

**AGRICULTURAL PUMP ENGINE COMPONENT  
HEAVY-DUTY ENGINE  
EMISSION REDUCTION INCENTIVE PROGRAM  
GUIDELINES, POLICIES, AND PROCEDURES**

**SECTION I  
INTRODUCTION**

The Tehama County Air Pollution Control District (TCAPCD) is seeking applications to reduce emissions from stationary agricultural irrigation pump engines, according to the terms and conditions described in these guidelines.

The purpose of the Heavy-Duty Engine Incentive Program (Heavy-Duty Engine Program) is to assist the TCAPCD in attaining state air quality standards by encouraging the early introduction of heavy-duty reduced-emission engine technologies. The widespread use of lower emitting heavy-duty engine technologies can provide improvements to air quality in Tehama County. The Heavy-Duty Engine Program has been augmented by the inclusion of agricultural irrigation pump engines of at least fifty (50) horsepower, which will provide additional cost-effective emission reductions.

The TCAPCD is providing incentives for the purchase of:

- New electric agricultural pump engines on new wells.
- New, current model year, certified, reduced-emission agricultural pump engines for replacement of existing diesel engines (repowers)
- Reduced-emission retrofit technologies (certified/verified).

The Heavy-Duty Engine Program provides incentive funds toward the purchase of reduced-emission engine technologies. Funds are available for eligible engine replacements and/or engine retrofits that meet specific program criteria. These guidelines describe the policies and procedures of the Agricultural Pump Engine Component of the Heavy-Duty Engine Program. For application materials only, please call or browse our website:

**(530) 527-3717**  
**[www.tehcoapcd.net](http://www.tehcoapcd.net)**

For further information please contact:

**Tehama County Air Pollution Control District**  
P.O. Box 38, Red Bluff CA 96080  
(530) 527-3717

**SECTION II  
BACKGROUND**

The TCAPCD does not meet the health based Ambient Air Quality Standards for ozone and particulate matter ten (10) microns or less in diameter (PM-10), and is required to implement strategies that will result in emission reductions. Nitrogen

oxides (NOx) are an important factor in the formation of ozone and secondary PM-10. Heavy-duty diesel engines are a significant source category that provides an opportunity to pursue cost-effective emission reductions.

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**SECTION III  
ELIGIBLE  
PARTICIPANTS  
AND ENGINES**

**A**ny individual, company or public agency may apply to receive an incentive under this program.

This program is designed to encourage the purchase of reduced emission agricultural irrigation pump engines which may be powered by diesel or alternative fuels, such as natural gas, liquefied petroleum gas or electricity. Fueling infrastructure is not eligible for funding and will not be considered under this program.

**Criteria for Existing Engines to be Replaced:**

- The existing agricultural pump engine being replaced must be fifty (50) horsepower (hp) or greater.
- The existing agricultural pump engine being replaced must be operated on diesel fuel. No engines operated on gasoline, natural gas, propane, electricity or any other fuel type are eligible to be replaced (repowered) under this program.
- The existing agricultural pump engine being replaced must be owned by the applicant and operated within the TCAPCD boundaries for a period of at least twelve (12) months prior to the application submission date.
- The existing agricultural pump engine being replaced must be currently operational (able to pump water) and situated at the location of operation (on the wellhead) or booster trailer at the time of application submission **and** TCAPCD inspection.

**Criteria for New Replacement Engines:**

- The new replacement engine must be certified by the California Air Resources Board (ARB) for sale in California. See below for specific certification criteria.
- The new replacement engine must be a new OEM, current model year off-road engine certified to current model year standards.
- The new replacement engine must show at least a 15% reduction of NOx emissions from the existing engine **and** no net increase of particulate matter (PM) emissions.

- The new replacement engine must comply with ARB durability and warranty requirements.
- The purchase of the new replacement engine must not be required by any local, state, or federal rule or regulation, or used to comply with any such rule or regulation.
- The purchase and/or emission reduction must not be required by any local, state or federal Memorandum of Understanding (MOU) or Memorandum of Agreement (MOA) or be used to generate, bank, or trade Emission Reduction Credits (ERCs).

