

# — OFF-ROAD



CARL MOYER PROGRAM 2025



# Guideline Changes: Off-Road



- ❖ Replacement Engine HP increased from 125% to 135% of Baseline HP
- ❖ Expanded opportunities for ZE projects
  - ❖ Case-by-case determinations from CARB no longer required
- ❖ Three new eligible equipment types:
  - ❖ Transport Refrigeration Units
  - ❖ Utility Terrain Vehicles (\$13,500 or 75%, whichever is less)
  - ❖ Portable Equipment / PERP Units (>49 HP Only)

# Eligible Project Types – Off-Road



Off-Road  
Construction  
Equipment



Large-  
Spark  
Ignition  
(LSI)  
Equipment



Agricultural  
Farm  
Equipment



Surplus  
Off-Road  
Opt-In NO<sub>x</sub>  
(SOON)



Transport  
Refrigeration  
Units  
(TRUs)



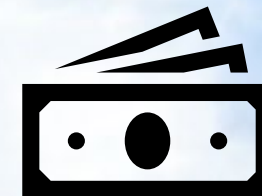
Cargo  
Handling  
Equipment



Portable  
Equipment  
Units  
(PERP)



# Funding



Project Type	What Costs Are Covered (including taxes and transportation costs)	What Costs Are <u>NOT</u> Covered
Replacement to Tier 4 Final or ZE	Up to 80% of the equipment cost, Up to 85% of the equipment cost for Zero Emission projects*	<ul style="list-style-type: none"> <li>Operating costs, including fuel</li> <li>Administrative costs, including reporting</li> <li>Maintenance costs (except retrofit filter cleaning if included in original quotes)</li> <li>Equipment warranty costs unless included in the new vehicle</li> <li>Attachments not on existing equipment such as backhoes and front loader</li> </ul>
Repower to Tier 4 Final or ZE	Up to 85% of the repower costs (engine + related parts+ installation labor)*	
Retrofit on eligible engines	100% of the retrofit costs (after treatment system + installation labor + maintenance during project life)*	

\*Transport Refrigeration Units (TRUs) – Up to 50% of the equipment cost

\*Utility Terrain Vehicles (UTVs) – Up to 75% of the equipment cost or \$13,500 (whichever is less)

# Off-Road Project Types

## Construction/Industrial/Others



Fleet Size	First Compliance Date (per Off-Road Regulation)*	Minimum Emission Reduction Surplus (years)	Final Compliance Date (per Off-Road Regulation)	CMP Funding Availability / Operation Deadline for CMP Project
Small (0 - 2,500 HP)	1/1/2019	1	1/1/2028	<b>12/31/2025</b>
Medium (2,501 – 5,000 HP)	1/1/2017	-	1/1/2023	<b>Ineligible (Apply under SOON)</b>
Large (>5,000 HP)	1/1/2014	-	1/1/2023	

\*SOON – Surplus Off-Road Opt-In for NO<sub>x</sub>

# Off-Road Project Types

## Construction/Industrial/Others

**Potential funding for Tier 4 Final or ZE**  
replacements/repowers will be available for the  
existing tiers until the following dates:

Potential Funding	Large Fleets*	Medium Fleets*	Small Fleets
Tier 0	Not Allowed	Not Allowed	12/31/2025
Tier 1	Not Allowed	12/31/2025	12/31/2027
Tier 2	12/31/2025	12/31/2027	12/31/2029

\*Large and Medium fleets only qualify for SOON funding

# Off-Road Project Types

## Large-Spark Ignition (LSI) Fleet

- ▶ Eligible funding must have at least 1 year of emission reductions that are surplus to the LSI Fleet Regulation

