

AGZA's Written Comments for CARB's Public Meeting on SORE Emissions

November 15, 2018

Thank you Chair Nichols, CARB Board, scientists and staff. My name is Luke Massman-Johnson with AGZA, the American Green Zone Alliance. We're honored to have you reading this statement.

The comments below aren't anything you don't already know. So my purpose here is to encourage you, simply and emphatically, to put an expiration date on gas-powered lawn and garden equipment in California.

CARB has already played an historic role in measuring and regulating air pollutants in the largest sectors of society. With compelling incentives and bold regulations, CARB has helped the EPA and the entire nation dramatically reduce the health and environmental impacts of fossil fuels from transportation, energy, agriculture, industry, etc. Because of successes like these, global leaders who are now faced with the unprecedented responsibility of climate change have been emboldened to declare target dates for an end to fossil fuels in many key sectors within the next decade.

Meanwhile, the lawn and garden industry has enjoyed a low profile on the sideline. While CARB and the EPA have enacted a number of regulations and incentives, millions of gas machines in use every day are outdated or in various states of disrepair, polluting more than regulations allow and yet remaining unmonitored and uncontrolled.

Further, millions of gas equipment operators are oblivious to the list of toxic pollutants they're breathing and absorbing. They aren't aware that their string trimmer spews far more smog-forming emissions per hour than their car. They don't understand that ear damage is a function of both sound pressure and duration, or that even minor hearing loss is permanent. And they certainly don't know the safe exposure level for cancer-causing benzene and 1,3-butadiene is zero.

Even straightforward gas leaf blower ordinances in prominent upscale communities like Santa Monica are universally known to be useless. Literally hundreds of cities across the country endure annual battles in council chambers between outraged citizens and defensive gas crews.

The irony is that since operators don't know these things, they're not looking for the alternatives. And since they're not looking for alternatives, they don't know that commercial-grade low-noise zero-emission equipment is available today. This lack of information is not their fault or their responsibility — it is ours.

AGZA is deeply grateful to CARB for the time, resources and talent you have dedicated to studying the effects of emissions from SOREs. We recognize the extraordinary effort and scientific rigor required to define, conduct, and report studies that are measured in micrograms-per-cubic-meter and cancers-per-million workers.

Your work gives veracity to AGZA's on-the-ground face-to-face advocacy for cleaner, quieter, zero-emission equipment and gas-free operations in the lawn care industry. It's hard for us to convince city managers and grounds crews how serious the health and environmental hazards of gas-powered lawn care are if we can't point to indisputable scientific evidence.

CARB and AGZA enjoy a symbiotic relationship and we walk the same path: study, educate, change minds, change behavior. What CARB does so well in the lab and with legislation backs AGZA's pioneering role in field-testing, advocacy, education and training on the ground with operators. Your eye-opening 2020 study gives us compelling data to convince mayors and city managers that transitioning city-wide municipal operations to electric is important and urgent. And the success of AGZA's Green Zone Certification and AGZA Service Professional Accreditation gives CARB proof that your zero-emission goals are not only achievable, but being done at scale today.

That said, we'd also like to keep all this research and data in perspective: the debate and decisions in front of CARB, and all the comments lobbied, are under the umbrella of lawn care. We are talking about manicuring grass and shaping bushes. We are talking about an industry that didn't exist for most Americans until well after WWII. An industry which only recently arms swarms of commercial crews with gas-powered leaf blowers in every neighborhood across the country.

To beautify our green spaces with maximum power and speed, we choose to burn well over a billion gallons of gas into the air and spill tens of millions of gallons into the soil and evaporative emissions every year. These are volumes and toxicities that we have long-ago banished from most other key sectors of society.

It's not that this industry specifically wants to cause pollution and health risks and environmental damage — it's that until recently there hasn't been legitimately viable alternatives to gas. But those days have just ended.