### **Existing Pre-1996 Engines (1995 and older)**

#### ***Diesel Replacement Engine (50-99 hp)***

- ◆ Beginning January 1, 2004, the NOx emission standard for engines rated from 50 hp to 99 hp will be to 5.6 g/bhp-hr NOx + NMHC. The 5.6 g/bhp-hr emission level is considered the **Tier II** standard for this horsepower category. The replacement engines for this horsepower category submitted on applications on or after January 1, 2004 must be certified to the **Tier II** standard (5.6 g/bhp-hr NOx + NMHC).

#### ***Diesel Replacement Engine (100-749 hp)***

- ◆ If you currently have an existing pre-1996 model year engine **between 100 hp and 749 hp**, the replacement diesel engine must be a new, current model year engine certified to the ARB **Tier II** emission standard. The **Tier II** standard varies by horsepower category but generally ranges from 4.8 to 4.9 g/bhp-hr NOx + NMHC.

#### ***Diesel Replacement Engine (750 hp or greater)***

- ◆ If you currently have an existing pre-1996 model year engine **750 hp or greater**, the replacement diesel engine must be a new, current model year engine certified by the ARB to 6.9 g/bhp-hr NOx (**Tier I**).

#### ***Spark-Ignited Replacement Engine (50 hp or greater)***

- ◆ If you currently have an existing pre-1996 model year diesel engine **50 hp or greater**, the replacement engine may be a new, current model year, ARB certified **spark-ignited engine** (natural gas, propane, etc.) that meets the current applicable diesel emission

standard for Off-Road engines. However, spark ignited engines must undergo applicable ARB certification testing to verify emission levels and are subject to maximum funding levels outlined on Page 10.

***Electric Replacement Motor (50 hp or greater)***

- ◆ If you currently have an existing pre-1996 model year diesel engine **50 hp or greater**, the replacement engine may be a new, current model year **electric motor**.

***Existing Post-1996 Engines (1996 or newer)***

- ◆ If you currently have an existing post-1996 model year diesel engine **50 hp or greater**, the replacement engine **must** be a new, current model year **electric motor**. Existing post-1996 model year diesel engines **may not** be replaced with a diesel engine.

***Electric Motors on New Wells:***

- ◆ If you have recently drilled a new irrigation well, the TCAPCD may assist in the purchase of a new electric pump motor.
- ◆ The electric motor must be a current model year electric motor greater than 37 kilowatts (50 hp equivalent).
- ◆ Funding assistance with electric motor projects may include selected peripheral equipment (e.g. control panel, motor leads, etc.). Funding for other peripheral equipment will be at the discretion of the TCAPCD.

◆ ***Ineligible Engines/Project Types***

- The replacement/repower of an engine that results in an increase in particulate matter (PM) emissions is not eligible.
- Rental or leased engines are not eligible for replacement/repower.
- Engines used as generators are not eligible for replacement/repower.
- Engines not operational at the time of application submission are not eligible for replacement/repower.

**In all diesel engine replacement/repower projects, the replacement engine must be a new, current model year OEM off-road engine certified to the current applicable emission standard.**

**Applicants must obtain approval and have a signed, executed contract from the TCAPCD prior to purchase and installation of an engine. Any engine purchased and installed prior to contract execution is ineligible. Note: The TCAPCD Heavy-Duty Engine Program is not a rebate program.**

**Criteria for Purchase of Retrofit Technology:**

- The retrofit technology must be certified or verified by ARB for sale in California.
- The retrofit technology must show at least a 15% reduction of NOx emissions from the existing engine **and** no net increase of particulate matter (PM) emissions.
- The retrofit technology must comply with ARB durability and warranty requirements.
- The purchase and/or emission reduction cannot be required by any local, state or federal Memorandum of Understanding (MOU) or Memorandum of Agreement (MOA) or be used to generate, bank or trade Emission Reduction Credits (ERCs).