LSI Fleet Type	Eligibility for Moyer Funding
Large/Medium Forklift Fleets (4+ units)	<ul style="list-style-type: none"><li>• Must demonstrate compliance with CARB LSI Regulation.</li><li>• For Zero Emission Replacements, Baseline units must have less than 8,000 lbs lift capacity</li></ul>
Non-Forklift Fleets (4+ units): <ul style="list-style-type: none"><li>• Sweeper/Scrubbers</li><li>• Ground Support Equipment (GSE)</li><li>• Industrial Tow Tractors</li></ul>	<ul style="list-style-type: none"><li>• Must demonstrate compliance with CARB LSI Regulation.</li></ul>
Agricultural Crop Preparation Forklift Fleets (Model Year 1990+)	<ul style="list-style-type: none"><li>• Must meet 3.0 g/bhp hr fleet average</li></ul>



New ZE Forklift Regulation - <https://ww2.arb.ca.gov/our-work/programs/zero-emission-forklifts>

# Off-Road Project Types

## Agricultural Farm Equipment

### What is an Agricultural Operation?

- Equipment is "Agricultural" if more than half of its annual operating hours are used for agricultural operations.
- Agricultural operations include, but are not limited to activities such as:
  - Raising and harvesting of crops from soil
  - Raising of fowl or animals
  - Logging
  - Forestry operations
- The maximum project life for all off-road agricultural projects is 10 years
- Agricultural equipment will be evaluated using FARMER Guidelines and are not subject to the In-Use Off-Road Diesel-Fueled Fleet Regulation.

# Off-Road Project Types

## Agricultural Farm Equipment

### Farm Equipment May Include:

- Tractors, harvesters, or other field equipment
- Forklifts for loading/unloading produce in fields or at first processing site
- Backhoes and other equipment used to maintain farm property
- Trucks used in the field to move produce, fertilizer, etc.
- Utility Transit Vehicles (UTVs) for in-field transportation of people or equipment

For further details, please consult ARB FAQ document:  
<https://ww2.arb.ca.gov/our-work/programs/farmer-program>



# FUNDING AGRICULTURAL REPLACEMENT MEASURES FOR EMISSION REDUCTIONS (FARMER) PROGRAM

CARL MOYER PROGRAM 2024



A green John Deere tractor with yellow wheels is shown in a field, partially obscured by the text. The tractor is pulling a green implement, and the background shows a field under a cloudy sky.

# FARMER OVERVIEW

- FARMER Program funding is available to help fund purchases of cleaner agriculture-related equipment
- Reduce emissions from the agricultural sector, yielding positive health impacts for farmers and their communities
- Prioritizes funding to disadvantaged communities
- FARMER Program supports zero-emission UTV projects and may not require a case by-case evaluation by ARB

# FARMER OVERVIEW

At least 50% of annual activities is performing agricultural operations

Comply with Carl Moyer Guidelines

Apply for FARMER Funds using the Carl Moyer Program Online Application System

Must own equipment for duration of contract

Must submit 1-10 years of annual reports (for the duration of the project/contract term)

# FARMER PROJECT TYPES



# **FARMER Program Guideline Updates**

More stringent baseline and replacement requirements

Expand opportunities for ZE projects

Expanded eligible project types

# — SURPLUS OFF-ROAD OPT-IN FOR NOX (SOON)



CARL MOYER PROGRAM 2025



# 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 Limit is Based on NOx Reduction Benefit ONLY

- \$60,000/ton for projects that bring engines to current standards
- \$120,000/ton for zero-emissions or near zero-emissions projects

# REGULATION FOR IN USE OFF ROAD DIESEL FUELED FLEETS

## CCR, Title 13, Division 3, Chapter 9, Article 4.8

Base Rule / SOON	Section	Description	Highlights
“Base Rule” Off-Road Regulation	2449	General Provisions	Reduction of NOx and PM  Date Driven Reclining Target Rates for Fleets
	2449.1	Performance Requirements	
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)
- 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

