


TCEQ Interoffice Memorandum

To: Ramiro Garcia, Jr., Deputy
Office of Compliance and Enforcement

Caroline Sweeney, Deputy
Office of Legal Services

From:  Steve Hagle, P.E., Deputy
Office of Air

Date: September 13, 2017

Subject: Federal and State Air Regulations for Stationary Diesel-Fired Engines in Demand Response Programs

Issue

Owners and operators of stationary diesel engines are subject to multiple overlapping federal and state air regulations. These regulations treat emergency demand response programs differently and recent litigation has impacted the federal regulations. This document provides an overview of the current main applicable federal and state air regulations for stationary diesel engines with regard to demand response programs and whether an engine would retain its emergency engine classification under state or federal regulatory requirements if the engine is operating as a result of participating in such programs.

Short Answer: Stationary diesel engines participating in emergency demand response programs may continue to be considered as emergency-use engines under Texas Commission on Environmental Quality (TCEQ) permitting and 30 Texas Administrative Code (TAC) Chapter 117 requirements but may lose emergency engine status under federal air regulations.

Demand Response Programs

Independent system operators (ISO) and regional transmission operators (RTO) have established demand response programs to help provide reliability during grid emergencies by participants decreasing their consumption of electric power from the grid and even potentially putting power back to the grid to help support the system. Participants in such programs establish a commitment with the ISO or RTO to decrease their power consumption from the electric grid during certain events. Such commitments can be directly with the ISO or RTO but are more commonly through a third party known as a Qualified Scheduling Entity (QSE). Participants may decrease their consumption from the electric grid by either decreasing the electricity consumption onsite or by replacing the electrical power drawn from the grid with local generation. Owners and operators of stationary diesel-fired reciprocating internal combustion engines, which are typically only used as emergency backup, sometimes participate in such programs. While other types of stationary engines, e.g., gasoline-fired or natural gas-fired engines, could potentially be used in demand response programs, diesel-fired engines are the predominate type of back-up generation that would typically be used by owners and operators participating in

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demand response programs. The Electric Reliability Council of Texas (ERCOT) has established such demand response programs, including:

- Emergency Response Service (ERS). ERS is only deployed during an ERCOT Energy Emergency Alert (EEA). Participants in ERS can put electrical power back to the grid for compensation.
 - ERS-10: Deployed at EEA Level 2. Response required within 10 minutes.
 - ERS-30: Deployed at EEA Level 1. Response required within 30 minutes.
 - Both ERS-10 and ERS-30 have two service types: weather-sensitive and non-weather-sensitive. The weather-sensitive programs are intended for consumers that have increased energy usage during peak hours (e.g., residential customers).
- Load Resources. ERCOT has multiple services that load resources, i.e., electricity consumers actively participating in the ERCOT market, may participate in other than ERS. Load resources do not put electrical power back to the grid; they reduce consumption in exchange for compensation. Load resources are classified as either controllable or non-controllable. Most load resources are non-controllable and participate by providing Responsive Reserve Service, which requires the load resource to be available to quickly reduce consumption in the event of a sudden loss of generation. These resources are typically deployed during either an ERCOT emergency by instruction from the ERCOT operator or automatically by triggering an under-frequency relay. In some rare events, they may also be deployed outside of an ERCOT emergency condition to help resolve overloaded transmission facilities.

ERCOT is not the only entity within the ERCOT region that offers demand response programs. Some transmission service providers sponsor Commercial Load Management (CLM) programs while some retail and demand response providers sponsor Four Coincidental Peak (4CP) Programs. These programs are not dispatched by ERCOT. Some programs, such as the CLM programs, may be deployed during grid emergencies, but may also be deployed in other localized situations when the transmission service provider determines this is appropriate. Other programs also may not necessarily be deployed during grid emergencies. For example, 4CP Programs are deployed for the purpose of reducing transmission charges by reducing load during an expected coincident peak interval, which may or may not occur during an ERCOT emergency. Additionally, similar programs may exist for portions of Texas outside of the ERCOT region.

Federal Regulations

Background

In the March 3, 2010 *Federal Register*, the United States Environmental Protection Agency (EPA) published a final rulemaking to revise 40 Code of Federal Regulations (CFR) Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart ZZZZ, §63.6640(f)(4) to allow emergency stationary diesel engines to operate up to a maximum of 15 hours per year as part of an emergency demand response program and still retain the emergency engine classification. The EPA proposed a rulemaking in August 2010 (75 FR 32612) to revise two New Source Performance Standards (NSPS) regulations to provide a similar allowance: 40 CFR Part 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, §60.4211(f)(4); and 40 CFR Part 60,

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Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines, §60.4243(d)(4). The EPA decided not to adopt the revision regarding the 15 hours allowance when finalizing the rulemaking for NSPS Subparts III and JJJJ in June 2011 (76 FR 37954). However, the EPA subsequently proposed and adopted revisions to all three regulations (January 30, 2013, 78 FR 6674) to allow emergency stationary engines to operate as part of an emergency demand response program provided certain conditions were met, e.g., the regional transmission authority or equivalent balancing authority and transmission operator has declared an EEA Level 2 as defined in the North American Electric Reliability Corporation Reliability Standards EOP 002-3, Capacity and Energy Emergencies. Operation under an emergency demand response program was included in the 100 hours per year allowed for non-emergency use. The emergency demand response provisions were adopted into the following sections: 40 CFR §§60.4211(f)(2)(ii) - (iii), 60.4243(d)(2)(ii) - (iii), and 63.6640(f)(2)(ii) - (iii). Below is the language from 40 CFR §63.6640(f)(2)(ii) - (iii) but the language in the three regulations is essentially identical.

