

As indicated in the *Notice of Public Hearing to Consider the Adoption of a Proposed Airborne Toxic Control Measure for Stationary Compression Ignition Engines*, dated September 16, 2003, ARB staff is currently considering language that would address diesel PM and criteria pollutants from stationary diesel engines operating under demand response programs. Provided below is language that will be presented as a modification to the proposed ATCM for the Board's consideration at the hearing scheduled to begin on November 20, 2003. Please note that the language is still subject to editorial corrections (numbering, grammatical, typographical) and to substantive changes that the Board may want to make at the hearing, which will be shown in strikeout/underline format for an additional 15-day comment period if the Board approves the language. If you have any questions about the language, please contact Alex Santos at (916) 327-5638.

**PROPOSED ATCM LANGUAGE ADDRESSING STATIONARY ENGINES USED IN
DEMAND RESPONSE PROGRAMS
(11/13/03)**

DEFINITIONS

- (1) “Demand Response Program (DRP)” means a program for reducing electrical demand using an ISC or RBRP.
- (2) “DRP Engine” means an engine that is enrolled in and operating under a DRP.
- (3) “Emergency Standby Engine” means a stationary engine that meets the criteria specified in a. and b. and any combination of c. or d. or e. below:
 - a. is installed for the primary purpose of providing electrical power or mechanical work during an emergency use and is not the source of primary power at the facility; and
 - b. is operated to provide electrical power or mechanical work during an emergency use; and
 - c. is operated under limited circumstances for maintenance and testing, emissions testing, or initial start-up testing, as specified in subsections (e)(2)(A), (e)(2)(B), and (e)(2)(F); or
 - d. is operated under limited circumstances in response to an impending outage, as specified in subsections (e)(2)(A), (e)(2)(B) and (e)(2)(F) ; or
 - e. is operated under limited circumstances under a DRP as specified in subsection (e)(2)(F).
- (4) “Enrolled” means either of the following, whichever applies:
 - a. the ISC is in effect during the specified time period for an engine in an ISC; or
 - b. the date the engine is entered into the RBRP.
- (5) “Interruptible Service Contract (ISC)” means a contractual arrangement in which a utility distribution company provides lower energy costs to a nonresidential electrical customer in exchange for the ability to reduce or interrupt the customer’s electrical service during a Stage 2 or Stage 3 alert.
- (6) “Rolling Blackout Reduction Program (RBRP)” means a contractual arrangement, implemented by the San Diego Gas and Electric Company (SDGE) in San Diego County, in which SDGE pays a nonresidential electrical customer \$0.20 per kW-hr of reduced demand in exchange for the customer using its diesel-fueled engines to reduce its electrical demand by 15% or more, with a minimum of 100 kW reduction, during a Stage 3 alert upon request by SDGE.

- (7) “Stage 2 Alert” means a forecast or declaration by the California Independent System Operator (CAISO) that the operating reserves of electrical power will fall or have fallen below 5 percent.
- (8) “Stage 3 Alert” means a forecast or declaration by the California Independent System Operator (CAISO) that the operating reserves of electrical power will fall or have fallen below 1.5 percent.

PROPOSED NEW RBRP/ISC SECTIONS

(e)(2)(F) Operating Requirements and Emission Standards for New and In-Use Stationary Diesel-Fueled CI Engines That Have a Rated Brake Horsepower of Greater than 50 (>50 bhp) Used in Demand Response Programs (DRP Engines).

1. ***New Emergency Standby Diesel-Fueled CI DRP Engine (>50 bhp) Operating Requirements and Emission Standards***

- a. No person shall operate any new stationary emergency standby diesel-fueled CI DRP engine (>50 bhp) located on school grounds for non-emergency use, including maintenance and testing purposes, while any school-sponsored activity is taking place.
- b. No person shall operate any new stationary emergency standby diesel-fueled CI DRP engine (>50 bhp) in response to the notification of an impending rotating outage, unless all of the following criteria are met:
 - I. the engine's permit to operate allows operation of the engine in anticipation of a rotating outage, or the District has established a policy or program that authorizes operation of the engine in anticipation of a rotating outage; and
 - II. the Utility Distribution Company has ordered rotating outages in the control area where the engine is located, or has indicated it expects to issue such an order at a specified time; and
 - III. the engine is in a specific location that is subject to the rotating outage in the control area, except this requirement does not apply to an engine that is operating pursuant to a DRP and is located outside of the control area with the impending outage;
 - IV. the engine is operated no more than 30 minutes prior to the time when the Utility Distribution Company officially forecasts a rotating outage in the control area; and
 - V. the engine operation is terminated immediately after the Utility Distribution Company advises that a rotating outage is no longer imminent or in effect.
- c. Except as provided in subsection (c), no person shall operate any new stationary emergency standby diesel-fueled CI DRP engine (>50 bhp) , unless it meets all of the following applicable operating requirements and emission standards:

