Off-Road Equipment
South Coast Air Quality Management District
2021
Off-Road Equipment Topics

- Updates and Requirements
- Project Types
- Maximum Funding & Eligible Costs
- What Do I Need to Apply?
- Inspections
- Construction/LSI Fleet/Off-Road Agriculture
- Surplus Off-Road Opt-In NOx (SOON)
Large and Medium Fleets

- Eligible for Moyer funding ONLY if they meet final compliance requirements of the Off-Road Regulation
- If not compliant with the final compliance requirements, may still be eligible for SOON Provision

Off-Road Regulation Updates & Carl Moyer

- As of 1/1/2018, Large and medium fleets may not add Tier 2 engines to their fleets.

For replacement engines >125% HP: Funding amount based on the cost of new engine/equipment with HP no greater than 125% of existing engine HP
General Eligibility

- Diesel-powered (Compression-ignition engines)
- Greater than or equal to 25 HP
- Self-propelled
- Existing uncontrolled, Tier 1, Tier 2, and Tier 3 engines are eligible for replacement/repower
## Eligible Project Types

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Eligible Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacement</td>
<td>Replacing uncontrolled, Tier 1, 2, or 3 to Tier 4-Final*</td>
</tr>
<tr>
<td>Repower</td>
<td>Repowering uncontrolled, Tier 1 or 2 to Tier 3; or to Tier 4 Final, if available*</td>
</tr>
<tr>
<td>Retrofit</td>
<td>Retrofit of uncontrolled to Tier 3 engines</td>
</tr>
</tbody>
</table>

*As of 1/1/2018, Large and medium fleets may not add Tier 2 engines to their fleets. Therefore, replacement/repower with new Tier 2 engines are not eligible for Moyer funding.*
What Does Carl Moyer Program Pay For?

<table>
<thead>
<tr>
<th>Project Type</th>
<th>What Costs Are Covered</th>
<th>What Costs Are NOT Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacement</td>
<td>Up to 80% of the equipment cost*</td>
<td>• Operating costs, including fuel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Administrative costs, including reporting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Maintenance costs (except retrofit filter cleaning if included in original quotes)</td>
</tr>
<tr>
<td>Repower</td>
<td>Up to 85% of the repower costs (engine + related parts + installation labor)*</td>
<td></td>
</tr>
<tr>
<td>Retrofit</td>
<td>100% of the retrofit costs (after treatment system + installation labor + maintenance during project life)*</td>
<td>• Equipment warranty costs unless included in the new vehicle</td>
</tr>
</tbody>
</table>

*Applicant must show itemized costs in the form of a vendor quote
Application Requirements

- **Equipment Usage Records**
  - *Past 24-months (such as maintenance records, usage logs, etc.)*

- **Proof of Ownership**
  - *Owned for prior 24-months (such as bill of sale, tax depreciation, etc.)*

- **Vendor Quotes**
  - *All quotes must be dated within 90 days prior to application submittal date*

- **DOORS Printout**
  - *Compliance Status Page (e.g., DOORS Fleet Compliance Snapshot)*
Applicants MUST provide vendor quotes with their application to document cost of the replacement, repower and/or retrofit project

- All quotes must be obtained within 90 days prior to application submittal

- Elements of a Complete Vendor Quote:
  - Equipment/Engine Cost
  - Sales Tax
  - Warranty Info
  - Engine Year, HP, & Tier
  - Corresponding Engine Family and CARB Executive Order
DOORS Fleet Compliance Snapshot

Your fleet, as currently reported, has met the off-road regulation performance requirements through the January 1, 2023 compliance date. Per regulation section 2449.1, you will need to take action prior to December 31, 2023 in order for your fleet to be in compliance on January 1, 2024.

This determination is based on the make-up of your CURRENT fleet in DOORS, which includes age and horsepower of engines, retrofits (if any), vehicles sold (if any), exempt vehicles such as Low-Use (if any), small fleets (if any), and other credits (if any).