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

The EPA also adopted similar provisions in 40 CFR §§60.4211(f)(3), 60.4243(d)(3), and 63.6640(f)(4) that were for situations that the EPA did not consider to be emergency situations. The 50 hours per year allowed under these non-emergency operation provisions still counts against the total 100 hours per year allowed for emergency stationary engines under 40 CFR §§60.4211(f)(2), 60.4243(d)(2), and 63.6640(f)(2).

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except

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as provided in paragraph (f)(3)(i) of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

The NSPS regulations for stationary engines in 40 CFR Part 60, Subparts IIII and JJJJ, only apply to new, modified, and reconstructed engines. However, the NESHAP regulations in 40 CFR Part 63, Subpart ZZZZ, apply to existing and new stationary engines at area and major sources of hazardous air pollutants.

Following the January 2013 adoption of the revisions that included the emergency demand response provisions in 40 CFR Part 60, Subparts IIII and JJJJ, and 40 CFR Part 63, Subpart ZZZZ, the Delaware Department of Natural Resources and Environmental Control filed a petition for review with the United States Court of Appeals for the District of Columbia Circuit. On May 1, 2015, the court issued a decision (*Delaware Department of Natural Resources and Environmental Control v. EPA*, No. 13-1093, D.C. Circuit) that reversed and remanded the 2013 rules in 40 CFR §§60.4211(f)(2), 60.4243(d)(2), and 63.6640(f)(2). However, the court's decision was not that the EPA could not provide for such programs within its regulations but rather that the EPA "acted arbitrarily and capriciously" when responding to comments concerning the emergency demand response provisions. The court opinion stated that the EPA "cannot have it both ways—it cannot simultaneously rely on reliability concerns and then brush off comments about those concerns as beyond its purview."

The vacated rule language in the May 2015 court decision included provisions beyond just those related to emergency demand response. The EPA subsequently filed a motion for rehearing to get clarification regarding the vacatur. The court issued an amended decision on July 21, 2015 vacating only those provisions specific to emergency demand response: 40 CFR §§60.4211(f)(2)(ii) - (iii), 60.4243(d)(2)(ii) - (iii), and 63.6640(f)(2)(ii) - (iii). The EPA also requested a stay of the mandate of the decision to allow owners and operators of

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affected engines time to install controls necessary for compliance with the regulation. The court granted the request and issuance of the mandate was stayed until May 4, 2016.

The EPA also requested and received a voluntary remand of the provisions in 40 CFR §§60.4211(f)(3), 60.4243(d)(3), and 63.6640(f)(4) associated with a different case (*Conservation Law Foundation, et.al. v. EPA*, No. 13-1233, D.C. Circuit). While remanded, the provisions for non-emergency operation in 40 CFR §§60.4211(f)(3), 60.4243(d)(3), and 63.6640(f)(4) remain in effect.

Impact of Vacated Rule Language

On April 15, 2016, the EPA issued a memorandum, *Guidance on Vacatur of RICE NESHAP and NSPS Provisions for Emergency Engines*, (see Attachment 1) to provide guidance to owners and operators of stationary engines affected by the court's decision. Staff's review of the EPA guidance indicates the following key points:

- The EPA's position is that the vacatur of 40 CFR §63.6640(f)(2)(ii)-(iii) as published on January 30, 2013 did not revert the rule language to its form prior to that revision. In other words, the previous rule provisions allowing emergency demand response up to 15 hours per year were effectively also vacated. The rules in 40 CFR §60.4211 and §60.4243 did not have previous provisions regarding emergency demand response so this issue has no relevance to the NSPS rules.
- An emergency stationary engine that was operated for the purposes of 40 CFR §§60.4211(f)(2)(ii)-(iii), 60.4243(d)(2)(ii)-(iii), and 63.6640(f)(2)(ii)-(iii) after the court decision but that operation ceased as of May 4, 2016 would still be classified as an emergency stationary engine for the purposes of NESHAP Subpart ZZZZ and NSPS Subparts IIII and JJJJ.
- Emergency stationary engines that operate in a manner specified in the vacated provisions in 40 CFR §§60.4211(f)(2)(ii)-(iii), 60.4243(d)(2)(ii)-(iii), and 63.6640(f)(2)(ii)-(iii) after May 4, 2016 will not be classified as emergency engines. The owner or operator of the engine will be required to meet the requirements for non-emergency engines under NESHAP Subpart ZZZZ and NSPS Subparts IIII and JJJJ, as applicable.

Additionally, NSPS Subparts IIII and JJJJ rely heavily on manufacturer certification of emission standards for engines of certain model years and size ranges. Engines are certified as either emergency engines or non-emergency engines. Questions have been raised whether a Subpart IIII certified emergency engine can be retrofitted and then tested to demonstrate compliance with the applicable non-emergency engine standards. NSPS Subpart IIII §60.4211(c) specifically states for 2007 and later model year engines subject to the emission standards of §60.4204(b) or §60.4205(b) the owner or operator must comply by purchasing an engine certified to those applicable standards. In an April 19, 2012 letter (Attachment 2), the EPA has indicated that for owners and operators subject to certification requirements under NSPS Subpart IIII §60.4211(c), particularly 2011 model year and later, retrofitting a certified emergency engine and testing to demonstrate compliance with the non-emergency engine standards is not acceptable for compliance with the regulatory requirement to purchase a certified engine. Similar responses have been provided by the EPA in an applicability determination request (Attachment 3) and in correspondence to engine manufacturers (Attachment 4). Furthermore, while

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§60.4211(g) specifies that if the owner or operator does not install, configure, operate and maintain the engine and control device according to the manufacturer's emission-related written instructions then the owner or operator must conduct a performance test to demonstrate compliance with the applicable emission standards, *the EPA does not interpret §60.4211(g) as allowing an owner or operator to change the requirement in §60.4211(c) for purchasing an engine certified by the manufacturer for the applicable classification of engine.* The issue is particularly relevant to 2011 and later model year engines because the more stringent Tier 4 standards are applicable to non-emergency engines beginning with engines manufactured in 2011 while emergency engines are only required to meet Tier 2.