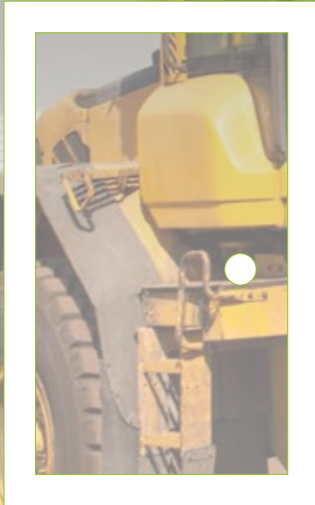
# APPLICABILITY



## Exclusions and Limitations

- Flexible Engines – Engines certified to the standards in Title 13, CCR, Section 2423 (d)
  - Note: Flexible engines are usually labeled by the engine manufacturer.
  - Limitations: Repower projects involving flexible engines must be evaluated based on the immediately preceding, applicable emission standard
  - Exclusions: Replacement projects involving the purchase of new flexible engines
- Forklifts
  - Limitation: Only Class 7 (LSI) Forklifts are SOON eligible

# COMPLIANCE PLAN



Projects in the SOON program must create a Compliance Plan to demonstrate compliance with the CARB Off-Road Regulation throughout the contract period

**Plan must include:**

SOON Compliance Plan Signature Page

SOON Compliance Calculator **OR** ARB Fleet Calculator Attachment

DOORS Compliance Snapshot (ARB)

DOORS Fleet Listing (ARB)

AQMD SOON Homepage: [www.aqmd.gov/soon](http://www.aqmd.gov/soon)

# COMPLIANCE PLAN

At a minimum, forecast annual fleet NO<sub>x</sub> reduction actions, for the next upcoming SOON NO<sub>x</sub> target date

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, target rate, or BACT Credit

**Key Takeaway:** Your **Fleet Average Index (FAI)** must be less than or equal to your **SOON Target Rate (STR)**

# Transport Refrigeration Units (TRUs)

- TRUs are refrigeration systems powered by diesel internal combustion engines designed to refrigerate or heat perishable products that are transported in various containers, including truck vans, semi-truck trailers, shipping containers and railcars
- The existing equipment must be registered with ARB Equipment Registration (ARBER) and demonstrate compliance with the TRU ATCM (Airborne Toxic Control Measure)
- Funding opportunities exist for zero-emission replacement projects only
- Max Funding: 50%

**Phase-in Compliance Schedule for ZE Truck TRU Fleets**

Compliance Date as of December 31	Required ZE Truck TRU Fleet Percentage
2023	15%
2024	30%
2025	45%
2026	60%
2027	75%
2028	90%
2029 and thereafter	100%



# Off-Road Project Types

## Cargo Handling Equipment

- Propulsion engines on mobile off-road equipment located at ports and intermodal railyards
- Fleets must be compliant with CARB's Regulation for Cargo Handling Equipment at Ports and Intermodal Rail Yards
- Rubber-tired gantry (RTG) cranes
- Yard trucks
- Other cargo handling equipment
  - Top handlers, side handlers, reach stackers, forklifts, loaders, aerial lifts, excavators, dozers, etc.

# Portable Equipment (PERP)

- Portable equipment is eligible for funding if it meets the following criteria:
  - Engine horsepower must be 50 hp or greater
  - Equipment must have an active PERP Registration or SCAQMD Permit
  - Fleet must be in compliance with all applicable rules and regulations under the Portable Engines ATCM and any Permit/Registration conditions
  - Small Fleets (Cumulative fleet horsepower of 750 or less)
    - Existing engine must be Tier 3 or higher (engine built on or after 1/1/2009)
  - Large Fleets (Cumulative fleet horsepower greater than 750)
    - Existing engine must be Tier 4

## Maximum Funding Amounts:

- 85% for Portable Equipment Repower or Replacement to Zero Emission
- 80% for Portable Equipment Replacement to Diesel

# Portable Equipment (PERP)

## Equipment Examples



**Air  
Compressors**



**Generators**



**Wood  
Chippers**



**Pumps**



**Crushing  
Plant**



**Screening  
Plant**



**Sand Blasting  
Pot**

**All equipment in this category must qualify as “Portable” to be eligible for funding**

- Equipment must be moveable
- Equipment must not operate at the same location for more than 12 months over a 3-year period