

RULE 1612.1. MOBILE SOURCE CREDIT GENERATION PILOT PROGRAM

(a) Purpose

The purpose of this rule is to provide opportunities to generate NO_x mobile source emission reduction credits (MSERCs) for use in RECLAIM through the voluntary replacement of diesel-fueled heavy-duty vehicles or yard hostlers, with clean technologies.

(b) Applicability

(1) This rule applies to persons who voluntarily elect to generate NO_x MSERCs, for use in RECLAIM pursuant to Rule 2008 – Mobile Source Credits through the replacement of diesel-fueled heavy-duty Class 7 or 8 captive vehicles, or yard hostlers operated exclusively within the district with new similar-type vehicles using clean technologies.

(2) This rule does not apply to any:

(A) emission reductions produced by monies from any public air quality related funding program including but not limited to Rule 2202, the Carl Moyer Memorial Air Quality Standards Attainment Program, or AB2766 funding;

(B) emission reductions required pursuant to any law, rule, or regulation, or legal instrument such as a legal settlement or consent decree; or

(C) vehicle that is subject to the requirements of any Rule 1190 series rule.

(c) Definitions

(1) **ACTIVITY LEVEL (AL)** means the number of miles traveled, fuel consumed, or hours of operation per year within the District.

(2) **APPLICATION** means the Rule 1612.1 MSERC Application as specified in subdivision (e).

(3) **BASELINE EMISSION FACTOR (EF_{base})** means the emission factor used to quantify annual emissions from a new diesel-fueled heavy-duty vehicle or yard hostler that would have been purchased if the clean technology powered vehicle was not purchased.

(4) **CAPTIVE VEHICLE** means a heavy-duty Class 7 or 8 diesel-fueled on-road vehicle that is operated exclusively within the district during the

credit generation period and provides a service other than transporting passengers, with the exception of vehicle maintenance that requires the vehicle to be serviced outside of district boundaries one-time per calendar year and the vehicle is not hauling or transporting freight upon leaving and returning to the district.

- (5) CLEAN TECHNOLOGIES means any low-emission technology certified by CARB using compressed or liquefied natural gas, liquefied petroleum gas, electric power, or dual-fueled engines.
- (6) CREDIT GENERATION PERIOD means the timeframe that MSERCs are being generated and begins on the date that the requirements of subdivision (d) are met and can extend no longer than the lifetime of the original replacement vehicle, except as provided in subdivision (i).
- (7) CREDIT ISSUANCE PERIOD means the timeframe for which MSERCs are issued and begins on the date that the requirements of subdivision (h) are met.
- (8) DIESEL FUEL means any fuel that is commonly known as diesel fuel No. 1-D or 2-D, or meets the specifications in ASTM D 975, Standard Specifications for Diesel Fuel Oils.
- (9) DISTRICT means the geographical area defined by Rule 103 – Definition of Geographical Area.
- (10) DUAL-FUEL ENGINE means an engine that is designed to operate simultaneously on compressed or liquefied natural gas and diesel fuel.
- (11) EVALUATION YEAR means the first year and subsequent years thereafter as determined pursuant to paragraph (g)(3) during which the AQMD, CARB, and EPA will assess whether MSERCs may continue to be generated or if a portion or all future MSERCs need to be discontinued or discounted to ensure credits remain surplus.
- (12) HEAVY-DUTY CLASS 7 OR 8 VEHICLE means any on-road vehicle having a gross vehicle weight of greater than 26,000 pounds.
- (13) MOBILE SOURCE EMISSION REDUCTION CREDIT (MSERC) means for the purpose of this rule, emission reduction credits that meet the requirements of this rule and are issued as specified in subdivision (h).
- (14) OPTIONAL EMISSION FACTOR (EF_{opt}) means the emission factor certified by CARB used to quantify annual emissions for the replacement vehicle.

