

## INCREMENTAL COST-EFFECTIVENESS ANALYSIS

### PROPOSED AMENDED RULE 69.4.1 – STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES

Health and Safety Code Section 40920.6(a) requires air pollution control districts to identify one or more potential control options that achieve at least the same benefit as the proposed rule, assess the cost-effectiveness of those options and calculate the incremental cost-effectiveness of each identified option. Incremental cost-effectiveness is defined as the difference in control costs divided by the difference in emission reductions between two potential options achieving the same emission reduction goal.

The only potential option that achieves at least the same or better environmental benefits from controlling emissions from stationary reciprocating internal combustion engines would be to adopt the lower oxides of nitrogen (NO<sub>x</sub>) emission limits of Rule 1110.2 (Emissions from Gaseous- and Liquid-Fueled Engines) of the South Coast Air Quality Management District (SCAQMD).

Table 1. SDAPCD Rule 69.4.1 – Proposed Amendments

NO <sub>x</sub> Emission Reductions	292 tons per year = 583,400 pounds per year
Annualized Cost for proposed Rule 69.4.1	\$3,041,200 per year
Cost-Effectiveness	\$5.21 per pound NO <sub>x</sub> reduced

Table 2. SCAQMD Rule 1110.2 – 2019

NO <sub>x</sub> Emission Reductions	463 tons per year = 926,000 pounds per year
Annualized cost	\$12,646,180 per year
Cost-Effectiveness	\$13.66 per pound NO <sub>x</sub> reduced

Table 3. Incremental Cost-Effectiveness

Incremental Annualized Cost	$\$12,646,180 - \$3,041,200 = \$9,604,980$ per year
Incremental Annual Emission Reductions	$926,000 - 583,400 = 342,600$ pounds per year
Incremental Cost-Effectiveness	\$28 per pound NO <sub>x</sub> reduced

As shown in Table 3, the incremental cost-effectiveness of achieving higher emission reductions is \$28 per pound of NO<sub>x</sub> reduced. This means that each extra pound of NO<sub>x</sub> emissions that would be reduced by adopting the more stringent limits of SCAQMD Rule 1110.2 would cost \$28 in San Diego County. Therefore, this potential option is not feasible.