Therefore, for example, if an owner or operator purchased a 2011 model year certified emergency engine and then operates that engine after May 4, 2016 in a demand response program then the owner or operator would be non-compliant with Subpart III and has two options to return to compliance.

1 - The owner or operator must use an engine certified by the manufacturer to meet the non-emergency engine emission standards, either through purchasing a new engine or, if possible, getting the emergency engine recertified by the manufacturer as a non-emergency engine after retrofitting to meet the non-emergency emission standard. However, it is unclear whether manufacturers will be able and willing to recertify an engine in such a scenario.

2 - The owner or operator must cease participating in the demand response program and return to using the engine as an emergency-only engine as defined in the regulations. Ms. Melanie King, Energy Strategies Group, EPA Office of Air Quality Planning and Standards, and the EPA lead staff on the NSPS and NESHAP regulations for stationary engines, has confirmed to TCEQ staff that if an engine was originally installed as an emergency engine then subsequently lost that status due to operating as a non-emergency engine, the engine could requalify as an emergency engine by returning to the emergency-only status as specified in Subpart III.

NSPS Subpart JJJJ has similar language regarding purchasing certified engines for compliance in §60.4243(a) so a similar situation could occur for spark-ignited engines of certain model years and size ranges that are subject to Subpart JJJJ. However, spark-ignited engines are not typically used in demand response programs.

Applicability of Remanded Rule Language for Certain Non-Emergency Operations

Additionally, staff have received questions regarding whether ERCOT's emergency demand response programs could qualify for the non-emergency operation in 40 CFR §§60.4211(f)(3), 60.4243(d)(3), and 63.6640(f)(4). Specifically, various parties have asked if stationary engines operating under ERCOT's ERS and Load Resource programs would qualify as operation under the provisions in 40 CFR §§60.4211(f)(3), 60.4243(d)(3), and 63.6640(f)(4). The operation must meet all the conditions to be eligible for 40 CFR §§60.4211(f)(3), 60.4243(d)(3), and 63.6640(f)(4). The EPA memorandum issued on April 15, 2016 did not address these provisions other than to state that the EPA requested and received a voluntary remand from the court and that these rule provisions were still in effect. Based on TCEQ staff's review of the rules, discussions with ERCOT staff, and guidance provided by the EPA staff, the provisions in 40 CFR §§60.4211(f)(3), 60.4243(d)(3), and 63.6640(f)(4) are not intended for emergency demand response programs established by ISOs and RTOs such as ERCOT's ERS and Load Resource programs. Furthermore, ERCOT's ERS and Load Resource programs do not satisfy the conditions to qualify for the

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non-emergency operation under 40 CFR §§60.4211(f)(3), 60.4243(d)(3), and 63.6640(f)(4), in particular subparagraphs (A) and (B). The key points of staff's review are as follows:

- Ms. Melanie King has indicated that the non-emergency operation provisions in 40 CFR §§60.4211(f)(3), 60.4243(d)(3), and 63.6640(f)(4) were intended for programs operated by local providers such as rural cooperatives and not ISOs or RTOs. The preamble of the January 30, 2013 published final rule supports this position (78 FR 6686).
- Subparagraph (A) requires that the emergency stationary engines be dispatched by the local balancing authority or local transmission and distribution system operator. However, ERCOT does not appear to be either of these entities.
 - Balancing authority is defined by the North American Electric Reliability Corporation (NERC) as the responsible entity that integrates resource plans ahead of time, maintains demand and resource balance within a balancing authority area and supports interconnection frequency in real time. While ERCOT would be considered the balancing authority within the ERCOT region, local balancing authority is not defined by NERC and appears to be a term created by the Midwest Independent System Operator (MISO) to distinguish between itself as the NERC-authorized balancing authority and smaller entities that are responsible for compliance with a subset of NERC balancing authority reliability standards for their specific geographic area within the MISO area. As local balancing authority is not defined by the EPA or NERC, ERCOT might be interpreted as being the local balancing authority for purposes of the federal regulations. However, such an interpretation would be contrary to the EPA's stated intent for the provisions in 40 CFR §§60.4211(f)(3), 60.4243(d)(3), and 63.6640(f)(4) as indicated by Ms. Melanie King.
 - ERCOT protocols define Transmission Service Provider and Distribution Service Provider as separate entities from ERCOT (ERCOT Nodal Protocols, Section 2: Definitions and Acronyms, March 1, 2016). The local transmission and distribution system operator would most reasonably be interpreted as the local entities directly responsible for transmission and distribution systems, such as Oncor Electric Delivery Company LLC and Centerpoint Energy Houston Electric LLC.
- Subparagraph (B) requires that the dispatch be intended to mitigate local transmission or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region. ERCOT's ERS Programs are deployed for system-wide emergencies when the margin between electrical demand and system generating capacity is less than specified levels or if the system frequency is less than set values in the ERCOT's protocols, not to mitigate local transmission or distribution limitations (ERCOT Nodal Protocols, Section 6.5.9.4, April 12, 2016). Similarly, Load Resources providing Responsive Reserve Service have historically only been deployed when ERCOT is in an emergency condition or the system frequency approaches 59.7 Hz.