- (15) RECLAIM FACILITY means any stationary source subject to Regulation XX, pursuant to Rule 2001 - Applicability.
 - (16) REFUSE COLLECTION VEHICLE means any heavy-duty Class 7 or 8 vehicle used expressly for collecting solid waste from residential or commercial establishments and generally operates on fixed routes.
 - (17) REPLACEMENT OR REPLACE means for the purpose of this rule, the complete removal of a preexisting vehicle from service and substitution with a vehicle using a clean technology.
 - (18) RETIRE OR RETIRED means that the credit, regardless of the expiration date of the credit, can no longer be transferred or used.
 - (19) SURPLUS means that emission reductions achieved throughout the duration of the emission reduction activity that are not required or relied upon by any local, state, or federal rule, or regulation, and the federal Clean Air Act; and are not required or relied upon in an attainment demonstration, reasonable further progress demonstration, or emissions inventory thereby ensuring that there is no double counting of emission reductions.
 - (20) VEHICLE means for the purpose of this rule, either a heavy-duty Class 7 or 8 captive vehicle, including a refuse collection vehicle, or a yard hostler subject to this rule.
 - (21) YARD HOSTLER means a tractor less than 300 hp which is used to transfer semi-truck or tractor-trailer containers in and around storage, transfer, or distribution yards or areas and is often equipped with a hydraulic lifting fifth wheel for connection to trailer containers.
- (d) Credit Generator Requirements
- Any person who elects to generate MSERCs under this rule shall meet the following requirements:
- (1) Replace existing diesel-fueled vehicles with new vehicles of similar vehicle type, performing a similar function, powered by clean technologies where the engines are certified to meet a CARB NO_x optional credit standard that is at or below the NO_x maximum optional emission factors shown in Table 1 – Evaluation Year and NO_x Baseline and Optional Emission Factors;

- (2) Demonstrate that the purchase contract for acquisition of the new replacement vehicles is signed no earlier than January 1, 2001 and that vehicle deliveries do not occur prior to March 16, 2001;
 - (3) Demonstrate that the new replacement vehicles are captive vehicles;
 - (4) Submit an Application as specified in subdivision (e); and
 - (5) Demonstrate compliance with the monitoring, recordkeeping, and reporting requirements specified in subdivision (j).
- (e) Application
- (1) Any person who elects to generate MSERCs under this rule shall submit an Application to the District no later than 30 days after delivery of the replacement vehicles and before January 1, 2004 unless otherwise determined by both CARB and EPA to be before January 1, 2003. The Application shall include the following:
 - (A) A description of the replacement project, including, at a minimum, the vehicle model(s), model year(s), and applicable conversion factors, and baseline and optional emission factors;
 - (B) The county or counties where the replacement vehicle will be used during the credit generation period;
 - (C) The location where the replacement vehicle is parked or garaged when not in service;
 - (D) The initial service date of each new replacement vehicle which is a date after the existing diesel-fueled vehicle is replaced that would represent the beginning of the credit generation period;
 - (E) Documentation showing the date of purchase for the new replacement vehicle such as a signed purchase agreement;
 - (F) Identification of the intended user(s) of the MSERCs, if available;
 - (G) The historical annual average activity level for replaced captive vehicles for the previous calendar two-year period; and
 - (H) Designation of the RECLAIM Compliance Cycle for each vehicle for the initial and each annual credit generation period for the entire credit generation period.
 - (I) The projected activity level for the initial credit generation period and the projected annual activity level after the initial credit generation period which coincides with either RECLAIM Compliance Cycle 1 or 2, up to the evaluation year, not to exceed a

five-year credit generation period. The projected activity level for any single new replacement vehicle should not exceed 120% of the most recent two-year historical annual average activity level specified in subparagraph (e)(1)(G).

- (2) If the initial service date, as specified in subparagraph (e)(1)(D) of the new replacement vehicle is before the Application is approved, the Application shall include the following additional information:
 - (A) Proof of delivery for the new replacement vehicles;
 - (B) Proof of transfer of ownership of the replaced vehicles with the location and identity of the new owner(s), along with a copy of a written notification informing the new owner that the replaced vehicle must not be operated, sold, or otherwise transferred or delivered in the district or in Ventura or Santa Barbara Counties;
 - (C) Proof of removal from service for the replaced vehicles which are not sold or otherwise transferred to a new owner by providing a Certificate of Planned Non-operation from the California Department of Motor Vehicles, along with the location and final odometer reading of the vehicle;
 - (D) Proof of destruction of the replaced vehicle such as a copy of the Report of Vehicle to be Dismantled from the California Department of Motor Vehicles, for replaced vehicles not otherwise sold, transferred or certified as non-operational;
 - (E) Written certification or signed declaration from the credit generator that any vehicle that is not sold, scrapped, or otherwise transferred to a new owner or location outside the district has not been, and will not be operated within the district or in Ventura or Santa Barbara Counties during the credit generation period; and
 - (F) Vehicle identification numbers and engine serial numbers of each replacement vehicle.