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**SECTION IV  
PROGRAM  
REQUIREMENTS**

In addition to the above engine/technology criteria, the following elements are set forth as program requirements:

- Simple annual reports will be required for five (5) years from the date of the new engine/retrofit installation. The reports shall include such information as fuel consumption and or energy usage, hours of operation, and details regarding maintenance. **If the engine does not complete the minimum five (5) year term set forth in this program, a pro-rated portion of the funds must be returned to the TCAPCD** (e.g. if engine is sold, stolen, or damaged in an accident).
- The incentive amount will be based on NOx cost-effectiveness (amount of emissions reduced) by purchasing the new reduced-emission technology engine as compared to the emission standard of the existing uncontrolled engine. **A mandatory minimum out-of-pocket expense is required based on an estimated rebuild cost for the existing engine.**
- Purchaser agrees that any emission reductions associated with this program will be claimed and retired by the TCAPCD in the interest of air quality improvement for the residents of Tehama County. Purchaser waives, for all time, the right to claim emission reduction credits which may accrue at any time as a result of this program, and agrees not to apply to the TCAPCD or any other agency for such credits.

- Evidence of applicable insurance coverage must be provided prior to reimbursement by the TCAPCD.

Criteria and requirements may be reviewed, as new information becomes available, and can be revised at the discretion of the Air Pollution Control Officer as needed.

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## **SECTION V PROGRAM PROCEDURES**

**T**he application and program participation process is as follows (under normal circumstances):

Application is submitted to the TCAPCD. Applications may be submitted by mail or hand delivery. **NO FAXES WILL BE ACCEPTED.** Faxed applications **will not** be processed.

- The application is reviewed by the TCAPCD for completeness within five (5) working days of receipt of the application. If the application is incomplete, it will be returned to the applicant with a description of areas in which the application is inadequate. Any application that is not returned with the requested information within fourteen (14) calendar days for processing is rendered null and void, and resubmittal is required.
- Complete applications will be reviewed to determine that program criteria and requirements have been met. The incentive will not exceed the cost-effectiveness value of up to \$6.80 per pound (\$13,600 per ton) of NOx emissions reduced, or the maximum incentive limits based on horsepower rating.
- Existing (old) engines will be pre-inspected by the TCAPCD to verify that the existing agricultural pump engine being replaced is operational (able to pump water) and situated at the location of operation (on the wellhead).
- Funds will be awarded based on NOx cost-effectiveness. Projects will be funded starting with the most cost-effective to the least cost-effective projects during the initial application process. In the event that applications are submitted on the same day and rank the same for cost-effectiveness, projects will be funded in the order that they were received until funds are exhausted. If there are any funds left over after the initial application process, projects will be funded on a first-come, first-serve basis to all applications that meet the criteria and requirements, while program funds are available.
- Applicant orders and places the reduced-emission technology into service within six (6) months of contract execution.
- Applicant invoices District and submits copy of vendor's invoice. The TCAPCD will review the information for compliance with all contract requirements.

Additionally, the Applicant must verify that the existing (old) engine is permanently removed from operation in California by one of the following methods:

- ◆ Permanently disable the engine by punching at least a five (5) inch diameter hole through the engine block above the oil pan.
  - ◆ Crush the engine and provide written verification such as a receipt from a scrap metal recycling operation.
  - Payment will be issued within thirty (30) days of verification (TCAPCD site visit) that the replacement (new) engine is installed and operating, and the existing (old) engine has been permanently disabled.
  - Applicant submits simple annual reports. The TCAPCD maintains the right to monitor the project periodically.
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## **SECTION VI APPLICATION REQUIREMENTS**

The applicant must provide information about each engine. The following information will be required when completing the agricultural pump engine component application. Additional information may be requested during the review process if needed.

### **Applicant Information**

- Organization name, address, person with contract signing authority, contact name, office/cell phone, fax, and number of existing engines to be replaced.
- The physical address where the engine will be located. The engine fuel consumption, energy usage or hours of operation must occur within the TCAPCD for at least five (5) years from the beginning of engine operation with the reduced-emission technology.