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State Regulations

Air Quality Regulations for Nonattainment Areas

The TCEQ's air quality regulations for control of nitrogen oxides (NO_x) are in 30 TAC Chapter 117. Stationary diesel engines are only subject to Chapter 117 in two areas: the Houston-Galveston-Brazoria (HGB) 2008 eight-hour ozone nonattainment area (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties), and the Dallas-Fort Worth (DFW) 1997 eight-hour ozone nonattainment area (Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties). While certain Chapter 117 rules were expanded to include Wise County for Reasonably Available Control Technology (RACT) purposes as part of the DFW 2008 eight-hour ozone nonattainment area, regulation of stationary diesel engines in Wise County was not necessary for RACT purposes. The Chapter 117 rules regarding stationary diesel engines in the DFW and HGB areas apply to both major and minor sources of NO_x.

Stationary diesel engines are most commonly used as emergency backup power generators. Chapter 117 provides multiple exemptions for emergency backup engines. Stationary diesel engines installed, modified, reconstructed, or relocated on or after October 1, 2001 in the HGB area and June 1, 2007 in the DFW area, are required to meet two criteria to qualify for exemption:

- meet the applicable EPA tier standards in effect at the time the engine is installed, modified, reconstructed, or relocated; and
- operate less than 100 hours per year in other than emergency situations.

For stationary diesel engines installed before October 1, 2001 in the HGB area and June 1, 2007 in the DFW area that have not been modified, reconstructed, or relocated on or after those dates, two alternate exemptions may apply.

- The engine must be used exclusively for emergency situations, except that operation for testing or maintenance is allowed for up to 52 hours per year in the HGB area and 100 hours per year in the DFW area. Any operation other than for testing, maintenance, or an emergency situation would result in the loss of the exemption.
- The engine operates less than 100 hours per year, including emergency purposes.

Chapter 117 does not prohibit participation in demand response programs, but such participation may affect whether an engine qualifies for these exemptions. The determination of whether operation of a stationary diesel engine as part of a demand response program affects the engine's exemption status under Chapter 117 is largely dependent on whether that operation meets the definition of emergency situation. The commission had previously allowed ERCOT's Emergency Interruptible Load Service (EILS) Program, the predecessor to the ERS Program, to be considered an emergency situation through interpretation. However, the EILS Program did not allow participants to put power to the electric grid whereas the ERS Program does allow participants to put power to the grid. On April 10, 2013, the commission adopted revisions to the definition of emergency situation to specifically address ERCOT's ERS Program (TCEQ Rule Project 2012-025-117-AI, *Texas Register* publication April 26, 2013, 38 TexReg 2623).

Chapter 117 currently defines emergency situation in §117.10(15):

(15) Emergency situation--As follows.

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(A) An emergency situation is any of the following:

(i) an unforeseen electrical power failure from the serving electric power generating system;

(ii) the period of time that an Electric Reliability Council of Texas, Inc. (ERCOT)-issued emergency notice or energy emergency alert (EEA) (as defined in ERCOT Nodal Protocols, Section 2: Definitions and Acronyms (August 13, 2014) and issued as specified in ERCOT Nodal Protocols, Section 6: Adjustment Period and Real-Time Operations (August 13, 2014)) is applicable to the serving electric power generating system. The emergency situation is considered to end upon expiration of the emergency notice or EEA issued by ERCOT;

(iii) an unforeseen failure of on-site electrical transmission equipment (e.g., a transformer);

(iv) an unforeseen failure of natural gas service;

(v) an unforeseen flood or fire, or a life-threatening situation;

(vi) operation of emergency generators for Federal Aviation Administration licensed airports, military airports, or manned space flight control centers for the purposes of providing power in anticipation of a power failure due to severe storm activity; or

(vii) operation of an emergency generator as part of ERCOT's emergency response service (as defined in ERCOT Nodal Protocols, Section 2: Definitions and Acronyms (August 13, 2014)) if the operation is in direct response to an instruction by ERCOT during the period of an ERCOT EEA as specified in clause (ii) of this subparagraph.

(B) An emergency situation does not include:

(i) operation for training purposes or other foreseeable events; or

(ii) operation for purposes of supplying power for distribution to the electric grid, except as specified in subparagraph (A)(vii) of this paragraph.

ERS Program:

The definition of emergency situation in §117.10(15) specifically addresses the ERS Program as being considered an emergency situation under subparagraph (A)(vii). Furthermore, the ERS Program is the only program that is allowed to put power back to the electrical grid and still be considered an emergency situation. Subparagraph (B)(ii) prohibits supplying power for distribution to the electric grid from being considered an emergency situation except for the operation specified under subparagraph (A)(vii), i.e., the ERS Program. The protocols referenced in the current definition of emergency situation include both the ERS-10 and ERS-30 programs.

Load Resources and Other Programs:

While the deployment of ERCOT's registered Load Resources is not one of the events specifically cited under the definition of emergency situation in §117.10(15), operation of an emergency diesel engine as a result of a Load Resource deployment, or under another

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entity's program such as the CLM Program, would still be considered an emergency situation as long as the conditions of the definition are met. Subparagraph (A)(ii) defines an emergency situation as the period of time that an ERCOT-issued emergency notice or EEA is applicable to the serving electric power system. As such, subparagraph (A)(ii) is not specific to any particular program or operation. If a stationary diesel engine is operated as a result of a demand response program being deployed during an ERCOT-issued emergency notice or EEA, subparagraph (A)(ii) of the definition of emergency situation is met so long as the operation is during the period of time the notice or EEA is in effect. However, the conditions of subparagraph (B) must also be satisfied. Subparagraph (B)(i) specifies that the operation for training purposes or other foreseeable events is not considered an emergency situation. While participants in a demand response program know that they may be deployed at some point, they do not know when that deployment will occur until being notified. If the owner or operator of the stationary diesel engine is not putting power to the electric grid, the requirements of subparagraph (B)(ii) are satisfied. As these conditions are not specific to ERCOT's programs, operation under any demand response program could qualify as an emergency situation so long as that operation is during the time period specified in subparagraph (A)(ii) and is not an operation specifically excluded under subparagraph (B). However, if the demand response program is deployed outside of the time period of an ERCOT-issued emergency notice or EEA and the operation does not meet one of the other conditions under subparagraph (A) then the operation would not be considered an emergency situation under Chapter 117.