- (3) If the initial service date, as specified in subparagraph (e)(1)(D) is after the Application is approved, the credit generator shall provide information specified under subparagraph (e)(2)(A) through (e)(2)(F) prior to credit issuance pursuant to paragraph (h)(1).
 - (4) The Application shall be deemed a plan, and plan fees shall be assessed in accordance with Rule 309 – Fees For Regulation XVI.
 - (5) The Executive Officer shall approve or disapprove the Application, and any subsequent revisions submitted pursuant to paragraph (e)(6), in writing within 90 days of submittal of a complete Application or Application revision.
 - (6) Notwithstanding subparagraph (e)(7), any person that submits an Application may amend the Application to:
 - (A) revise information provided under subparagraphs (e)(1)(A) through (e)(1)(G) at any time;
 - (B) revise the original projected activity levels specified in subparagraph (e)(1)(I) no later than 30 days for the initial credit generation period and 180 days for the annual credit generation period after the beginning eligibility credit issuance date pursuant to subparagraph (h)(2)(B) of the MSERCs; or
 - (C) remove a vehicle from the Application, provided the credit generator retires MSERCs or MSERCs converted into RTCs to cover reductions projected for that vehicle for the entire current and subsequent credit generation periods in which the replaced vehicle would have generated credits.
 - (7) An Application shall not be amended to add a vehicle that is removed from the Application pursuant to subparagraph (e)(6)(C) until the following annual credit generation period.
 - (8) The credit generation period shall begin no earlier than the date the Application is received by the district.
- (f) MSERC Quantification
- (1) MSERCs for captive vehicles using fuel consumption or miles traveled as unit of measurement of the activity level shall be quantified using the following equation:

$$\text{MSERC} = [(\text{EF}_{\text{base}} - \text{EF}_{\text{opt}}) \times \text{DFA} \times \text{CF} \times \text{AL}] / 454$$

Where

- MSERC = Mobile source emission reduction credit (pounds)
- DFA = Dual-fuel adjustment equal to 0.7 for the purchase and operation of dual-fueled heavy-duty Class 7 or 8 vehicles, unless otherwise demonstrated through manufacturer’s data or testing and approved by the Executive Officer, CARB, and EPA, and equal to 1.0 in all other cases
- EF_{base} = Baseline emission factor (g/bhp-hr)
- EF_{opt} = Optional emission factor (g/bhp-hr)
- CF = Conversion factor associated with the fuel used to transform EF_{base} and EF_{opt} into appropriate units consistent with the activity level monitored (bhp-hr/mile, bhp-hr/gal, or bhp-hr/ft³)
- AL = Activity level (mile, gal, or ft³)

- (2) MSERCs for captive vehicles using hours of operation as the unit of measurement for the activity level shall be quantified using the following equation:

$$MSERC = \frac{[(EF_{base} \times HP_{base} \times LF_{base}) - (EF_{opt} \times HP_{opt} \times LF_{opt})] \times AL}{454}$$

Where

- MSERC = Mobile source emission reduction credit (pounds)
- EF_{base} = Baseline emission factor (g/bhp-hr)
- EF_{opt} = Optional emission factor (g/bhp-hr)
- HP_{base} = Horsepower of the replaced engine (hp)
- HP_{opt} = Horsepower of the replacement engine (hp)
- LF_{base} = Load factor of the replaced vehicle
- LF_{opt} = Load factor of the replacement vehicle
- AL = Activity level (hour)

- (3) The load factors used for the replaced and replacement vehicles shall be equal to 0.43 unless otherwise demonstrated and approved in writing by the Executive Officer, CARB, and EPA.
- (4) The projected and actual activity level used to quantify the MSERCs shall be determined from the information submitted pursuant to subdivisions (e)

and (j), respectively. MSERCs shall be quantified using fuel consumption as the activity level for purposes of issuing credits for all vehicles.