Current Fleet Statistics

<table>
<thead>
<tr>
<th>Fleet Size:</th>
<th>Small</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Vehicles:</td>
<td>In Fleet Average: 15</td>
</tr>
<tr>
<td>Low-Use:</td>
<td>0</td>
</tr>
<tr>
<td>Exempt Not Low-Use:</td>
<td>0</td>
</tr>
<tr>
<td>Vehicles in Fleet:</td>
<td>15</td>
</tr>
<tr>
<td>Horsepower (in fleet average):</td>
<td>5,000</td>
</tr>
<tr>
<td>Total Fleet Horsepower:</td>
<td>5,000</td>
</tr>
<tr>
<td>First Compliance Date:</td>
<td>January 1, 2019</td>
</tr>
<tr>
<td>Next Required Compliance Date:</td>
<td>January 1, 2024</td>
</tr>
</tbody>
</table>

Total family horsepower is the sum of the horsepower of any parent company, subsidiary, or other fleet related to the current fleet. Click the "Show Fleet Family" option button on the reporting home page for more information.
Inspections

Pre-Inspection

• Inspector verifies the old equipment/engine is operational
• Verification of engine make, model, year, HP
• If information does not match or unavailable, must provide engine documentation from manufacturer
• To prepare for application process, we encourage you to check your engine tags beforehand!

Post-Inspection

• Inspector verifies the new equipment/engine information
• Verification of new engine make, model, year, HP, serial, Tier data, and family number

Destruction Inspection

• Inspector verifies old equipment/engine has been permanently destroyed
• Existing equipment/engine must be destroyed within 60 days of being replaced.
• Destruction method must meet the 2017 Carl Moyer Program Guidelines, Chapter 5 (page 5-10 & 5-14 to 5-15)

South Coast AQMD will not pay invoices until pre, post, and destruction inspections have been completed and reports reviewed!
Inspections (Cont’d)

- Example - Verification of Engine HP and Year:

**Photo of Engine Label**

**Engine Year/HP Verification from Engine Manufacturer**
Off-Road Project Types
Agricultural Farm Equipment

What is an Agricultural Operation?

- Agricultural operations include, but are not limited to, activities such as the raising and harvesting of crops from soil, the raising of fowl or animals, logging, and forestry operations
- Equipment used in over half of its annual operating hours for agricultural operations are not subject to the In-Use Off-Road Diesel-Fueled Fleet Regulation.
- The maximum project life for all off-road farm equipment replacement projects is 10 years

Farm Equipment May Include:

- Tractors, harvesters, and other field equipment
- Forklifts for loading/unloading produce in field or at first processing site
- Backhoes and other equipment used to maintain farm property
- Trucks used in the field to move produce, fertilizer, etc.

For further details, please consult ARB FAQ document: https://www.arb.ca.gov/msprog/ordiesel/guidance/ag-operations.pdf
## Off-Road Project Types
### Large-Spark Ignition (LSI) Fleet

Eligible funding must have at least 3 years of emission reductions that are surplus to the LSI Fleet Regulation.

<table>
<thead>
<tr>
<th>LSI Fleet Type</th>
<th>Eligibility for Moyer Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large/Medium Forklift Fleets (4+ units)</td>
<td>Must meet final average emission level applicable on 1/1/2013</td>
</tr>
<tr>
<td>Non-Forklift Fleets (4+ units):</td>
<td></td>
</tr>
<tr>
<td>• Sweeper/Scrubbers</td>
<td>Must meet final average emission level applicable on 1/1/2013</td>
</tr>
<tr>
<td>• Ground Support Equipment (GSE)</td>
<td></td>
</tr>
<tr>
<td>• Industrial Tow Tractors</td>
<td></td>
</tr>
<tr>
<td>Agricultural Crop Preparation Forklift Fleets (Model Year 1990+)</td>
<td>• Must replace, repower or retrofit 100% of their fleet by 1/1/2012 OR</td>
</tr>
<tr>
<td></td>
<td>• Meet 3.0 g/bhp hr fleet average</td>
</tr>
</tbody>
</table>
## Off-Road Project Types