The risks of inaction are obvious:

1. Air pollution is among the deadliest health threats to communities around the world. Its primary cause is man-made combustion.
2. Climate Change is fast becoming an existential threat to all life on Earth. Its primary cause is man-made combustion.
3. Most people are unaware that gas-powered lawn care contributes significantly to both problems, as well as to user health, and they don't know zero-emission alternatives are viable.

Happily, the solutions are also obvious:

1. Civilization must rid ourselves of fossil fuels with an urgency and commitment not seen since WWII.
2. CARB is mandated to protect the public from the harmful effects of air pollution and climate change — and it has the tools to do so.
3. Battery-electric equipment has improved dramatically in just the past three years, and it's now viable for all-day commercial crews.

What is not obvious — and what lies at the heart of CARB's decision on this topic — is whether we collectively will be brave enough and fast enough to make the changes that absolutely must be made immediately.

To this end, and with great respect and support, AGZA strongly encourages CARB to establish a target date of 2025 to prohibit the sale of new gas lawn and garden equipment throughout California. AGZA is in a unique position to support any CARB initiative, and to help us get there by shepherding cities, schools, hospitals, commercial crews and homeowners to make the transition safely, effectively, and profitably.

If this target feels too ambitious, we must remember that air pollution and climate change don't respect borders and don't care about our opinions or our politics. The science and math are cold facts, unrelenting and accelerating. Only our fast and sweeping actions can make a difference in time.

Thank you for reviewing our statement, and for your very important ongoing work.



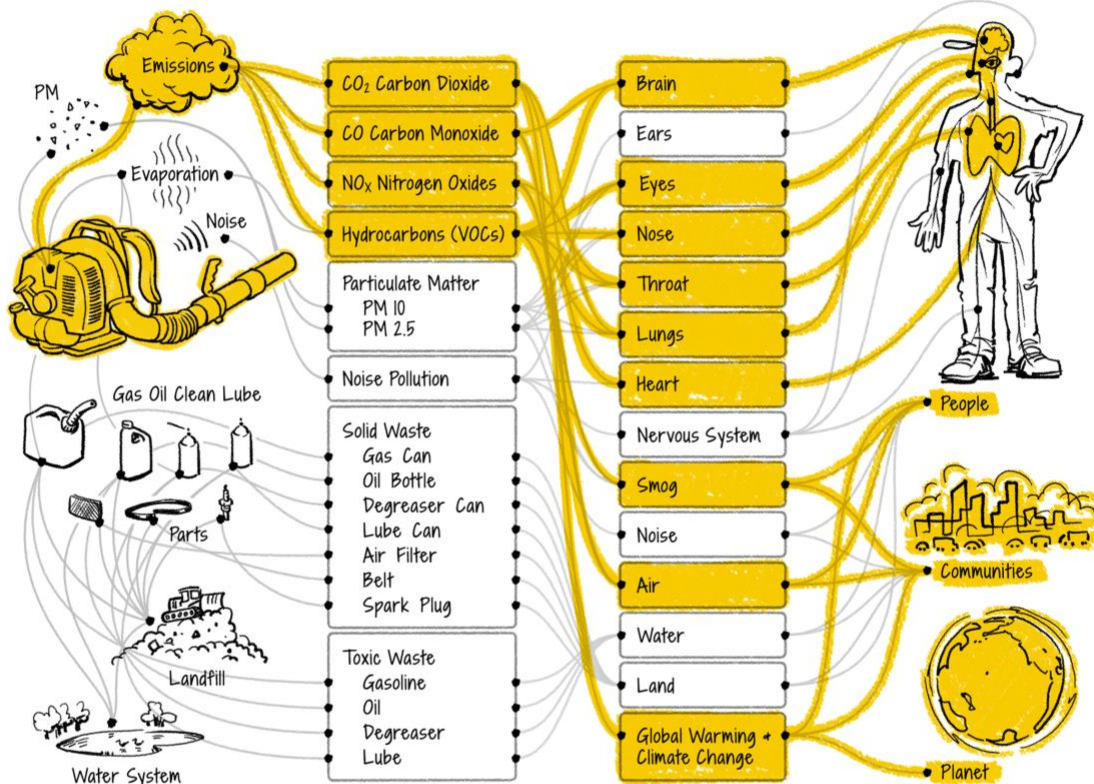
Luke Massman Johnson
Communications Director
American Green Zone Alliance

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Q: WHAT'S SO BAD ABOUT GAS LAWN TOOLS?