- (5) To quantify MSERCs, the credit generator shall use the values of baseline and maximum optional emission factors in Table 1 – Evaluation Year and Baseline and Optional Emission Factors based on the date of vehicle delivery.
 - (6) For yard hostlers the baseline emission factor shall represent the value certified to the on-road emission standards. The baseline emission factor for off-road emission standards as shown in Table 1 may be used provided the credit generator:
 - (A) provides historic captive vehicle records that demonstrate their existing yard hostlers are powered by off-road engines; and
 - (B) demonstrates that the replaced yard hostler(s) are powered by engine(s) subject to the off-road emission standards.
 - (7) Notwithstanding paragraph (f)(5), a credit generator may use a lower optional emission factor provided that the new engine is certified to a CARB NO_x optional credit standard that is lower than the maximum optional emission factor for the applicable category shown in Table 1 and EPA concurs with the CARB certification.
 - (8) The conversion factors listed in Table 2 - Conversion Factors shall be used to quantify MSERCs based on the appropriate activity level monitored during the credit generation period.
- (g) Source Category Evaluation
- (1) Six months prior to the end of the evaluation year, the Executive Officer with CARB and EPA shall complete an evaluation on Class 7 and 8 vehicles and yard hostlers and agree whether future MSERCs need to be either discontinued or discounted to ensure credits remain surplus.
 - (2) The evaluation shall include, but is not limited to, an assessment of current and future local, state, and federal rules and regulations affecting each source category.
 - (3) After the initial evaluation year, the evaluation performed in paragraph (g)(1) shall be completed on a timeframe as agreed to by the AQMD, CARB, and EPA, but not more than once per year.

- (4) Subsequent evaluations performed pursuant to paragraph (g)(3) shall be completed at least six months prior to end of each evaluation period specified in paragraph (g)(3), for the remainder of the pilot program.
 - (5) No future MSERCs shall be issued if the evaluation is not completed or the AQMD, CARB and EPA do not agree on whether future MSERCs need to be discontinued or the amount that the MSERCs need to be discounted.
- (h) Credit Issuance
- (1) The Executive Officer shall issue MSERCs provided the credit generator has written approval of the Application and has provided the information specified in subparagraphs (e)(2)(A) through (e)(2)(F):
 - (2) The Executive Officer shall issue MSERCs:
 - (A) in pounds of NO_x for the amount indicated in the approved Application in one-year increments;
 - (B) designated with a beginning and ending date based on the date of credit issuance;
 - (C) for the number of annual credit issuance periods up to December 31 of the evaluation year shown in Table 1 and shall be based on the annual projected activity level specified in subparagraph (e)(1)(I); and
 - (D) discounted upon issuance by:
 - (i) nine percent which will be retired for the benefit of the environment; and
 - (ii) one percent which will either fund the Rule 518.2 – Federal Alternative Operating Conditions offset program, or if Rule 518.2 funding is not needed, be retired for the benefit of the environment.
 - (3) Any reductions other than NO_x that result from implementation of projects subject to this rule shall be for the benefit of the environment and ineligible for transfer or use.
 - (4) The actual amount of MSERCs issued shall be based on the approved Application, or any subsequent verification by the Executive Officer.
 - (5) Notwithstanding Rule 2008 – Mobile Source Credits, MSERCs converted to RTCs shall be issued for either RECLAIM Compliance Cycle 1 or 2 provided that each annual credit generation period coincides with the

entire cycle selected. If the initial credit generation period begins prior to the start of a complete RECLAIM Compliance Cycle, that portion of MSERCs converted to RTCs shall be issued for the current or previous cycle provided that this initial credit generation period is fully contained within the cycle selected.

- (6) Any MSERCs not used by the specified expiration date shall be retired to benefit the environment and be ineligible for transfer or use.
- (i) Loss or Malfunction
 - (1) If any replacement vehicle identified in the Application is itself replaced due to loss or a malfunction that is not a result of normal use during the current credit generation period, the credit generator shall replace the vehicle with an engine certified to meet or be below the lower of the following:
 - (A) The maximum optional emission factor used for the originally replacement vehicle; or
 - (B) The maximum optional emission factor that is currently in effect at the time of replacement due to loss or malfunction as specified in Table 1; and
 - (2) The credit generator shall be responsible for obtaining credits and surrendering them to the Executive Officer to make up any potential shortfall in credits according to the reconciliation procedures of subdivision (k) as a result of the following:
 - (A) any vehicle that is stolen, destroyed, or malfunctions after 10 years from the initial credit issuance date;
 - (B) any vehicle that is not replaced pursuant to paragraph (i)(1); and/or
 - (C) any reduction in activity level during the replacement of the stolen, destroyed, or malfunctioning vehicle.
 - (3) Notwithstanding the requirements of paragraph (i)(2), no additional MSERCs shall be issued:
 - (A) due to the replacement vehicle having a lower optional emission factor than that used for the original vehicle; or
 - (B) for use of the replacement vehicle beyond 2006 for the current credit generation period, or the last year of the current credit generation period that surplus emission reductions have been issued.

