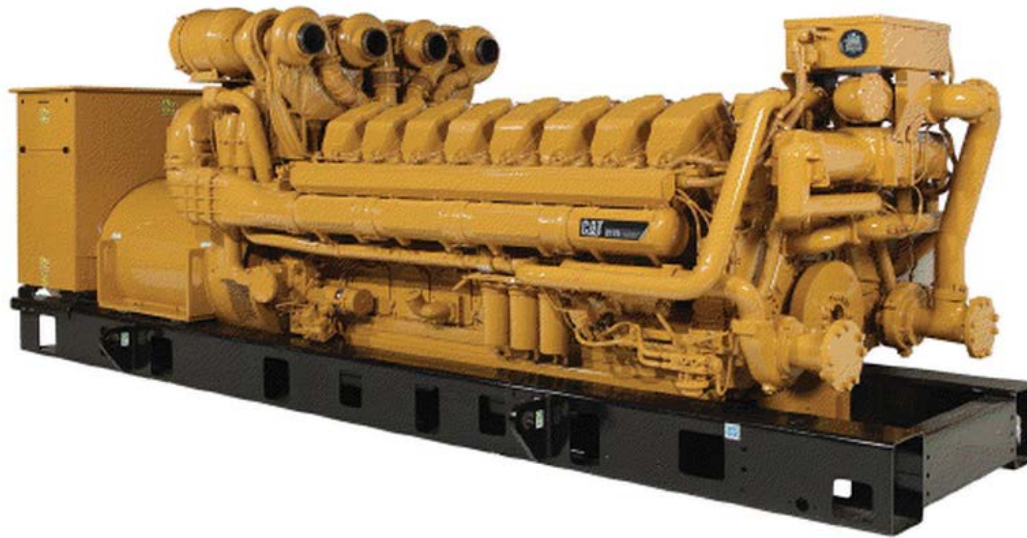




Maryland
Department of
the Environment

Distributed Generation



AQCAC Meeting – March 13, 2017



Topics Covered

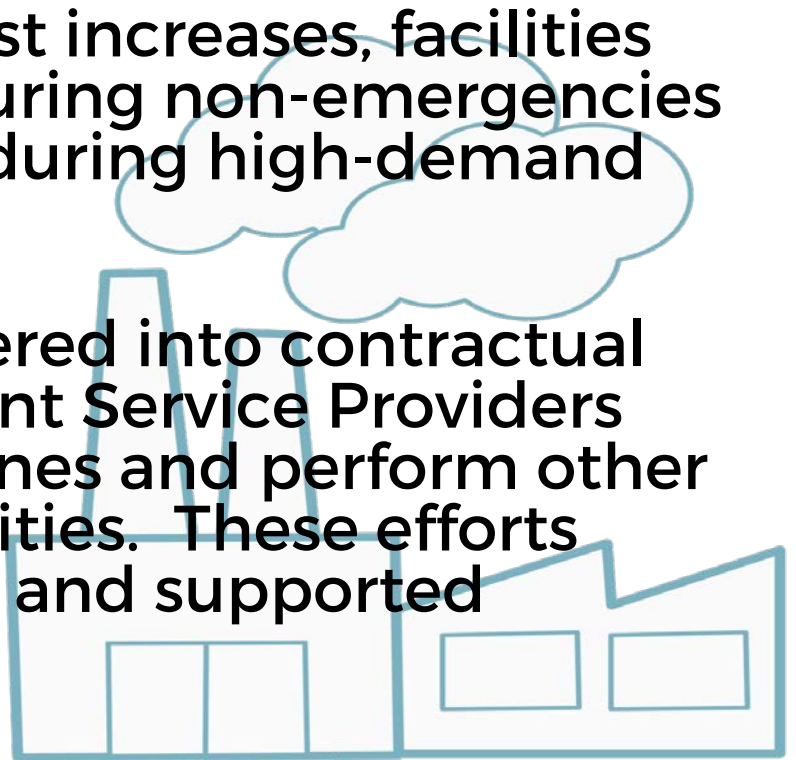
- Overview of Emergency Engines
- Existing Maryland Regulations
- Federal Requirements for Engines
- Summary of Draft Amendments
- Emergency Demand Response Program
- Regulation Adoption Timeline





Overview of Emergency Engines

- Emergency engines typically installed at facilities as an emergency back-up of power.
- In response to electricity cost increases, facilities began operating engines during non-emergencies to reduce their electric bill during high-demand days.
- Owners of engines also entered into contractual agreements with Curtailment Service Providers (CSPs) to both operate engines and perform other electricity curtailment activities. These efforts reduced their electric costs, and supported electric system reliability.





Existing Maryland Regulations

- In 2009, MDE adopted regulations in an effort to achieve reductions in NO_x emissions during the summer ozone season when operation of engines for non-emergency purposes were most frequently employed.
- Most stationary internal combustion engines (ICE) are fired with diesel fuel and have minimal NO_x emission controls which when operated resulted in excess NO_x emissions on the hottest and worst days for air pollution.
- Reductions in NO_x emissions help the State to maintain and attain the National Ambient Air Quality Standard (NAAQS) for Ozone.



