FACT SHEET

EMERGENCY GENERATOR

SUMMARY

There are a surprising number of environmental requirements for emergency generators and associated fuel tanks. Generally, at the state or local levels, an air permit is required for the installation and operation of an emergency generator. The specifics depend on the jurisdiction, as well as the size, and type of generator. There are also federal regulations that cover air emissions from generators, with the exact requirements based on the age, size and type of generator. Most states have authority to implement the federal air programs and may impose additional regulations. Local building and fire codes may also have additional requirements. This all means that installing and running an emergency generator takes a lot more management than just turning it on when the power goes out.

WHAT IS AN EMERGENCY GENERATOR?

Retailers need to understand the different definitions used for emergency generators in environmental regulations versus building codes in order to avoid confusion when dealing with a building inspector or fire marshal, as opposed to an inspector from an environmental regulatory agency.

AS DEFINED BY ENVIRONMENTAL REGULATIONS

Environmental regulations typically define an "emergency generator" as a stationary reciprocating internal combustion engine that is temporarily used to provide electrical power during a power outage.

AS DEFINED BY BUILDING CODES

Building codes or the fire protection standards published by the National Fire Protection Association (NFPA) have much more specific definitions for backup power systems. Specifically, the National Electric Code (NFPA-70), which has been adopted throughout the United States, refers to:

- **"Emergency systems"** -- for situations that could result in the loss of life or serious injuries. For example, building or fire codes may require an emergency generator to provide power for systems that will protect human life, such as egress lighting or fire detection and alarm systems.
- **"Legally required standby systems"** -- power for critical systems other than those impacting life safety such as heating and air conditioning, sewage disposal, and lighting.
- **"Optional standby systems"** -- provide power to systems that might result in financial or operational losses such as data management, communications, or refrigeration.

In retail, what is referred to as an emergency generator in an environmental regulation is most likely considered an optional standby system in the local building code.

FACTORS IMPACTING REGULATORY COMPLIANCE

Size and Type of Generator

The specific requirements and the types of permits that may be required before installing and operating an emergency generator depend to a significant degree on the size and type of generator. As the size of the generator increases, the potential for air pollution also increases, which may then increase the regulatory burden.

The type of fuel can also affect regulatory requirements. The two common generator types, which use different fuels, are:

- Compression ignition (CI) internal combustion engines (ICEs). A CI-ICE is an internal combustion engine where the ignition of the air-fuel mixture is caused by a rise in temperature from compression of the mixture in the cylinder. Compression ignition engines run on diesel fuel.
- Spark ignition (SI) ICEs. An SI-ICE is an internal combustion engine where the ignition of the air-fuel mixture is caused by a spark from a spark plug. Spark ignition engines can run on various fuels, including gasoline, propane, or natural gas.

There are solar generators, which do not have any emissions or fuel tanks, and as a result are not covered under most of the current regulations. However, as these generators make up a tiny fraction of the current generator market, they are not discussed in this fact sheet.

ENVIRONMENTAL CONSIDERATIONS

Air Pollutant Emissions

The internal combustion engines in emergency generators typically emit three categories of pollutants:

- Common pollutants, referred to by the EPA as criteria pollutants and precursors, including carbon monoxide (CO), sulfur dioxide (SO2), particulate matter (PM-10 and PM-2.5), nitrogen oxides (NOx), and volatile organic compounds (VOCs);
- Hazardous air pollutants (HAPs), including acetaldehyde, acrolein, benzene, formaldehyde, toluene, and xylene; and
- Greenhouse gases (GHG), including carbon dioxide (CO2) and methane.

The exact mix depends on the fuel. For example, diesel fuel and gasoline produce more PM-2.5 and HAPs than natural gas or propane. The quantity of pollutants generally depends on the size, i.e., the maximum power output, of the generator.

These pollutants are linked to adverse human health and environmental effects, including asthma and cancer, smog formation, and climate change. As a result, federal and state regulations were established to reduce emissions from emergency generators.

Fuel Storage

Emergency generators that use gasoline, diesel fuel, or propane require fuel storage tanks. These tanks can either be an underground storage tank (UST) or an aboveground storage tank (AST). In either case, leaks or spills from the tanks can contaminate soil and water, including groundwater, which may be used for drinking water. Federal and state regulations are designed to prevent and control fuel leaks from storage tanks.

OTHER CONSIDERATIONS

On-site vs. Portable

Some facilities rent portable emergency generators during power outages. If a portable emergency generator is being considered, consult with the supplier and local regulatory agency to determine if permitting requirements apply, and if so, whether the responsibility of permitting falls on the supplier or renter.

Location

In some states, regulatory agencies evaluate emissions criteria that depend on the distance of the exhaust point from the facility property line. The facility may have to demonstrate that the emissions criteria can be satisfied before a permit can be issued, or additional conditions may be included.

