

# AB 1346 (Berman & Gonzalez)

## Phase-out of Small Gas-Powered Engines

### SUMMARY

AB 1346 phases out the sale of new gas-powered small off-road engines, which have recently outpaced passenger cars in emissions of smog-forming pollutants that adversely impact human health and the environment.<sup>1</sup>

Contingent on a regulatory process at the California Air Resources Board (CARB), new sales of most small off-road engines must be zero-emission by 2024, with portable generators delayed to 2028.

The bill does not affect equipment already owned or purchased before the rules take effect.

### BACKGROUND

Small off-road engines (SORE) are engines that produce 19 kilowatts gross power or less (25 horsepower or less). These engines are primarily used in lawn and garden equipment (such as leaf blowers and lawn mowers).

SORE emit high levels of air pollutants, primarily oxides of nitrogen (NOx) and reactive organic gases (ROG). NOx and ROG together contribute to the formation of ozone, a criteria air pollutant that adversely impacts human health, causing immediate breathing problems, asthma attacks, respiratory and cardiovascular harm, and premature death.<sup>2</sup> California currently exceeds U.S. Environmental Protection Agency and state standards for ozone in many areas, including the South Coast Air Basin, the Bay Area, and Sacramento.<sup>3</sup> NOx also contributes to the formulation of particulate matter (PM), which has direct negative respiratory health impacts.<sup>4</sup> Many areas in California currently fail to meet PM standards, including the South Coast Air Basin and the San Joaquin Valley Air Basin.<sup>5</sup>

One hour of operating a commercial leaf blower can emit as much ROG and NOx as driving 1,100 miles in a 2017 Toyota Camry.<sup>6</sup> California daily NOx and ROG emissions from SORE surpassed emissions from light-duty passenger cars in 2021.

### AFFECTED EQUIPMENT

#### What equipment is affected?

- Leaf blower (backpack and handheld)
- Lawn mower (push and riding)
- Small chainsaw (under 45cc)
- Brushcutter (under 40cc)
- Carpet cleaner
- Commercial turf equipment
- Edger/ Hedge trimmer
- Floor/concrete polishing equipment
- Golf cart
- Pole hedge trimmer/pole saw
- Pressure washer
- Portable generator
- Pump (under 40 cc)
- Tiller
- Utility cart
- Woodsplitter
- Other engines 25 horsepower or less

#### What equipment is not affected?

- Off-road vehicles, such as ATVs or motorcycles
- Agricultural mowing equipment
- Brushcutter/clearing saw (40cc and above)
- Chipper
- Construction equipment
- Farm equipment
- Large chainsaw (45cc and above)
- Stationary generator
- For a full list of exempt equipment, see [the Preempt Equipment List](#).

## FREQUENTLY ASKED QUESTIONS

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### How will this bill be implemented?

- CARB will adopt cost-effective and technologically feasible regulations to establish a zero-emission standard for SORE by July 1, 2022. Those regulations will apply to engines manufactured after January 1, 2024, (2028 for portable generators), or when CARB determines is feasible, whichever is later.
- You can follow the regulatory process on the [Proposed Amendments to the Small Off-Road Engine Regulations: Transition to Zero Emissions](#) at CARB.

### Do I have to stop using the equipment I have now?

- No, the bill does not apply to equipment already purchased or in use before the new rules take effect.

### How will landscapers transition to zero-emission equipment?

- Landscapers will not have to change out their existing equipment or transition to zero-emission equipment all at once.
- The state budget includes \$30 million for an incentive program for small landscaping businesses to transition to zero-emission equipment. This will help cover up-front costs of battery equipment. Details of this program will be worked out through a public process at CARB.
- Cities, schools, parks, and universities have already transitioned to zero-emission landscaping.<sup>7</sup> There are at least 12 brands of zero-emission lawn and garden equipment designed for professional users available for sale.

### What about equipment firefighters need for emergencies?

- Fire, police, and other emergency response agencies have an exemption.<sup>8</sup> Chainsaws designed for use by firefighters are typically large and not considered SORE.<sup>9</sup>

### What about portable generators used for back-up power?

- Stationary generators are not affected.
- Sales of new portable gas generators will not be phased out until 2028.
- This extension will provide time for manufacturers to develop cost-effective zero-emission generators to meet consumer needs during power outages by 2028.
- There are currently at least 20 manufacturers of portable zero-emission generators that can run major household appliances and small electronics. For example, the Goal Yeti 6000X has 6,071 watt-hours of energy storage and can run a full-size refrigerator for 110 hours.<sup>10</sup>

### Why is this transition necessary?

- SORE are a disproportionate and growing contributor to air pollution, with smog-forming emissions surpassing those from passenger cars in California.
- Operators of gas-powered equipment face disproportionate health risks from air pollution and air toxics, including asthma and lung disease.<sup>11</sup>
- A 2018 study found that the volatile organic compounds (VOCs) emitted by gas equipment could potentially double the cancer risk to operators.<sup>12</sup>

## FOR MORE INFORMATION

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<sup>1</sup> California Air Resources Board, [Small Off-Road Engines: 2021 Pre-Rulemaking Workshop](#).

<sup>2</sup> American Lung Association, [Ozone](#).

<sup>3</sup> California Air Resources Board, [Area Designations for State Ambient Air Quality Standards: Ozone](#).

<sup>4</sup> California Air Resources Board, [Inhalable Particulate Matter and Health](#).

<sup>5</sup> California Air Resources Board, [Area Designations for National Ambient Air Quality Standards: PM2.5](#).

<sup>6</sup> California Air Resources Board, [Small Engines in California](#).

<sup>7</sup> For examples of zero-emission commercial landscaping, see [American Green Zone Alliance](#).

<sup>8</sup> [Title 13 CCR section 2403, subd. \(f\)](#).

<sup>9</sup> California Air Resources Board: [Public Hearing to Consider Amendments to the Small Off-Road Engine Regulations: Transition to Zero-Emissions](#), pg 12

<sup>10</sup> California Air Resources Board: [Public Hearing to Consider Amendments to the Small Off-Road Engine Regulations: Transition to Zero-Emissions](#), pg 24

<sup>11</sup> Fair Warning: [Leaf Blowers Flagged as Prodigious Polluters—And Possible Health Threat](#)

<sup>12</sup> CARB Research Division: [Operator Exposure to Emissions from Lawn and Garden Equipment](#)