Existing Maryland Regulations

- Requires existing load shaving units to control NOx emissions, limit operation to a total of ten hours during any ozone season, install controls to meet applicable NOx emission standards, or follow the Alternative Compliance option through purchase of NOx allowances.
- Requires new load shaving units to meet federal New Source Performance Standards (NSPS).
- Engines required to obtain a permit to construct for its intended use.
- Contains CSP reporting requirements.





Federal Requirements for Engines

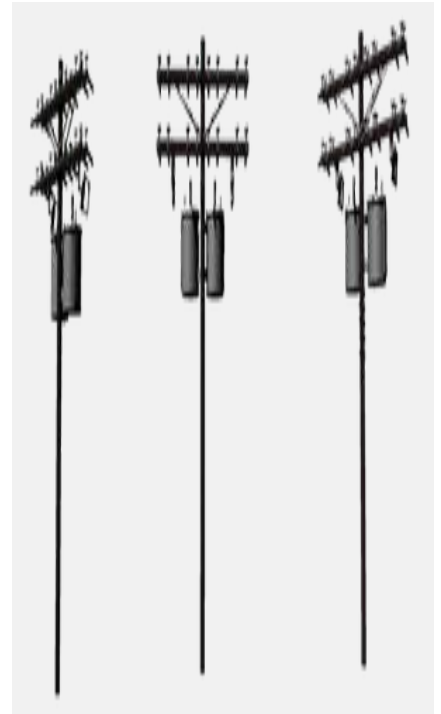
- EPA regulates stationary ICE through two types of regulations; National Emission Standards for Hazardous Air Pollutants (NESHAP) and New Source Performance Standards (NSPS).
- NESHAP regulates emissions of hazardous air pollutants (HAPs) from new, existing and modified sources. The NESHAP for Reciprocating Internal Combustion Engines (RICE) are outlined in 40 CFR Part 63, Subpart ZZZZ.
- NSPS regulates emissions of criteria pollutants from new, modified and reconstructed sources. The NSPS for Stationary Compression Ignition ICE is outlined in 40 CFR Part 60, Subpart IIII. The NSPS for Stationary Spark Ignition IC Engines is outlined in 40 CFR Part 60, Subpart JJJJ.





Federal Requirements for Engines

- EPA has been updating, amending and adding to NESHAP and NSPS requirements for engines for many years.
- Since 2006, a number of proposed updates and amendments have focused around the operation of engines. In 2010 engine use during Emergency Demand Response Programs was introduced.
- In 2013, 40 CFR Part 63, Subpart ZZZZ and 40 CFR Part 60, Subpart IIII and JJJJ, were amended to set conditions under which the operation of an “uncontrolled generator” in an Emergency Demand Response Program was permitted. EPA allowed engines to run:
 - Power failure/power outage
 - EEA Level 2
 - Variation in voltage greater than 5%





Emergency Demand Response Program

During the development and finalization of NESHAP and NSPS regulations for engines, a number of lawsuits were filed.

- Delaware v. EPA, 785 F . 3d I (D.C. Cir. 2015), questioned the conditions which permitted the operation of emergency engines for up to 100 hours in an Emergency Demand Response Program.
- In May 2015, the court issued a decision. Two specific conditions were to be vacated.
 - EEA Level 2
 - Variation in voltage greater than 5%
- Operation during power failure remains unlimited.
- EPA received a one year stay.
- On April 15, 2016 EPA issued a memorandum.





April 15, 2016 EPA Memorandum

- 100 hour provision vacatur
- This is why EPA rules are now more stringent than Maryland
- 50 hour provision under court review





Summary of Amendments

- Amend existing Maryland regulations to align with federal requirements.
- COMAR 26.11.36.03
 - Remove existing emergency engine and load shaving requirements.
 - Reference federal requirements which limit the operation of emergency engines (which reduces the hours an “uncontrolled generator” can run).
- COMAR 26.11.02.01, 26.11.36.01 - Changes to definitions
- COMAR 26.11.02.10 - Update permitting requirements
 - Same requirements for PTC, amend definitions



Permit to Construct

- **COMAR 26.11.02. Permits, Approvals, and Registration**
- **.10 Sources Exempt from Permits to Construct and Approvals.**
- **E. *Emergency* [S]stationary internal combustion engines or *emergency stationary reciprocating internal combustion engines (RICE)* with an output less than 500 brake horsepower (373 kilowatts) [and which are not used to generate electricity for sale or load shaving as that term is defined in COMAR 26.11.36.01B];**
- ***E-1. Stationary internal combustion engines or stationary reciprocating internal combustion engines (RICE) that serve as a primary source of power for agricultural equipment or industrial equipment, with an output less than 500 brake horsepower (373 kilowatts).***



EPA References for Engines

- Coordination with EPA
- EPA Tools - <https://www.epa.gov/stationary-engines/guidance-and-tools-implementing-stationary-engine-requirements>
 - Regulation Navigation Tool
 - Example Forms
 - Summary Tables
 - Videos
 - Other Guidance Documents



Calendar - Important Dates (TENTATIVE)

Air Quality Council Advisory Council (AQCAC)

March 13, 2017

March 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Public Hearing

August 15, 2017

August 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Notice of Proposed Action (MD Register)

July 7, 2017

July 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Final Publication in MD Register

October 4, 2017

October 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				



Final Thoughts and Discussion

- The amendments will align with the federal standards and provide clarity for permitted sources in MD.
- MDE will continue to follow federal updates and court cases.