Additionally, some emergency demand response programs have planned deployments for readiness testing purposes. Operation of a stationary diesel engine as part of a planned deployment is not an emergency situation because the operation is planned, i.e., foreseeable, and is therefore excluded from the definition of emergency situation by subparagraph (B)(i). Operation of a stationary diesel engine as part of a planned demand response deployment would be considered operation for testing purposes.

Air Permitting Preconstruction Requirements

Any new or modified facility with air emissions is required to have a preconstruction authorization from the TCEQ. Stationary diesel engines are typically authorized by one of the following: Permit by Rule (PBR) under 30 TAC Chapter 106; case-by-case New Source Review permit under 30 TAC Chapter 116, Subchapter B; or a standard permit under Chapter 116, Subchapter F. In some situations, the owner or operator of a stationary diesel engine must obtain either a case-by-case permit under Chapter 116, Subchapter B, or a use the Standard Permit for Electric Generating Units under Chapter 116, Subchapter F. However, stationary diesel engines for backup or emergency purposes are most commonly authorized by PBR under Chapter 106, specifically §106.511.

30 TAC §106.511:

Internal combustion engine and gas turbine driven compressors, electric generator sets, and water pumps, used only for portable, emergency, and/or standby services are permitted by rule, provided that the maximum annual operating hours shall not exceed 10% of the normal annual operating schedule of the primary equipment; and all electric motors. For purposes of this section, "standby" means to be used as a "substitute for" and not "in addition to" other equipment.

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As ERCOT's ERS Programs are currently only deployed during an EEA, the operation of a stationary diesel engine as part of these programs would be considered an emergency under §106.511, even if the operation was putting power to the electric grid under the ERS Program.

For ERCOT's Load Resource programs or other demand response programs, if the deployment of the program is for emergency purposes then operation of a stationary diesel engine as part of that deployment would be considered emergency operation. However, operation of a stationary engine as part of a demand response program outside of emergencies, such as a 4CP Program deployment, would not be emergency operation and not authorized under PBR §106.511. Participation in the ERS Program will not provide emergency generators the authority to exceed the hours of operation requirement in §106.511. In addition, owners or operators authorized by a case-by-case New Source Review permit or by a standard permit must meet all the requirements of the specific authorization during participation in the ERS Program. Participants in demand response programs that deploy outside of emergency situations that wish to operate a stationary engine to locally supply power, which do not qualify for PBR §106.511, are required to either obtain a case-by-case New Source Review permit or use the Standard Permit for Electric Generating Units under Chapter 116.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

April 15, 2016

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

MEMORANDUM

SUBJECT: Guidance on Vacatur of RICE, NESHAP and NSPS Provisions for Emergency Engines

FROM: Peter Tsigotis
Director, Sector Policies and Programs Division
Office of Air Quality Planning and Standards

TO: EPA Regional Air Enforcement Managers
EPA Regional Air Directors

The U.S. Environmental Protection Agency is issuing this guidance to explain how the EPA intends to implement certain regulatory requirements after the U.S. Court of Appeals for the District of Columbia Circuit issues the mandate effectuating the vacatur in *Delaware v. EPA*.¹ The statutory provisions and EPA regulations, as impacted by the impending issuance by the court of its mandate and described in this document, are themselves legally binding requirements. This document does not substitute for those provisions or regulations or modify them, nor is it a regulation itself. As such, this document does not impose legally binding requirements on the EPA, states, or the regulated community and may not apply to a particular situation based upon the circumstances. In appropriate circumstances, individual EPA decision makers may adopt approaches that differ from this guidance.

Background

On May 1, 2015, the U.S. Court of Appeals for the District of Columbia Circuit issued a decision² granting in part and denying in part petitions for review of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE), 40 CFR part 63 subpart ZZZZ, and the New Source Performance Standards (NSPS) for Stationary Compression Ignition and Spark Ignition Internal Combustion Engines, 40 CFR part 60 subparts IIII and JJJJ. The court decision, as modified on rehearing, vacated paragraphs 40 CFR 60.4211(f)(2)(ii)-(iii), 60.4243(d)(2)(ii)-(iii), and 63.6640(f)(2)(ii)-(iii). The vacated paragraphs specified that emergency engines may operate for a limited number of hours per year in two situations: (1) emergency demand response when the Reliability Coordinator has declared an Energy Emergency Alert Level 2, and (2) when there is a deviation of voltage or frequency of five percent or greater below standard voltage or frequency.³

¹ *Delaware v. EPA*, 785 F.3d 1 (D.C. Cir. 2015).

² *Ibid.*

³ In a different case (*Conservation Law Foundation, et. al. v. EPA*, No. 13-1233 (DC. Cir.)), the EPA requested and received a voluntary remand without vacatur of the provisions in 40 CFR 60.4211(f)(3)(i), 60.4243(d)(3)(i), and 63.6640(f)(4)(ii), which allow emergency engines to operate for up to 50 hours per year if certain conditions are met. Those provisions are not affected by the vacatur in *Delaware v. EPA* and engines can continue to operate for the purpose specified in those paragraphs

The EPA requested and received a stay of the court's mandate effectuating the vacatur until May 1, 2016. May 1, 2016, falls on a Sunday, so we expect the court to issue the mandate on Monday, May 2, 2016.