### **Engine Information**

- The number of engines to be purchased, repowered, and/or retrofitted.
- Types of fuel currently being used and proposed to be used.
- Type of activity for which the engine will be used.
- Estimated hours of operation, and fuel consumption (or energy usage) per year for each engine.
- The specific engine manufacturer, model number, EPA engine family, and year. For retrofits, the retrofit manufacturer and kit number.

- Manufacturer's **intermittent** (or maximum) brake horsepower rating (not continuous).
- Engine serial number for repowers and retrofits only.
- Estimated engine life and replacement schedule.
- Rebuild cost of existing engine for repower and retrofit projects.
- Cost of the engine repower or retrofit and installation. **Ineligible costs include gear heads, drivelines, fueling infrastructure, and peripheral equipment not necessary for engine operation.**
- Self-installation costs are ineligible. The TCAPCD defines self-installation as an individual or company that is an owner, partner, stakeholder, or holds a financial interest in both companies.
- Costs associated with the engine installation performed by a licensed business engaged in the practice of purchasing, selling, repairing and installing heavy-duty engines may be eligible for reimbursement at the discretion of the TCAPCD. It is the responsibility of the applicant to ensure that the engine installer of their choice meets the above qualifications. The TCAPCD may require proof that the installer meets these minimum qualifications.
- The ARB certified emission level(s) in g/kWh or g/bhp-hr.
- Identify the engine or retrofit technology dealer/installer. If the installer is different than the dealer, list this information separately. If the installer is different than the engine dealer, the applicant must have TCAPCD approval prior to funding determination.

#### **Refueling Arrangements (Alternative Fuels Only)**

- If the application is for an alternative fuel engine, describe fully how the engine will be refueled. Provide verification that the engines will have access to a refueling facility, delivery service or has access to electrical service.

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## **SECTION VII CONTRACT REQUIREMENTS**

Those projects that receive funding must enter into explicit contracts with the TCAPCD setting forth specific performance criteria to ensure compliance with statute and audit requirements.

Contract preparation will begin immediately upon TCAPCD approval of a project. The reduced-emission technology must be put into service within six (6) months from the date of contract execution.

The TCAPCD reserves the right to reduce the incentive amount if it is determined that the actual costs paid by the applicant are less than the costs indicated on the application. Incentive awards are based on costs for parts and labor necessary for engine replacement or retrofit. The TCAPCD reserves the right to disallow certain ineligible costs submitted on the Payment Invoice to the District and thereby reduce the incentive amount. **Additionally, no 3<sup>rd</sup> party consulting fees or grant preparation fees are eligible for funding.** A determination of cost eligibility will be at the sole discretion of the TCAPCD.

The contract will require the applicant to perform adequate record keeping allowing the TCAPCD to take credit for the emission reductions resulting from the project. It will also include reporting requirements by the applicant. Contract monitoring will be performed by the TCAPCD on a periodic basis.

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**SECTION VIII  
CLAIM  
REQUIREMENTS**

**P**rior to receiving any funds, the grantee must provide the TCAPCD with the following documents:

- **Claim For Payment.** List participant's name, address, participant's federal tax identification number, incentive agreement number, incentive amount, and engine serial number.
- **Proof of Purchase.** Submit to the TCAPCD copies of the invoice(s) showing the purchase date of the engine(s), including any additional equipment, parts, and labor involved with the engine re-power or retrofit.

All projects will be reimbursed only for work completed, as project costs are incurred, documented, and verified. Any costs claimed for non-essential engine parts or labor will be deducted from the overall project cost. **Labor charges for self-installations are ineligible.**

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**SECTION IX  
INCENTIVE  
LEVELS**

**S**tationary agricultural engine re-power projects are subject to a maximum grant amount awarded, based on the horsepower category of the engine. Table 1 lists the maximum grant amount allowed for each horsepower category. Repowering projects will be subject to the cost-effectiveness criterion of \$6.80 per pound of NOx emissions reduced, as well as other criteria presented in this guideline. A mandatory minimum out-of-pocket expense is required equal the estimated rebuild cost for the existing engine.