SOURCES → POLLUTANTS → IMPACTS → AFFECTED



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Q: WHAT'S THE ALTERNATIVE?

LOW-NOISE ZERO-EMISSION BATTERY-ELECTRIC TOOLS & SUSTAINABLE OPERATIONS

Transitioning your grounds maintenance equipment from dirty gas to clean electric will instantly eliminate or radically reduce almost every hazardous source and pollutant that impacts you, your community and the planet. Electric motors create zero smog, zero carcinogenic VOCs, zero toxic particulates, and zero greenhouse gasses. Electric tools are 40%-70% quieter, solving the biggest complaint about gas.

Electric motors don't need gas or oil, spark plugs, filters, solvents or stabilizers, so they save money while also eliminating those waste streams from entering landfills, soil, and water. In fact, since electric operations require almost no maintenance, they quickly achieve ROI and are increasingly profitable thereafter. So what's the best way for cities, schools, and homeowners to evolve to clean electric? AGZA educates and trains AGZA Accredited Service Professionals to establish and optimize low impact battery-electric operations. And we create, verify, and certify properties maintained with low-noise and zero-emissions as AGZA Green Zones®. Learn more at AGZA.net.

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AGZA
AMERICAN GREEN ZONE ALLIANCE


THE GLOBAL LEADER IN LOW-NOISE ZERO-EMISSION
SUSTAINABLE GROUNDS MAINTENANCE STRATEGIES

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Q: WHAT'S SO BAD ABOUT GAS LAWN TOOLS?

EMISSIONS	HEALTH RISKS	NOISE	VIBRATION	GAS & OIL
				
Toxic gasses, GHGs, carcinogenic PM	Asthma, heart disease, hypertension, cancer	Tinnitus, hearing loss, headaches, stress	Tingling, numbness, vibration syndrome	1.2 B gal burned, 17M gal spilled every year
TOXIC WASTE	SOLID WASTE	INEFFICIENT	MAINTENANCE	EXPENSE
				
Oil, cleaners, solvents, degreasers, stabilizers	Air + fuel filters, spark plugs, hoses, belts	High friction + heat, only 20%-40% efficient	Frequent maintenance, parts replacement	High operational cost of fuel, oil and repairs

Q: WHY ARE ELECTRIC MORE SUSTAINABLE?

CLEAN	HEALTHY	QUIET	SMOOTH	ELECTRIC
				
Zero-emissions during operations + cleanup	No toxic gasses, VOCs, HCs, carcinogenic PM	40% - 70% quieter, peace + sanity restored	Symmetric, magnetic, almost zero vibrations	Zero gas + oil, electric gets cleaner w/ the grid
SUSTAINABLE	RECHARGEABLE	EFFICIENT	SIMPLE	PROFITABLE
				
No pollution in soil, water, air + atmosphere	No bottles, cans, trash, spills, evaporation	Super low friction, low heat, 90% efficient	Far fewer parts, far less maintenance	Very low cost operation means a healthy ROI

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Q: WHAT IS A CERTIFIED AGZA GREEN ZONE® ?

A CERTIFIED AGZA GREEN ZONE® IS A DEFINED PROPERTY OR COLLECTION OF PROPERTIES ON WHICH ALL ROUTINE GROUNDS MAINTENANCE IS PERFORMED WITH LOW-NOISE ZERO-EMISSION ELECTRIC EQUIPMENT AND HAND TOOLS.

