’s move to electric was gradual and intentional, supported by in-house training. “We developed it in the field, translated it to paper and then established an e-learning site for our company where we nest all those trainings,” he says. “When you join the company, you go through an orientation.”

Battery-powered equipment responds differently than gas engines.

“You have to change your methodology,” Novak says.

For instance, when Serpico introduced battery blowers, crews naturally reverted to full-blast mode (when there is a power boost mode, it begs to be activated). “Your training program has to incorporate how to use the different mechanics,” Novak says.

The battery mowers Serpico uses go about twice as fast as gas-powered models. “You get so much torque and traction because you have more RPMs on the blades — so you can cut better and faster, improving productivity.”

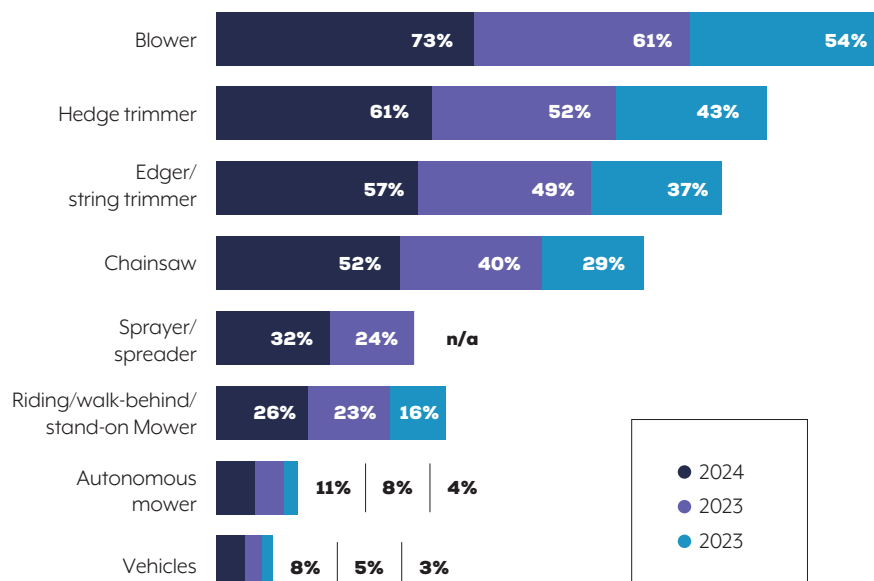
But the zero-to-hero acceleration — much like the Tesla — means taking care to not “spin out” and damage the grass, Kowalski says. “There was a learning curve, but now our technicians have gotten good with it.”

**NO GOING BACK.** Cruise the power equipment aisles of a box store in many regions throughout the country and the offerings are largely battery-powered. “There is a normalization of the equipment that is happening at the entry-point level, which is great,” Courtney says. “We’ll continue to see customer education plus some regulatory actions largely predicated on noise and pollution reduction.”

Courtney adds, “Within 10 years, if someone is out in a retail complex operating a gas blower, people will think, ‘I can’t believe you’re still using that.’ There will be

What **battery-powered/electric equipment** do you use at your landscaping or lawn care company?

Check all that apply.



**“Within 10 years, if someone is out in a retail complex operating a gas blower, people will think, ‘I can’t believe you’re still using that.’ There will be a stigma associated with it. That’s the way I see things going.”**

— BILLY COURTNEY, SPARKLAWN

a stigma associated with it. That’s the way I see things going.”

It’s not just a California thing.

Smith says nearby Montgomery County, Md., famous for its pesticide ban, also issued noise ordinances and restrictions on gas-powered hand-held equipment “for now,” he says, hinting there’s no going back. Which county is next?

“We see a philosophical change in Ann Arbor,” Kowalski says, relating that the city pledged to be carbon neutral by 2050. He is encouraged by the progress in the battery-powered outdoor equipment sector but not ready to deploy an electric fleet to a large-scale commercial property that requires a daylong crew.

“(Battery) has a place on commercial sites, however,” he says, adding that it has been a few years since he operated his electric crew on a 35-acre property. “We haven’t been able to test our battery crew out on that one yet.”

Novak suggests establishing a relationship with a provider who offers battery-powered options and testing equipment in the field.

“Educate yourself,” he adds, specifically pointing to the importance of a plan on how to charge while on the road. “This is not a gas mower. There’s a lot you need to know about how to support these batteries.” **L&L**

The author is a freelance writer based in Cleveland.

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