- (j) Monitoring, Recordkeeping, and Reporting
 - (1) For all replacement vehicles identified in the approved Application, credit generators shall monitor and maintain quarterly records of the following activity levels:
 - (A) Class 7 and 8 Vehicles and Refuse Collection Vehicles
 - (i) miles traveled per vehicle; and
 - (ii) gallons or cubic feet of fuel consumed per vehicle
 - (B) Yard Hostlers
 - (i) hours of operation as measured by an hour meter; and
 - (ii) gallons or cubic feet of fuel consumed per vehicle
 - (2) For each vehicle, credit generators shall maintain quarterly records of:
 - (A) the location where the vehicle is parked or garaged, when not in service;
 - (B) the vehicle engine identification number, model, model year, and serial number;
 - (C) vehicle loss, sale, lease, repower, or engine overhaul;
 - (D) when a vehicle is replaced due to loss or malfunction, identification of each replaced and replacement vehicle and engine including vehicle and engine model and model year, identification, and serial number;
 - (E) when a vehicle is sold or leased, identification and location of new owner or lease;
 - (F) any emission test results completed to verify or certify a participating engine; and
 - (G) when a vehicle is transferred out of the district for maintenance service, the type of service performed, the date the vehicle leaves and returns to the district, the odometer reading before leaving and upon returning to the district, and a signed declaration that the vehicle did not haul or transport freight upon leaving and returning to the district.
 - (3) Within 30 days after the end of each twelve-month credit generation period, the credit generator shall submit:
 - (A) the activity level specified in paragraph (j)(1) for the previous twelve-month credit generation period; and
 - (B) the information specified in paragraph (j)(2) if any vehicle identified in the Application is replaced, lost, sold, leased,

repowered, transferred across district boundaries for maintenance purposes, or the engine is overhauled.

- (C) the operation status of any vehicle which has been certified as being non-operational pursuant to subparagraph (e)(2)(C) along with the vehicles' odometer reading.
 - (4) Notwithstanding paragraph (j)(3), if the initial credit generation period begins prior to the start of a complete RECLAIM Compliance Cycle as specified in subparagraph (e)(1)(H) and is three months or less, the credit generator shall submit the information specified in paragraph (j)(3) within 30 days after the end of the annual credit generation period following the initial credit generation period. For an initial credit generation period that is greater than three months, the credit generator shall submit the information specified in paragraph (j)(3) within 30 days after the end of the initial credit generation period.
 - (5) The credit generator shall provide proof of transfer of ownership within 30 days of transfer of ownership for any vehicles receiving a Certificate of Planned Non-Operation which is sold or transferred to a new owner at some future date during the credit generation period along with a copy of a written notification informing the new owner that the replaced vehicle must not be operated, sold, or otherwise transferred or delivered in the district or in Ventura or Santa Barbara Counties;
 - (6) If the evaluation performed under subdivision (g) indicates that a portion or all future MSERCs are surplus, and if the credit generator elects to continue generating MSERCs, at least 60 days before the end of the evaluation year shown in Table 1, the credit generator shall submit the projected annual activity level for the following credit generation period, not to exceed five years.
- (k) Annual Reconciliation
- (1) The actual activity level submitted pursuant to paragraphs (j)(3) and (j)(4) shall be reviewed by the Executive Officer upon submittal to evaluate if any shortfall exists between the actual activity level and the projected activity level submitted pursuant to subparagraphs (e)(1)(I), or (e)(6)(B), and paragraphs (j)(3) and (j)(4).