**Table 1**

**Maximum Grant Award for Agricultural Irrigation Pump Engine Repower Projects**

<b>Horsepower Category</b>	<b>Maximum Incentive (dollars per repower)</b>	<b>Default Rebuild Cost</b>
<b>50 – 99</b>	<b>\$5,000</b>	<b>\$2,000</b>
<b>100 – 174</b>	<b>\$10,000</b>	<b>\$3,000</b>
<b>175 – 299</b>	<b>\$15,000</b>	<b>\$4,000</b>
<b>300 – 499</b>	<b>\$20,000</b>	<b>\$5,000</b>
<b>500 and greater</b>	<b>\$25,000</b>	<b>\$6,000</b>

In all instances, the maximum incentive amount is based on the lower horsepower (hp) category when comparing the existing engine hp to the replacement engine hp. For example, if the existing engine is rated at 97 hp, within the 50 - 99 hp category (\$5,000 maximum incentive) and the replacement engine is rated at 104 hp, within the 100 – 174 hp category (\$10,000 maximum incentive), the maximum incentive for the project will be based on the lower of the two horsepower categories or \$5,000 maximum incentive. Engine horsepower is determined by the manufacturer's intermittent (or maximum) rated horsepower (not continuous).

**AGRICULTURAL PUMP ENGINE COMPONENT  
HEAVY-DUTY ENGINE  
EMISSION REDUCTION INCENTIVE PROGRAM  
APPLICATION**

**A**pplication to the Tehama County Air Pollution Control District (TCAPCD) for incentive funds for the repower or retrofit of existing stationary agricultural irrigation pump engines of at least fifty (50) horsepower, with reduced-emission technologies.

Please provide the following information regarding your proposed purchase and application. Additional information may be requested during the review process if needed. Applicant acknowledges that award of cash incentive is conditional upon approval of the TCAPCD and must meet the minimum eligibility criteria.

The applicant will be informed as to whether or not the application meets the minimum qualifications. If the application does not meet the minimum qualifications, the TCAPCD will provide the applicant with a list of deficiencies. If you have any questions regarding the application process or to submit an application, please contact the TCAPCD office.

Tehama County Air Pollution Control District  
P.O. Box 38  
Red Bluff, CA 96080  
Phone: (530) 527-3717

**✓ CHECK LIST FOR APPLICATION ITEMS ✓**

**Be sure the following items are included with your application submittal. Check each applicable box below to indicate inclusion of material.**

- Completed Applicant Information Form
- Letter of Agreement from Alternative Fuel Provider or Utility Company (if applicable)
- Detailed Estimate from Engine Dealer (Specifically identify all costs including parts and labor)
- Other \_\_\_\_\_

**✓ CHECK LIST FOR ELIGIBILITY CRITERIA ✓**

**Please check each applicable box:**

**Existing Engine(s):**

- The existing agricultural pump engine being replaced is fifty (50) horsepower or greater.
- The existing agricultural pump engine being replaced is operated on diesel fuel.
- The existing agricultural pump engine being replaced has been owned by the applicant and operated within the boundaries of the TCAPCD for a period of at least twelve (12) months prior to the submission of this application.
- The existing agricultural pump engine being replaced is currently operational (able to pump water) and situated at the location of operation (on the wellhead) or booster trailer at the time of application submission **and** TCAPCD inspection.
- The existing agricultural pump engine being replaced has not already been replaced by any other, District, local, state or Federal program.

**New Engine(s):**

**IT IS THE APPLICANT'S RESPONSIBILITY TO ENSURE THAT NEW REPLACEMENT ENGINE(S) CONFORM TO THE SPECIFIC CRITERIA OUTLINED ON PAGES 3 AND 4 OF THE ATTACHED GUIDELINES, POLICIES AND PROCEDURES DOCUMENT.**

- The new replacement engine must be **certified** by the California Air Resources Board for sale in California.
- The new replacement engine must be **certified** to the appropriate emission level, based on horsepower category.
- The new replacement engine must be a new OEM, current model year engine certified to current model year standards.
- The new replacement engine must show at least a 15% reduction of NOx emissions from the existing engine and no net increase in PM emissions.
- The new replacement engine must comply with ARB durability and warranty requirements.
- The purchase of the new replacement engine must not be required by any local, state, or federal rule or regulation, used to comply with any such rule or regulation or be used to generate, bank or trade Emission Reduction Credits (ERCs).
- The purchase and/or emission reduction must not be required by any local, state or federal Memorandum of Understanding (MOU) or Memorandum of Agreement (MOA).

