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SUBMISSION TO DRAFT NSW CLEAN AIR STRATEGY

Thank you for providing the opportunity to comment on the draft NSW Clean Air Strategy.

Zeromow is a non-profit initiative helping to create awareness of the benefits of making the switch to clean, zero emission battery-electric mowing and gardening tools. The vision of Zeromow is to see the rapid transition to battery-electric equipment (mowers, trimmers, chainsaws, leafblowers etc), powered by 100% renewable energy.

The frequent use of petrol powered equipment in landscape and mowing operations is a significant and growing source of air pollution and greenhouse gas emissions. Demand for outdoor mowing and gardening equipment in Australia is projected to increase in the coming decades, along with Australia's population growth.

Making the rapid transition to zero emission battery-electric equipment would help improve air quality and reduce health risks, along with reducing noise pollution, greenhouse gas emissions and solid and toxic waste.

Air Pollution and health impacts from the use of petrol powered lawn and garden equipment

Fossil fuel powered machines are especially high polluters relative to their engine size and usage. Non-Road Spark Ignition (petrol) Engines and Equipment (NRSIEE), which include outdoor lawn and garden maintenance equipment, can contribute up to 10% of overall level of air pollution, including particulate

matter, oxides of nitrogen, volatile organic compounds, carbon monoxide and a range of other air toxins.[1]

Highly polluting petrol equipment is used extensively to maintain grounds in schools, universities, hospitals, retirement villages, parks, sports fields, golf courses, business parks, apartment buildings and homes.

Unlike vehicles that emit all their air pollution over a big stretch of road, equipment such as leaf-blowers, mowers and grass trimmers often deposit it all in one front or backyard.

The World Health Organisation states "air pollution is now the world's largest single environmental health risk"[2]. There is no safe level of air pollution.

The collective emissions from fossil-fuel powered landscape maintenance equipment contribute significantly to primary health risks, including lung disease, such as asthma, bronchitis, emphysema and lung cancer. These health risks directly impact operators of petrol powered equipment, who have repeated direct exposure to harmful air pollutants, as well as the community at large.

Benefits of zero-emission battery electric equipment

Transitioning grounds maintenance equipment from petrol to clean electric, would eliminate (or radically reduce) almost every air pollutant produced, along with the associated adverse health impacts on individuals, communities and the planet. It would also save millions of dollars in potential health costs.[3]

Battery-electric tools create *zero* smog, *zero* carcinogenic VOCs, *zero* toxic particulates and *zero* greenhouse gases. They don't need petrol, oil, spark plugs or filters so eliminate those waste streams from entering landfills, soil and water. They require little maintenance, save money, and are 40-70% quieter than petrol equivalents.[4]

Advances in battery technology and reductions in battery costs mean there are now high performance, affordable, cordless battery-electric alternatives available to replace petrol based tools. They can deliver petrol-like performance without the harmful emissions. They can be powered using electricity from clean, renewable sources such as solar and wind.

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[1] Department of Environment and Energy, Australian Government, 2016 http://www.environment.gov.au/protection/air-quality/non-road-spark-ignition-engines-and-equipment

[2] The World Health Organisation, '7 Million premature deaths annually linked to air pollution', http://www.who.int/mediacentre/news/releases/2014/air-pollution/en/

[3] Department of Environment and Energy, Australian Government, '*Reducing Emissions from Non-road spark ignition engines and equipment: Decision regulation impact statement*', 2016.

[4] American Green Zone Alliance (AGZA), https://www.agza.net

Current emission standards

In 2017 Australia introduced a National Product Emission Standard (NPES) that placed regulations on emissions from NRSIEE, to be phased in by 2020. Australia was many years behind the rest of the world in introducing such regulations, and had become a dumping ground for highly polluting petrol equipment.

Zero emission battery-electric alternatives barely got a mention in the NPES, and were not investigated.

The NPES regulations only apply to new petrol equipment and do nothing to address the highly polluting petrol equipment already in existence.

Meanwhile, other country jurisdictions are talking about phasing out fossil-fuel powered landscape maintenance equipment altogether. California, for example, is currently pushing for a full prohibition on the sale of new petrol powered lawn and garden tools by 2025.

Australia lags way behind in addressing this issue. It is time to stop talking about 'lowering' emissions and start talking about eliminating emissions altogether.

Strategies the NSW Government could introduce to fast-track the transition to zero emission lawn and garden equipment

The draft NSW Clean Air Strategy does little to address the problem of emissions from petrol powered lawn and garden equipment, other than making passing reference to the government procurement of 'lower emissions equipment' (p.39, paragraph 2).

The NSW Government could play an important role in progressing policies and incentives to increase the uptake of *zero emission* battery-electric equipment and hasten the phase out of polluting fossil fuel powered tools.

Some suggestions include:

- Encouraging the procurement of zero emission battery-electric equipment for government landscape maintenance operations and contractors, both at a state level and also in local councils etc.
  Page 39, paragraph 2 of the draft Clean Air Strategy should be changed to read: "The government also leads by example in requiring procurement of *zero emission equipment*…The policy requires purchase of *zero emissions equipment* and products by government agencies…"

- Providing buyback, exchange or trade-in schemes so that old petrol equipment can be replaced with zero emission battery-electric alternatives.[5]
- Providing rebates or discounts for battery-electric equipment to be made available through authorised dealerships.
- Introducing a form of accreditation or certification for commercial and residential grounds maintenance when it is performed using low-impact, zero emission equipment and people-powered tools. For example, the AGZA Green Zone Certification Program in California.[6]
- Introducing restrictions on time of use of petrol powered equipment (such as leaf blowers, grasstrimmers etc) and ensuring they can't exceed a certain noise threshold.
- Allowing commercial operators who use battery-electric equipment to commence operations earlier in the morning, especially during the heat of summer.
- Offering demonstrations and in-field trials of battery powered equipment.
- Providing improved consumer information on the benefits of switching to battery-electric equipment.
- Setting a target date (well before 2030) to ban all new sales of petrol powered equipment.

The NSW Government could send a strong, positive message by taking action to help fast-track the transition to zero emission lawn and garden maintenance equipment. Such action would not only improve the health and working conditions for landscape maintenance workers, but would create a cleaner, quieter and healthier environment for everyone to enjoy.

Yours sincerely,

Sally Perini
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[5] South Coast Air Quality Management District, LA, http://www.aqmd.gov/home/programs/commmuity/community-detail?title=lawn-equipment
[6] American Green Zone Alliance (AGZA) https://agza.net/