An AGZA Green Zone can be created for any outdoor space: private yards, public parks, sports fields, golf courses, universities, and entire cities.

AGZA Green Zone City Certification is the first and most comprehensive of its kind in the world. We measure, evaluate, and report on the full spectrum of health and environmental impacts of ongoing gas grounds maintenance for all municipal operations. We recommend and specify electric equipment fleets and battery banks that can fully replace all routine gas maintenance. We educate management and crews on the many hazards inherent to using gas tools. And we train crews to use electric equipment safely and optimally – including maintenance, charging and storage. This holistic approach maximizes work production and tool life, and ensures ROI and profitability.



Q: WHAT ARE THE KEY BENEFITS?

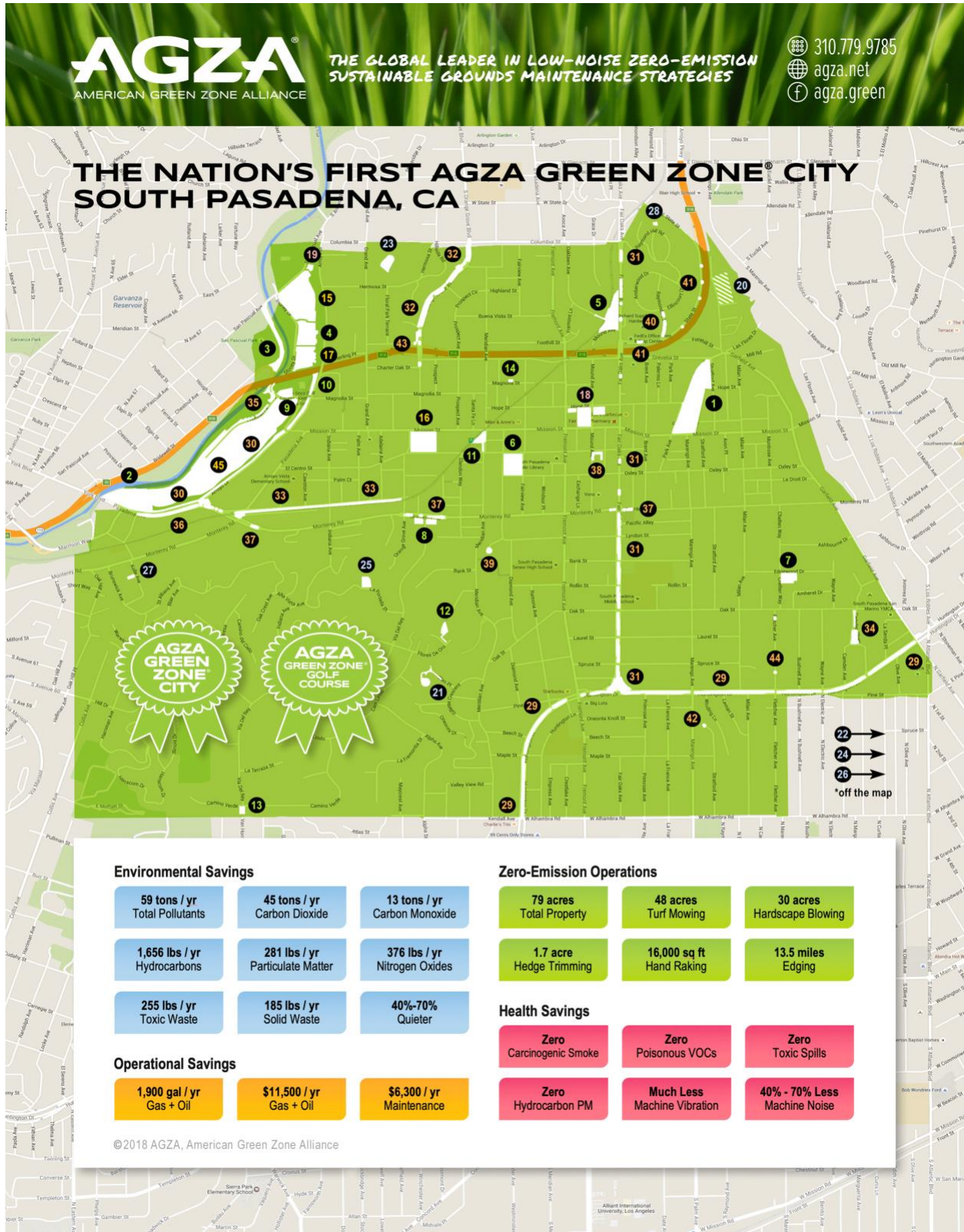
- 1. PERMANENTLY ELIMINATE ALL GAS POLLUTION**
No smog-forming gases (NOx & VOCs), no greenhouse gases (CO2), no hydrocarbon particulate matter (PM 2.5)
- 2. SLASH OPERATIONAL NOISE POLLUTION 40% -70%**
Quieter public spaces, neighborhoods, school campuses, libraries, museums, hospitals, and business parks
- 3. ELIMINATE GAS, OIL, GAS PARTS & CHEMICALS**