- I. Diesel PM Standard and Hours of Operating Requirements
 - i. New DRP Engines enrolled in the RBRP on or after January 1, 2005, and prior to January 1, 2008, shall:
 - aa. meet the requirements specified in (e)(2)(A)3. and
 - bb. not operate more than 75 hours per year for RBRP operation.
 - ii. New DRP Engines enrolled in the RBRP on or after January 1, 2008, shall:
 - aa. meet the more stringent diesel PM standard of either 0.01 g/bhp-hr of diesel PM; or
 - bb. the current model year diesel PM standard specified in the Off-Road Compression Ignition Engine Standards for off-road engines with the same horsepower rating (Title 13 CCR section 2423); and
 - cc. comply with the limitations on the hours of operation for maintenance and testing as specified in (e)(2)(A)3.a.i.ii. and (e)(2)(A)3.a.II., and
 - dd. not operate more than 75 hours per year for RBRP operation.
 - iii. New DRP Engines enrolled in an ISC on or after January 1, 2005, shall:
 - aa. meet the more stringent diesel PM standard of either 0.01 g/bhp-hr diesel PM; or
 - bb. the current model year diesel PM standard specified in the Off-Road Compression Ignition Engine Standards for off-road engines with the same horsepower rating (Title 13 CCR section 2423); and
 - cc. comply with the limitations on the hours of operation for maintenance and testing as specified in (e)(2)(A)3.a.i.ii. and (e)(2)(A)3.a.II., and
 - dd. not operate more than 150 hours per year for ISC operation
- II. HC, NO_x, NMHC + NO_x, and CO standards: No person shall operate any new stationary emergency standby diesel-fueled CI DRP engine (>50 bhp), unless it meets the standards for off-road engines of the same model year and horsepower rating as specified in the Off-Road Compression-Ignition Engine Standards (title 13, CCR, section 2423). If no standards have been established for an off-road engine of the same model year and horsepower rating as the new stationary emergency standby diesel-fueled CI DRP engine, then the new stationary emergency standby diesel-fueled CI DRP engine shall meet the Tier 1 standards in title 13, CCR, section 2423 for an off-road engine of the same horsepower rating, irrespective of

the new stationary emergency standby diesel-fueled CI DRP engine's model year.

- III. Consistent with section 39666(d) of the Health and Safety Code, the District:
 - i. may establish more stringent diesel PM, NMHC+NO_x, HC, NO_x, and CO emission rate standards; and
 - ii. may establish more stringent maintenance and testing hour of operation standards on a site-specific basis; and
 - iii. shall determine an appropriate limit on the number of hours of operation for demonstrating compliance with other District rules and initial start-up testing.

2. *In-Use Emergency Standby Diesel-Fueled CI DRP Engine (> 50 bhp) Operating Requirements and Emission Standards*

- a. No person shall operate any in-use stationary emergency standby diesel-fueled CI DRP engine (> 50 bhp) located on school grounds for non-emergency use, including for maintenance and testing purposes, while any school-sponsored activity is taking place.
- b. No person shall operate any in-use stationary emergency standby diesel-fueled CI DRP engine (>50 bhp) in response to the notification of an impending rotating outage, unless all of the following criteria are met:
 - I. the engine's permit to operate allows operation of the engine in anticipation of a rotating outage, or the District has established a policy or program that authorizes operation of the engine in anticipation of a rotating outage; and
 - II. the Utility Distribution Company has ordered rotating outages in the control area where the engine is located, or has indicated it expects to issue such an order at a certain time; and
 - III. the engine is in a specific location that is subject to the rotating outage in the control area, except this requirement does not apply to an engine that is operating pursuant to a DRP and is located outside of the control area with the impending outage; and
 - IV. the engine is operated no more than 30 minutes prior to the time when the Utility Distribution Company officially forecasts a rotating outage in the control area; and
 - V. the engine operation is terminated immediately after the Utility Distribution Company advises that a rotating outage is no longer imminent or in effect.

- c. Except as provided in subsection (c), no person shall operate any in-use stationary emergency standby diesel-fueled CI DRP engine (> 50 hp) unless it meets all of the following applicable operating requirements and emission standards:
 - I. Diesel PM Standard and Hours of Operation Requirements
 - i. In-Use DRP Engines enrolled in the RBRP prior to January 1, 2005, shall:
 - aa. meet the diesel PM standards and hour of operation limitations specified in (e)(2)(B)3.a. and (e)(2)(B)3.b., and
 - bb. not operate more than 75 hours per year for RBRP operation.
 - ii. In-Use DRP Engines enrolled in the RBRP on or after January 1, 2005, and prior to January 1, 2008, shall:
 - aa. meet a diesel PM standard of 0.15 g/bhp-hr diesel PM, and
 - bb. meet the requirements specified in (e)(2)(B)3.a. and (e)(2)(B)3.b. for maintenance and testing hours of operation, and
 - cc. not operate more than 75 hours per year for RBRP operation.
 - iii. In-Use DRP Engines enrolled in the RBRP on or after January 1, 2008, shall:
 - aa. meet a diesel PM standard of 0.01 g/bhp-hr diesel PM, and
 - bb. meet the requirements specified in (e)(2)(B)3.a. and (e)(2)(B)3.b. for maintenance and testing hours of operation, and
 - cc. not operate more than 75 hours per year for RBRP operation.
 - iv. In-Use DRP Engines enrolled in an ISC prior to January 1, 2008, shall:
 - aa. meet a diesel PM standard of 0.15 g/bhp-hr diesel PM, and
 - bb. meet the requirements specified in (e)(2)(B)3.a. and (e)(2)(B)3.b. for maintenance and testing hours of operation, and
 - cc. not operate more than 150 hours per year for ISC operation.
 - v. In-Use DRP Engines enrolled in an ISC on or after January 1, 2008, shall:
 - aa. meet a diesel PM standard of 0.01 g/bhp-hr diesel PM, and
 - bb. meet the requirements specified in (e)(2)(B)3.a. and (e)(2)(B)3.b. for maintenance and testing hours of operation, and