### Construction

<table>
<thead>
<tr>
<th>Fleet Size</th>
<th>First Compliance Date (per Off-Road Regulation)*</th>
<th>Minimum Emission Reduction Surplus (years)</th>
<th>Final Compliance Date (per Off-Road Regulation)</th>
<th>CMP Funding Availability / Operation Deadline for CMP Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small (0 - 2,500 HP)</td>
<td>1/1/2019</td>
<td>2</td>
<td>1/1/2028</td>
<td>12/31/2025</td>
</tr>
<tr>
<td>Medium (2,501 – 5,000 HP)</td>
<td>1/1/2017</td>
<td>3</td>
<td>1/1/2023</td>
<td>Ineligible</td>
</tr>
<tr>
<td>Large (&gt;5,000 HP)</td>
<td>1/1/2014</td>
<td>3</td>
<td>1/1/2023</td>
<td></td>
</tr>
</tbody>
</table>
Surplus Off-Road Opt-In For NOx (SOON)
SOON Overview

Purpose of the SOON Program

- To achieve additional reductions of NOx emissions from in-use off-road diesel fleets in California
- Requires earlier (or surplus) NOx reductions than would otherwise be achieved through the Off-Road Regulation (2449)

Cost Effectiveness is Based on NOx Reduction Benefit ONLY

- $30,000/ton for projects that bring engines to current standards
- $100,000/ton for zero-emissions or alternatively meet the cleanest optional standard level certified
Regulation For In-Use Off-Road Diesel-Fueled Fleets

<table>
<thead>
<tr>
<th>CCR, Title 13, Division 3, Chapter 9, Article 4.8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Base Rule/SOON</strong></td>
</tr>
<tr>
<td>“Base Rule” Off-Road Regulation</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
| SOON | 2449.2 | **Surplus Off-Road Opt-in for NOx** | • Reduction of NOx ONLY  
• Accelerated Emission Reduction / Earlier Target Rates |
Applicability

Must Apply for SOON Funding, If the Fleet:

- Operates within the air district;
- Consists of > 40% Tier 0 and Tier 1 Vehicles (as of 2008); and
- Has a statewide fleet size > 20,000 hp
  - Excludes hp from engines in two-engine vehicles and
    hp from single engine cranes formerly subject to the
    Cargo Handling Equipment Regulation
- Other fleet sizes may apply on a voluntary basis
Exclusions and Limitations

- Flexible Engines – Engines certified to the standards in Title 13, CCR, Section 2423 (d)
  - Excludes replacement projects involving the purchase of new flexible engines
  - Repower projects involving flexible engines must be evaluated based on the immediately preceding, applicable, Tier 3 emission standard
  - Usually labeled by the engine manufacturer
- Forklifts that are eligible for SOON funding must be Class 7 (LSI)
SOON Compliance Plan

- Demonstrate compliance with CARB Off-Road Regulation throughout the contract period must be provided
  - SOON Compliance Plan Signature Page (www.aqmd.gov/soon)
  - SOON Compliance Calculator OR ARB Fleet Calculator
  - DOORS Compliance Snapshot (ARB)
  - DOORS Fleet Listing (ARB)
SOON Compliance Plan (Cont’d)

• **Fleet Average Index (FAI) > SOON Target Rate (STR)**

• At a minimum, forecast annual fleet NOx reduction actions, for the next upcoming SOON NOx target date (2023)

• Cannot take credit for SOON project emission reductions until the end of the project term
  • Cannot use this lower emission rate to calculate the fleet average index and target rate, and BACT Credit

Must meet cost-effectiveness limit and be operational no later than May 20, 2023
APPLICATION DEADLINE

TUESDAY June 1, 2021 AT 1PM

APPLY ONLINE:
https://carlmoyeronline.aqmd.gov/
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- Please direct general questions to:
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