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The Secretary
Economy and Infrastructure Committee
Parliament House, Spring Street
EAST MELBOURNE VIC 3002

SUBMISSION TO INQUIRY INTO HEALTH IMPACTS OF AIR POLLUTION IN VICTORIA

Thank you for providing the opportunity to comment on the *Inquiry into Health Impacts of Air Pollution in Victoria*.

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 outdoor lawn and garden maintenance 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 levels 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, roadsides, sports fields, golf courses, business parks, apartment buildings, homes etc.

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

The World Health Organisation states that “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 lawn and garden 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.

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.

The NPES regulations only apply to new petrol equipment. They do nothing to address the highly polluting petrol equipment already in existence. Battery-electric alternatives barely got a mention in the NPES, and were not investigated.

Meanwhile, other country jurisdictions are talking about phasing out fossil-fuel powered landscape maintenance equipment. 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. It's time to kick petrol off the grass.

Strategies the Victorian Government could introduce to fast-track the transition to zero emission landscape maintenance equipment.

Victoria 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:

- The provision of improved consumer information.
- Encouraging the procurement of battery-electric equipment for government landscape maintenance operations and contractors, both at a state level and also in local councils etc. Lead by example.
- Providing buyback, exchange or trade-in schemes so that old petrol equipment can be replaced with zero emission alternatives.⁵
- Providing rebates or discounts for battery electric equipment to be made available through authorised dealerships.
- Allowing commercial operators who use battery-electric equipment to commence operations earlier in the morning, especially during the heat of summer.
- Introducing a form of accreditation or certification for commercial and residential grounds maintenance when it is performed using low-impact,

⁵ South Coast Air Quality Management District, LA,
<http://www.aqmd.gov/home/programs/commmunity/community-detail?title=lawn-equipment>

zero emission equipment and people-powered tools. For example, the AGZA Green Zone Certification Program in California.⁶

Such actions 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.

Any plans the Victorian Government has to minimise the health impact of air pollution in Victoria should take into consideration the emissions from the lawn and garden maintenance sector.

Yours sincerely,



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⁶ American Green Zone Alliance (AGZA) <https://agza.net/>