- Operation of the new, replacement engine must be within the boundaries of the TCAPCD, for at least five (5) years from the date the new engine is placed into service.

**Applicants must obtain approval and have a signed, executed contract from the TCAPCD prior to purchase and installation of an engine. Any engine purchased and installed prior to contract execution is ineligible. Note: The TCAPCD Heavy-Duty Engine Program is not a rebate program.**

**AGRICULTURAL PUMP ENGINE/REPOWER APPLICATION**

<b>APPLICANT INFORMATION</b>		
Organization/Company name:		
Business type (Corporation, Partnership, Sole Proprietorship, Government, etc.):		
Contact name and title ( <b>Engine Dealers may not be listed as the contact</b> ):		
Person with contract signing authority:		
Street/mailing address:		
City:	State:	Zip code:
Phone: (      )	Fax: (      )	
Cell phone: (      )	E-mail:	
Geographic area to be served by equipment if different than above:		

**I hereby certify that all information provided in this application and any attachments are true and correct to the best of my knowledge, and that I have read the separate Guidelines, Policies and Procedures document for this program component.**

Printed Name of Contract Signing Authority:	Title:
Signature of Contract Signing Authority: (Must sign in <b>INK ONLY</b> )	Date:

**AG PUMP ENGINE REPOWER/RETROFIT APPLICATION SECTION**

**Please check one:**

- Repowering existing ag pump engine with a new reduced-emission engine.
- Retrofitting existing ag pump engine with new reduced-emission technology.

<b>GENERAL INFORMATION ABOUT ENGINE REPOWER OR RETROFIT</b>		
Engine Type:	Compression <input type="checkbox"/>	Spark <input type="checkbox"/>
Estimated total annual hours of operation:		
Estimated annual fuel consumption (in gallons):		
Is there any seasonality to the use of the engine?    YES/NO    If Yes, please explain:		

<b>CURRENT ENGINE</b>
Engine manufacturer:
Engine model:
Year of manufacture:
Engine serial number:
Engine series:
Manufacturer's intermittent (maximum) brake horsepower rating (not continuous):
Primary fuel:
Estimated engine life:
Cost of rebuilding engine:
Average engine life:
Baseline Nox emission standard (If known):
Baseline PM emission standard (If known):
Certified USEPA standardized Engine Family Name: (If applicable)

<b>NEW REDUCED-EMISSION ENGINE/RETROFIT</b>
Engine manufacturer:
Engine model :
Year of manufacture:
Serial number of engine: (Provide when available)
Engine series:
Manufacturer's intermittent (maximum) brake horsepower rating (not continuous) (Not more than 25% increase):
Primary fuel:
Estimated engine life:
Estimated rebuild/replacement schedule:
Cost of new engine/retrofit replacement technology:
Certified Nox emission standard:
Certified PM emission standard:
Certified USEPA standardized Engine Family Name:(If applicable)

**AG PUMP ENGINE REPOWER/RETROFIT APPLICATION SECTION**

**(continued)**

**GENERAL INFORMATION ABOUT THE INSTALLER**

<b>REDUCED-EMISSION AG PUMP ENGINE REPOWER (replacement)</b>	
Engine installer:	
Street address:	
City:	State:
Phone: ( )	Fax: ( )
Contact name:	

**OR**

<b>RETROFIT TECHNOLOGY</b>	
Retrofit manufacturer:	
Retrofit installer:	
Installer Street address:	
City:	State:
Phone: ( )	Fax: ( )
Contact name:	Retrofit kit number:
Description of retrofit technology:	