No gas, oil, mixes, stabilizers, spark plugs, filters, belts, hoses, cleaners, cans or rags in landfills and water tables
- 4. SLASH COSTS FOR FUEL, PARTS & MAINTENANCE**
Incredible cost reductions per hour during operation and maintenance mean a great ROI and ongoing savings.
- 5. RADICALLY IMPROVE CREWS HEALTH & SAFETY**
No tinnitus, COPD, asthma, bronchitis, vibration syndrome, hypertension, headaches or dizziness
- 6. IMPROVE QUALITY OF LIFE ACROSS COMMUNITIES**
Peaceful outdoor spaces, clean air and clear water are good for workers and the entire communities they serve.
- 7. ENHANCE ENVIRONMENTAL & CLIMATE GOALS**
Measureable health and environmental benefits contribute to existing sustainability and climate mitigation goals.
- 8. DEMONSTRATE SUSTAINABILITY LEADERSHIP**
Lead by example, raise sustainability awareness, and inspire low-noise zero-emission lawn care for others.
- 9. AGZA SERVICE PROFESSIONAL ACCREDITATION**
Increase performance and lifespan of electric equipment. New green collar skillset enhances career of grounds crews.
- 10. AGZA GREEN ZONE® CERTIFICATION**
Compelling marketing advantages, especially for schools, universities, HOAs, golf courses, and sports venues

