

LSI AB1085 Fact Sheet

Cost savings

- 2006 Form 399 Attachment identified 46,000 units in one of the four categories of equipment affected by the LSI fleet regulation. 12,000 of these units were not expected to be addressed by routine turnover. Of the 12,000 units, 20 percent or 2,400 units were expected to reside in small fleets exempt from the fleet average. The remaining 9,600 units were expected to be retrofitted or replaced. 20 percent of these units were expected to be limited hours of use (no reference) and 5 percent were expected to be specialty equipment (manufacturer calls).
- The range of cost for LHU units is as follows:
 - LHU = $(0.20)(9600 \text{ units}) = 1,920 \text{ units}$
 - Low end assumes 100 percent retrofit at a cost of \$3,500
 - $\text{Cost}_{\text{Low}} = (1.00)(1920 \text{ units})(\$3500) = \$6.7 \text{ M}$
 - High end assumes 67 percent retrofit at a cost of \$3,500 and 33 percent replacement at a cost of \$30,000
 - $\text{Cost}_{\text{High}} = (0.67)(1920 \text{ units})(\$3500) + (0.33)(1920 \text{ units})(\$30000) = \$23.5 \text{ M}$
- The range of cost for specialty units is as follows:
 - Specialty = $(0.05)(9600 \text{ units}) = 480 \text{ units}$
 - Low end assumes 100 percent retrofit at a cost of \$3,500
 - $\text{Cost}_{\text{Low}} = (1.00)(480 \text{ units})(\$3500) = \$1.7 \text{ M}$
 - Medium end assumes 67 percent retrofit at a cost of \$3,500 and 33 percent replacement at a cost of \$75,000
 - $\text{Cost}_{\text{Med}} = (0.67)(480 \text{ units})(\$3500) + (0.33)(480)(\$75000) = \13 M
 - High end assumes 100 percent replacement at a cost of \$75,000
 - $\text{Cost}_{\text{High}} = (1.00)(480 \text{ units})(\$75000) = \$36 \text{ M}$
- Total cost range is \$8.4 to \$59.5 M

Emissions

- Statewide annual HC+NOx emissions in tons per day (tpd) attributable to LSI equipment prior to the fleet regulation are 70.2 tpd (2004), 35.8 tpd (2010), and 23.4 tpd (2020). (from Table 2 of the 2006 LSI ISOR)
- Further emissions reductions (attributable to the fleet regulation) are: 5.6 tpd (2010) and 6.2 tpd (2020). (from May 25, 2006 board hearing presentation: <http://www.arb.ca.gov/msprog/offroad/orspark/presentations/2006boardpres.pdf>).
- Thus, emissions, prior to amendments are 30.2 tpd in 2010 and 6.2 tpd in 2020.
- 2006 Form 399 Attachment identified 46,000 units in one of the four categories of equipment affected by the LSI fleet regulation. 12,000 of these units were not expected to be addressed by routine turnover. Of the 12,000 units, 20 percent or 2,400 units were expected to reside in small fleets exempt from the fleet average. The remaining 9,600 units were expected to be retrofitted or replaced. 20 percent of these units were expected to be limited hours of use (no reference) and 5 percent were expected to be specialty equipment (manufacturer calls).

- These 2,400 units would be expected to operate no more than 200 hours per year on average, 80 percent because they're limited by the LHU exemption, and the remaining 20 percent because specialty equipment in general aren't operated as much. Some specialty equipment would be operated significantly greater than 200 hours per year, but these are expected to be offset by the number of LHU units operating fewer than 200 hours per year.
- The resulting emissions loss calculation is:
 - $(2400 \text{ units})(200 \text{ hours/unit/yr})(12 \text{ grams HC+NOx/brake horsepower-hour})(63 \text{ horsepower}^*)(1 \text{ ton}/907185 \text{ grams})(1 \text{ year}/365 \text{ days})$ or 1.1 tons/day

Alternatives

- Cost savings for alternatives were not quantified.
 - The multiple year extension request alternative would be expected to provide exactly the same cost savings benefit as far as avoided vehicle retrofit or replacement. However, administrative costs would be doubled.
 - The limited hours of use threshold would be expected to offer greater cost savings at a level higher than 200 hours per year and lesser savings at a lower level. However, the level was chosen for consistency with the off-road regulation and to lessen the impact on emission benefits.

* 63 Horsepower represents the average used for LSI equipment in the ARB's OFFROAD Model during the 2006 rulemaking.