Impact of the Vacatur

Upon issuance of the court's mandate vacating 40 CFR 60.4211(f)(2)(ii)-(iii), 60.4243(d)(2)(ii)-(iii), and 63.6640(f)(2)(ii)-(iii), these provisions will cease to have any legal effect. It is the EPA's view that this change will mean that an engine may not operate in circumstances described in the vacated provisions for any number of hours per year unless it is in compliance with the emission standards and other applicable requirements for a non-emergency engine.⁴ After issuance of the mandate, operation of emergency engines will be limited to emergency situations as specified in 40 CFR 60.4211(f)(1), 60.4243(d)(1), and 63.6640(f)(1); maintenance checks and readiness testing for a limited number of hours per year as specified in 40 CFR 60.4211(f)(2)(i), 60.4243(d)(2)(i), and 63.6640(f)(2)(i); and certain non-emergency situations for a limited number of hours per year as specified in 40 CFR 60.4211(f)(3), 60.4243(d)(3), and 63.6640(f)(3)-(4).⁵

For an emergency engine that was operating for the purposes specified in paragraphs 40 CFR 60.4211(f)(2)(ii)-(iii), 60.4243(d)(2)(ii)-(iii), and 63.6640(f)(2)(ii)-(iii) before the vacatur mandate that becomes a non-emergency engine after the vacatur mandate solely as a result of the operation for those purposes after the vacatur mandate, regulatory requirements including numerical emission limits or work practice standards, notifications, and performance testing may apply. The applicability of regulatory requirements to a particular engine depends on criteria including the engine's type, horsepower, and age, and not every such engine will become subject to notification and testing requirements. The EPA's Regulation Navigation tools for the RICE NESHAP and NSPS can assist engine owners/operators in determining the applicable criteria and requirements for a specific engine. The tools can be found at <https://www3.epa.gov/ttn/atw/icengines/imp.html#regnav>.

Engines that are subject to initial performance testing requirements should conduct the initial performance test within 180 days of the date of the mandate (or by October 29, 2016, assuming the court issues the mandate on May 2, 2016). If an initial notification is required for the engine per 40 CFR 63.6645, notifications should be submitted no later than 120 days after the date of the mandate. If an initial notification is required for the engine according to 40 CFR 60.4214(a) or 60.4245(c), then such notification should be submitted no later than 30 days after the date of the mandate.⁶ The timelines for performance testing and initial notifications are specified in 40 CFR 60.7(a)(1), 60.8(a), 60.4214(a), 60.4245(c), 63.9(b), 63.6610, 63.6611, 63.6612, and 63.6645.

while the EPA addresses the *Conservation Law Foundation, et. al. v. EPA* remand. This guidance does not further address those remanded provisions.

⁴ In the EPA's motion asking the D.C. Circuit Court to stay the mandate, the EPA explained its understanding that the court's vacatur did not reinstate the provisions within the prior 2010 regulation that had previously allowed up to 15 hours per year of emergency demand response or mean that engines may operate for unlimited periods for emergency demand response and still qualify as emergency engines. See footnote 2 of the EPA's "Motion for Stay of the Mandate" in *Delaware v. EPA* which can be found at <https://www3.epa.gov/ttn/atw/icengines/tech.html>.

⁵ See footnote 3 regarding the voluntary remand without vacatur of the provisions in 40 CFR 60.4211(f)(3)(i), 60.4243(d)(3)(i), and 63.6640(f)(4)(ii).

⁶ This guidance with respect to notice and performance testing obligations only applies to the limited universe of engines that operate for the purposes specified in paragraphs 40 CFR 60.4211(f)(2)(ii)-(iii), 60.4243(d)(2)(ii)-(iii), and 63.6640(f)(2)(ii)-(iii) before and after the issuance of the vacatur mandate and for which the issuance of the vacatur mandate is the sole reason for the engine's change in status from an emergency engine to a non-emergency engine.

Reporting for Emergency Engines

Paragraph 40 CFR 63.6650(h) specifies that owners/operators of emergency engines that are used or contractually obligated to be available for the purposes specified in 40 CFR 63.6640(f)(2)(ii)-(iii), which are the paragraphs that were vacated, must submit an annual report that includes the hours the engine operated for those purposes. These reporting regulations provide that the first report must cover operation during 2015 and must be submitted no later than March 31, 2016. The deadline for this report occurred before the court is scheduled to issue the mandate, and owners/operators were required to submit this report by March 31, 2016. The NSPS regulations also contain similar reporting requirements in 40 CFR 60.4214(d) and 60.4245(c), and owners/operators were also required to submit the reports required by the NSPS regulations by March 31, 2016. Owners and operators will not be required to submit a report by March 31, 2017, for any such operations in 2016.

cc: Sheila Igoe, OGC
Sara Ayres, OECA
Robert Klepp, OECA



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 19 2012

Mr. James Richmond
GenAcc
60 State Street, Suite 101
Peoria, Illinois 61602

ASSISTANT ADMINISTRATOR
FOR ENFORCEMENT AND
COMPLIANCE ASSURANCE

Dear Mr. Richmond:

We are writing to follow up on a call that you had with several members of our staff on February 27, 2012, regarding the New Source Performance Standards for Stationary Compression Ignition (CI) Internal Combustion Engines. Those standards were published on July 11, 2006, 71 Fed. Reg. 39,154, and revised on June 28, 2011, 76 Fed. Reg. 37,954. They can be found at 40 C.F.R. part 60, subpart IIII. During the call and in previous communications with our staff, you raised a number of concerns and claims related to the provisions in subpart IIII that require engine manufacturers to obtain certification that their new stationary CI engines meet applicable emission standards and that require owners and operators of new stationary CI engines to purchase engines certified to the applicable emission standards. Below is our response to the specific issues you raised during the call.