Q: HOW DOES AGZA CREATE GREEN ZONES?

- 1. INVENTORY** existing gas equipment and operations.
- 2. EVALUATE** health and environmental impacts of gas.
- 3. DEFINE** Green Zone properties and maintenance tasks.
- 4. SPECIFY** electric equipment fleet and battery bank.
- 5. PREPARE** charging and storage facilities.
- 6. ROLL OUT**, set up, and verify new equipment fleet.
- 7. EDUCATE**, train and Accredit management and crew.
- 8. MONITOR** and optimize equipment and crew.
- 9. CERTIFY** the AGZA Green Zone.
- 10. CELEBRATE** sustainability leadership and share success.

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TESTIMONIALS

1. JACKSON DODDS & CO, an AGZA Accredited Service Professional

AGZA has been instrumental in helping our company in the transition to battery-electric powered equipment. The knowledge that AGZA has shared gave us opportunities to make the best choices. Their educational training and documented health risks are a value in moving ahead with an understanding of the importance in updating regulation standards with gas powered equipment.

*Doreen Johnston
Sales Representative
Jackson Dodds & Co
AGZA Accredited Service Professional serving Long Island, NY*

2. DIANA ZOGRAN, LA Neighborhood Council Sustainability Alliance

I am an enthusiastic advocate of the American Green Zone Alliance (AGZA) and their AGZA Green Zone certification program. In fact, I recommended them for the City of Los Angeles Recreation and Parks zero emissions pilot project. We know that crew education and training on electric tools is a key factor to a successful municipal landscape maintenance program and there is no better organization than AGZA to help transition municipal grounds crews from gas to electric.

*Diana Zogran
Garden Ecologist @ It Takes A Garden
NCSA Zero Emissions Leaf Blower Working Group, Environmental Health Committee Chair, and Trees
Committee Advisor
Founder @ Treeology.com*

3. THE CITY OF OJAI, CA, an AGZA Green Zone City served by AGZA Accredited Service Professionals

Our citizens [in Ojai] were tired of all the gas equipment that was being used, not only by us but by all the gardeners in the area. We knew that something had to change and we had to lead the way. I had already been doing my research on electric equipment, but it was not until I contacted AGZA that we started this journey.

We did have a large learning curve that we needed to get over. We are so used to what we have had for many years that change becomes an issue. But AGZA makes this process easy. They've been there every step of the way and that is great. It's new territory that most people don't have a clue about. Dan and Luke are very knowledgeable and can help out with any questions anyone could have.

We know that we are doing something great for our health, community, and our planet — not only for us right now in the present but for our kids in the future.

*Miguel Contreras
Lead Senior Maintenance
City of Ojai*

4. HUNTINGTON CALM, an AGZA Non-profit Strategic Partner

As a Co-founder of Huntington CALM (Clean Alternative Landscaping Methods) along with my colleague Dr. Lucy Weinstein, Chair of the American Academy of Pediatrics Environmental Health Committee Chapter 2, we are strong proponents of transitioning from highly polluting gas-intensive equipment to clean cost-effective and environmentally friendly battery equipment.

We have worked with large municipalities in New York and they are extremely satisfied with the results, the economic savings, and worker productivity achieved with battery equipment.

As in all things, proper training and education makes any transition easier and faster, with better and more successful end results. This is where AGZA, with their vast knowledge and proven track-record in the industry, plays an essential role. Huntington CALM has worked many times with AGZA and we are continually impressed with their rigorous testing, knowledge, and ability to communicate in an extremely effective manner. AGZA always delivers the goods and ensures a successful transition.

Huntington CALM believes that a fair and reasonable course of action for CARB to take is to phase out the most highly polluting two stroke engine equipment by 2021 followed by a phase out of the larger four stroke engine equipment by 2023.

*Dr. Bonnie Sager
Co-Founder, Huntington CALM
AGZA East Coast Strategic Partner*

5. VAN JAMES FURNISS, an AGZA Strategic Partner and Sub-Contractor

I believe we all want clean air, a lessening dependence on fossil fuel, and safe working conditions for all. It makes no sense to use archaic, harmful equipment when much better, cleaner, and safer options exist. The switch to battery-powered equipment is now practical because of recent improvements in battery technology; improvements that deliver more power, hold a charge longer, and charge faster. This new technology allows commercial users to maintain large properties without sacrificing income, efficiency, or time.

Over the past several years I have had the pleasure of working with AGZA on several projects in the NY area and I can attest to their knowledge, transparency, professionalism, and dedication. They walk the walk and have hands-on experience with all the equipment in the field always giving unbiased, reliable information and recommendations. Their accreditation process insures a smooth and successful transition from gas to battery equipment. Crew members feel a sense of pride and accomplishment because they receive the tools and training that ensures their success. I have personally witnessed the ah-ha moment when die-hard gas guys see the merits, understand the profitability, and realize the capability of industrial battery equipment. Even the most skeptical have become proponents.

I hope CARB will take swift action to regulate this industry and help it transition to zero emission, low-noise grounds maintenance practices through incentives and legislation.

*Van James Furniss
Plant Utilities Engineer
SUNY College at Old Westbury*