- (2) If a shortfall exists between the actual and projected activity levels, the credit generator and user are subject to the penalty provisions specified under subdivision (m).
 - (3) If the actual activity level exceeded the projected activity level, then the Executive Officer shall, after performing the evaluation required by paragraph (k)(1), issue additional MSERCs equal to the amount of the increase and pursuant to subdivision (h) for use in the RECLAIM Compliance Cycle that ends no later than six months from the last day of the credit generation period of which the increase in activity level occurred.
- (l) Credit Use
- MSERCs generated under this rule may be used as RTCs under the provisions of Regulation XX – Regional Clean Air Incentive Market (RECLAIM).
- (m) Penalties
- (1) If a shortfall exists pursuant to paragraph (k)(1), credits equal to 110 percent of the shortfall shall be obtained and surrendered to the Executive Officer such that the applicant shall retire NO_x MSERCs generated under the same or different Application or RTCs that are approved and designated for use within the same RECLAIM cycle or if not available, from the next RECLAIM cycle.
 - (2) Any person submitting an Application who falsifies information in the Application or fails to implement any provision of the Application, shall be subject to the penalties specified in the Health and Safety Code for violation of District rules and shall be grounds for the Executive Officer to take one or more of the following actions:
 - (A) disapprove the Application and void all previously issued MSERCs, and those already converted to RTCs, that have not yet expired;
 - (B) designate the applicant to be ineligible to generate MSERCs; or
 - (C) assess the penalty specified in paragraph (m)(1).
 - (3) If the shortfall cannot be reconciled through paragraph (m)(1), any person who uses MSERCs or MSERCs converted into RTCs generated under this rule at a RECLAIM facility where there is a shortfall in emission reductions or where previously issued MSERCs, and those already

converted to RTCs, that have not yet expired are voided, shall be subject to the provisions specified in Rule 2010 – Administrative Remedies and Sanctions for RECLAIM rule violations. If there are multiple credit holders or users of credits generated under the same Application, each holder or user shall retire MSERCs or RTCs according to their prorated share of credits purchased.

(n) Program Review

- (1) On or before March 2002 and biannually thereafter, the Executive Officer shall complete a review and present a report to the Governing Board that includes but not be limited to the following information:
 - (A) General description of projects participating in the pilot program and the amount of NO_x MSERCs, including the amount converted to RTCs, generated under the pilot program;
 - (B) The location of the credit generation projects and facilities using RTCs under this pilot program;
 - (C) The amount of NO_x MSERCs retired to benefit the environment; and
 - (D) The amount of concurrent non-NO_x emission reductions such as PM and toxic air contaminants, generated under the pilot program that have been retired to benefit the environment.

Table 1
Evaluation Year and NO_x Baseline and Optional Emission Factors

Category	(Vehicle Delivered prior to 10/01/02) (g/bhp-hr)		(Vehicle Delivered on or after 10/01/02) (g/bhp-hr)		Evaluation Year
	NO _x Baseline Emission Factor	NO _x Maximum Optional Emission Factor	NO _x Baseline Emission Factor	NO _x Maximum Optional Emission Factor	
Refuse Collection Vehicles	4.4	2.5	2.0	1.8	2006
Other On-Road Heavy-Duty Vehicles	4.0	2.5	2.0	1.8	2006
Yard Hostlers ¹ With Existing On-Road Engines	4.0	2.5	2.0	1.8	2006
Yard Hostlers ² With Existing Off-Road Engines					
Below 175 hp ³	6.9	2.5	6.9	1.8	2006
175 hp to 299 hp ³	5.8	2.5	5.8	1.8	2006

- Engines subject to emission standards contained in Title 13, California Code of Regulations, Sections 1950-1978
- Engines subject to emission standards contained in Title 13, California Code of Regulations, Sections 2420-2427 or 40 CFR Part 89
- Engines with a horsepower rating of 100 hp to 299 hp delivered on and after January 1, 2003 shall have a NO_x baseline emission factor of 4.6 g/bhp-hr.

Table 2
Conversion Factors

Activity Level Monitored	Conversion Factor
Miles Traveled (Class 7)	2.3 bhp-hr/mile
Miles Traveled (Class 8)	2.6 bhp-hr/mile
Cubic Feet of CNG	0.1342 bhp-hr/ft ³
Gallons of LNG	11.07 bhp-hr/gal