Requirement to purchase certified engines: As specified in subpart IIII at 40 C.F.R. § 60.4205(b), for 1 MW stationary CI emergency engines with a displacement less than 10 liters per cylinder, the emission standards that apply for owners and operators (emphasis added) of 2011 model year and later engines are the Tier 2 standards in Table 1 of 40 C.F.R. § 89.112. As specified in subpart IIII at 40 C.F.R. § 60.4204(b), owners and operators of 2011 model year and later 1 MW stationary CI non-emergency engines with a displacement less than 10 liters per cylinder must meet the Tier 4 standards in 40 C.F.R. part 1039, subpart B.

You indicated that you are purchasing new 2011 and later model year stationary CI engines that are certified to the Tier 2 standards that apply to emergency engines. You are then installing emission controls on the engine that you believe will reduce the emissions of the engines below the Tier 4 emission standards. You stated that these engines are then being used in non-emergency applications, despite the fact that they are not certified by the U.S. Environmental Protection Agency (EPA) as meeting the emission standards applicable to non-emergency engines. You indicated that you are the owner/operator of these engines through your affiliation with ELM Energy LLC.

As our staff has indicated to you previously on several occasions, subpart IIII specifies at 40 C.F.R. § 60.4211(c) that owners and operators of 2007 model year and later stationary CI engines subject to the emission standards in § 60.4204(b) and § 60.4205(b) must comply by purchasing an engine certified to the applicable emission standard. For 2011 model year and later non-emergency engines larger than 1 MW with a displacement less than 10 liters per cylinder, the applicable emission standards are the Tier 4 standards in 40 C.F.R. part 1039, subpart B, not the Tier 2 standards in Table 1 of 40 C.F.R. § 89.112. It



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is a violation of subpart IIII to purchase an engine for non-emergency use if it is not certified to the applicable standards for non-emergency engines.

You indicated that you believe 40 C.F.R. § 60.4211(g) allows you to demonstrate compliance through on-site compliance testing in lieu of purchasing a certified engine. This is not correct. Paragraph 60.4211(c) says that the owner/operator must comply by purchasing a certified engine; it then goes on to say that it must be installed and configured according to the manufacturer's specifications, "except as permitted in paragraph (g) of this section." In other words, there is no exception to purchasing a certified engine; the paragraph (g) exception applies only to the requirement that the engine be installed and configured as per the manufacturer's specifications. Paragraph 60.4211(g) further makes clear that the requirements for the additional compliance demonstration apply "if you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer" In other words, 60.4211(g) does not provide a mechanism for doing something other than purchasing a certified engine; it only provides an alternative mechanism for showing compliance if you deviate from the manufacturer's specs for installation and configuration of the certified engine that you are required to purchase.

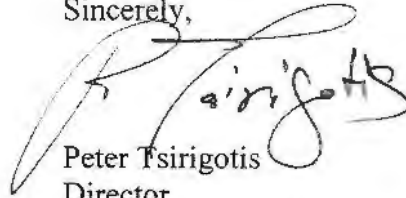
As you may be aware, we issued a letter to engine manufacturers in December 2011 to remind manufacturers that they are required to certify engines to the applicable emission standards in subpart IIII, and that non-emergency engines must be certified to the emission standards for non-emergency engines. Any manufacturer that sells an engine subject to subpart IIII that is not certified to the applicable emission standards for the engine's model year, maximum engine power, and application is violating subpart IIII. The manufacturer letter is attached for your information.

Cost of certification: You indicated that the cost of certification is an unreasonable burden for small businesses. As we have indicated previously, the certification program ensures that the engine manufacturer goes through a robust process to show that the engine meets these emissions standards *over the useful life of the engine*. Owners and operators of certified engines benefit significantly from this program, because they do not have to perform costly stack testing to show initial or continuing compliance with the emission limits set out in subpart IIII. By contrast, once a manufacturer certifies an engine family under subpart IIII, no further engines in that subcategory need be tested under subpart IIII. Numerous small volume manufacturers have certified their engines to the provisions for mobile sources over the years, and the EPA regulations contain several provisions to reduce the burden of certification on small volume manufacturers.

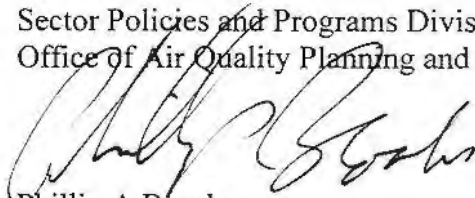
Field testing and state/local requirements: You stated that owners/operators of stationary CI engines are experiencing difficulty in reconciling the EPA requirements for stationary CI engines with more stringent state or local requirements. It is important to note that states have the right to issue their own air quality regulations, provided they are at least as stringent as federal rules. States cannot weaken federal regulations, however, and they cannot waive the EPA certification requirement for stationary CI engines. You also indicated that field testing of certified engines has demonstrated large differences between emissions measured using the laboratory certification test procedures versus field test procedures, and that certified engines do not reduce emissions below the required emission standards for the first 90 minutes after startup. As we have stated previously, we have not been notified of such difficulties or differences by our state and local air agency partners, but would welcome additional specific information about these issues.

We would welcome any additional information and data you wish to provide us regarding your concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "P. Tsirigotis". The signature is fluid and cursive, with a large initial "P" and a long, sweeping underline.