- cc. not operate more than 150 hours per year for ISC operation.

II. Additional Standards:

- i. Owners or operators that choose to meet the diesel PM standards and hour of operation limits defined in subsection (e)(2)(F)2.c. with emission control strategies that are not verified through the Verification Procedure shall:
 - aa. not increase HC or NO_x emission rates by more than 10% above baseline, or
 - bb. not increase the sum of NMHC and NO_x emission rates above baseline, and
 - cc. not increase CO emission rates by more than 10% above baseline.

III. Consistent with section 39666(d) of the Health and Safety Code, the District:

- i. may establish more stringent diesel PM, NMHC+NO_x, HC, NO_x, and CO emission rate standards; and
- ii. may establish more stringent limits on hours of maintenance and testing on a site-specific basis; and
- iii. shall determine an appropriate limit on the number of hours of operation for demonstrating compliance with other District rules and initial start-up testing

3. *Other Requirements Specific to RBRP Engines and the San Diego Gas and Electric Company*

- a. The sum total electrical generation (also known as the “total load reduction capacity”) from all diesel-fueled engines dispatched in the RBRP shall not exceed 80.0 megawatts (MW) at any time.
- b. RBRP Engines shall be dispatched by SDGE into service in accordance with a district-approved dispatch protocol as specified in subsection (e)(4)(J)2.

4. *Requirements Applicable to DRP Engines after a DRP is Terminated*

- a. After a DRP is terminated by either the Utility Distribution Company or the engine owner or operator, the DRP engine shall remain subject to the requirements of subsection (e)(2)(F) as if the DRP were still in effect.

PROPOSED RBRP AND ISC REPORTING REQUIREMENTS

- (e)(4)(J) Reporting Requirements for the San Diego Gas and Electric Company Regarding the RBRP
1. The San Diego Gas and Electric Company shall provide to the San Diego County Air Pollution Control District the following information, by January 1, 2005, to the extent the District does not already have the information:
 - a. For each diesel-fueled engine enrolled in the RBRP:
 - I. Owner's Company Name (if applicable);
 - II. Contact name, phone number, e-mail address
 - III. Load reduction capacity of engine, which is the rated brake horsepower expressed in megawatts (megawatts)
 - IV. Diesel PM emission rate of the engine (g/bhp-hr)
 - b. The information shall be updated as necessary to reflect the current inventory of RBRP engines and provided to the SDAPCD upon request.
 2. The San Diego Gas and Electric Company shall provide the San Diego County Air Pollution Control District with an environmental dispatch protocol for the RBRP that meets all of the following requirements:
 - a. The protocol shall require the San Diego Gas and Electric Company to dispatch engines in an order that protects public health, with consideration given to factors including, but not limited to, diesel PM emission rate, location, and other factors to be determined by the District; and
 - b. The protocol shall require the San Diego Gas and Electric Company to report to the District the identification of the engines called for dispatch within 1 day of the dispatch; and
 - c. The protocol shall require the San Diego Gas and Electric Company to report the following information to the District, within 30 days of the dispatch:
 - I. Identification of engine dispatched
 - II. Load capacity of engine dispatched
 - III. Cumulative total of load capacity of engines dispatched (megawatts)
 - IV. Cumulative total of diesel PM emission rate of engines dispatched (g/hr).
 - d. Within 30 calendar days of receiving the environmental dispatch protocol, or a time period mutually agreed by the parties, the District APCO shall approve or disapprove the protocol.

(e)(4)(K) Additional Reporting Requirements for the Stationary Emergency Standby Diesel-Fueled CI Engines Used To Fulfill the Requirements of an Interruptible Service Contract (ISC)

1. The owner or operator of an ISC engine shall provide to the District the following information, as necessary to the extent the District does not already have the information:
 - a. For each diesel-fueled engine enrolled in the ISC:
 - I. Owner's Company Name (if applicable);
 - II. Contact name, phone number, e-mail address
 - III. Diesel PM emission rate of the engine (g/bhp-hr)
 - b. For engines enrolled in an ISC prior to January 1, 2005, the information identified in (e)(4)(K)1.a. shall be provided to the District by February 1, 2005.
 - c. For engines enrolled in an ISC after January 1, 2005, the information identified in (e)(4)(K)1.a. shall be provided to the District no later than 30 days after the engine is enrolled in an ISC.
 - d. The information shall be updated as necessary to reflect the current inventory of ISC engines and provided to the District upon request.