Peter Tsirigotis
Director
Sector Policies and Programs Division
Office of Air Quality Planning and Standards

A handwritten signature in black ink, appearing to read "Phillip A. Brooks". The signature is cursive and somewhat stylized, with a large initial "P" and a long, sweeping underline.

Phillip A Brooks
Director
Air Enforcement Division
Office of Enforcement and Compliance Assurance



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

ASSISTANT ADMINISTRATOR
FOR ENFORCEMENT AND
COMPLIANCE ASSURANCE

Michael W. Kendall, R.S.
Senior Air Program Manager, Group Leader
Air Services Group
URS Corporation
13825 Sunrise Valley Drive, Suite 250
Herndon, Virginia 20171-3426

Re: Regulatory Interpretation in Response to URS Applicability Determination Request of New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines at 40 CFR Part 60, Subpart IIII

Dear Mr. Kendall:

This letter is in response to your request for a determination of the requirements of the New Source Performance Standards (NSPS) for Stationary Compression Ignition (CI) Internal Combustion Engines, which are codified at 40 CFR Part 60, Subpart IIII. Your request was received by the United States Environmental Protection Agency (EPA) on August 21, 2012. Specifically, you requested a determination as to whether a 3,000 kW engine, manufactured after January 1, 2011 and certified to the Tier 2 emission standards, can be used for non-emergency purposes if it is equipped with selective catalytic reduction and a diesel particulate filter to reduce emissions to levels equivalent to the Tier 4 interim emission standards. The EPA is confirming that the Subpart IIII regulations require that 3,000 KW engines manufactured after January 1, 2011 and certified to the Tier 2 standards may only be used for emergency purposes.

The Subpart IIII regulations set forth the following:

- §60.4204(b) states that 2011 model year 3,000 kW stationary non-emergency CI engines with a displacement less than 10 liters per cylinder must meet the Tier 4 standards in 40 CFR Part 1039, Subpart B.
- §60.4205(b) states that the emission standards that apply to owners and operators of 2011 model year 3,000 kW stationary emergency CI engines with a displacement less than 10 liters per cylinder are the Tier 2 standards in Table 1 of 40 CFR §89.112.
- §60.4211(c) states that owners and operators of 2007 model year and later stationary CI engines subject to the emission standards in §60.4204(b) and §60.4205(b) must comply by purchasing an engine certified to the applicable emission standard.

For a 2011 model year 3000 kW non-emergency CI engine with a displacement less than 10 liters per cylinder, the applicable emission standards are the Tier 4 standards in 40 CFR Part 1039, Subpart B, not the Tier 2 standards in Table 1 of 40 CFR §89.112. Therefore, the 3,000 KW engines manufactured after January 1, 2011 and certified to the Tier 2 standards may only be used for emergency purposes.

In your letter you assert that a number of states, including North Carolina and Virginia, continue to issue permits for non-emergency engines that are not Tier 4 interim certified, but are meeting the Tier 4 interim (and some Tier 4 Final) emission requirements. Please provide specific details concerning these inconsistencies that would assist us in addressing your concerns. You also stated that there is inconsistency in rule implementation, as evident by North Carolina's adoption of Subpart IIII into their state regulations without a similar state regulation in Virginia. It is important to note that states may issue their own air quality regulations, provided that they are at least as stringent as Federal rules. States cannot weaken Federal regulations, and they cannot waive the EPA certification requirement for stationary engines subject to Subpart IIII.

EPA regards this response as a regulatory interpretation. As such, this response is not a site-specific applicability determination and is not considered a final Agency action. Feel free to contact John DuPree at (202) 564-5950, if you would like to provide site-specific information in support of a request for a formal EPA applicability determination.

Sincerely,

A handwritten signature in cursive script that reads "Edward J. Messina".

Edward J. Messina, Director
Monitoring, Assistance, and Media Programs Division
Office of Compliance

bcc: Greg Fried, AED
Julius Banks, MAMPD
Michael Horowitz, OGC
Melanie King, OAQPS
Zelma Maldonado, Region 3
Beverly Banister, Region 4



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

December 8, 2011

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

Subject: Certification of Stationary Compression Ignition Engines

Dear Manufacturer:

This letter is to remind you that the Standards of Performance for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE), which are found at 40 CFR part 60 subpart IIII, require manufacturers of 2007 and later model year stationary CI ICE with a displacement of less than 30 liters per cylinder to certify the engines to the applicable emission standards in subpart IIII. You may not sell, offer for sale, or introduce or deliver into commerce in the United States or import into the United States any 2007 model year or later stationary CI ICE with a displacement of less than 30 liters per cylinder, unless it is covered by a valid certificate of conformity for its model year, maximum engine power and application (non-emergency or emergency service). If the engine is a non-emergency engine, it must be certified to the emission standards for non-emergency engines. Any manufacturer that sells an engine subject to subpart IIII that is not certified to the applicable emission standards for the engine's model year, maximum engine power, and application is violating subpart IIII. We may assess a civil penalty up to \$37,500 for each engine or piece of equipment in violation.

The provisions of subpart IIII for modified and reconstructed engines specified in 40 CFR 60.4211(e) do not allow the sale or purchase of freshly manufactured engines that are not certified to the applicable emission standards for the engine's model year, maximum engine power, and application. The two methods of demonstrating compliance under this portion of the rule (40 CFR 60.4211(e) (1) and (2)) apply to engines (regardless of model year) that have been modified or reconstructed; they are not an alternative to the certification requirements for freshly manufactured engines set out in subpart IIII.

Any questions you have regarding the requirements of subpart IIII should be directed to Melanie King at (919) 541-2469 or king.melanie@epa.gov.

Sincerely,

A handwritten signature in black ink that reads "Peter Tsirigotis".

Peter Tsirigotis

Director

Sector Policies and Programs Division