In addition, many jurisdictions have regulations prohibiting nuisance pollution. Retail facilities installing emergency generators should consider the possible impacts of the exhaust on neighbors when deciding where to locate the unit on the property.

Noise

All ICE emergency generators make a significant amount of noise. The impact of the noise on neighbors can be reduced depending on the siting and by using an enclosure.

Noise pollution is typically regulated at the local level, so local noise ordinances need to be checked before installing a generator.

PERMITS/APPROVALS

Air Quality

Facilities must determine which of the following permit actions will cover their emergency generator:

- Permitting exemption;
- General permit or permit-by-rule; or
- Construction and/or operating permit.

The permitting action is determined by the state or local air quality regulations and regulatory agency in the jurisdiction where the emergency generator is located. Permits typically have fees. The RCC Emergency Generator Permitting Matrix has information on permitting options by state.

Permitting Exemptions

Depending on the size and pollutants, it is possible that an emergency generator may qualify for an exemption from air permitting. Agencies usually establish criteria that must be satisfied in order for a facility to qualify for an exemption.

For example, the exemption criteria may specify fuel type, or establish maximum thresholds for power and/or uncontrolled emissions.

> Emergency generators are typically sized based on the maximum power rating of the generator in kW. However, permitting regulations are often based on the capacity in horsepower (hp) for a gasoline or diesel ICE or British thermal units per hour (Btu/hr) for a natural gas ICE. The information needed for a permit application is usually available on a plate fastened to the engine.

NFPA Standards and Other Regulations

The local utility company and local officials who oversee the local building code need to be consulted before installation of an emergency generator to determine if there are any regulations governing the installation or operation of emergency power generators.

Emergency generators should be installed by qualified electricians, in accordance with applicable codes and industry standards, such as those published by the NFPA.

General Permits

State or local regulatory agencies often develop a general permit for common pieces of equipment, such as emergency generators, that have similar operations, emissions, or regulatory requirements. An emergency generator general permit often contains pre-established permit conditions that apply to all emergency generators using the general permit, i.e., a "one-permit-fits-all" approach. General permits generally undergo public review when developed so there is no requirement for additional public review when issued to individual sources. General permits normally require less time for agency review and can therefore be issued more quickly.

The submission of a general permit application signifies the applicant's belief that their equipment qualifies for the permit and that they are willing to comply with all the terms and conditions of the permit. The permitting authority reviews applications and, if they agree that the permit applies, issues the general permit with language identifying the specific source.

However, just because an emergency generator satisfies the eligibility criteria, does not mean that the general permit is appropriate. General permits cannot be modified, so the facility must be comfortable that it can comply with all of the permit terms and conditions. Discovering late that a general permit doesn't work can cause delays while waiting for a source-specific permit, or worse, result in enforcement actions if the facility is unable to comply with the permit.

PERMITS-BY-RULE

Some state and local regulatory authorities offer a permit-by-rule for emergency generators. A permit-by-rule is a permitting provision in the state or local regulations that applies specifically to certain low-emitting sources, such as emergency generators. The provision includes qualifying criteria, emissions limitations, operating criteria, and recordkeeping and reporting requirements. If an emergency generator does not continuously meet all of the requirements of the permit-by-rule provision, the facility must obtain a general permit or a construction and operating permit.

Coverage under a permit-by-rule typically begins with a simple, one-page notification form submitted to the permitting authority.

Construction and Operating Permits

Emergency generators that do not qualify for a permit exemption or are not permitted under a general permit or permit-by-rule will likely need a construction permit, which can go by other names depending on the regulatory agency, and an operating permit.

In general, before installation, the owner or operator must submit a construction permit application to the regulatory authority. The application includes information on the facility, emergency generator, expected emissions, and any operational restrictions. The regulatory agency typically drafts a permit containing the regulatory requirements that apply to the emergency generator and allows the applicant and the public to comment on the draft. After addressing comments, the agency will issue a construction permit. In most cases, it is a violation to start installation of the generator before the permit has been issued.

The process of obtaining an operating permit varies by jurisdiction. In some cases, the operating permit application is submitted after the emergency generator is installed. In other instances, the construction and operating permit are a single document, or the owner or operator notifies the permitting authority that the emergency generator is installed, and the agency forwards the operating permit.

FUEL STORAGE

ASTs are primarily regulated at the state level. Regulations may require tank registration, installation permits, and fees. State AST requirements for spill prevention planning, spill response, tank inspection, and notification, as well as secondary containment standards, may stricter than federal rules.

In addition, the installation of a fuel tank may require approval from the state fire marshal and/or the local fire department.

COMPLIANCE WITH AIR EMISSIONS REGULATIONS

At the federal level, emergency generators are regulated under the federal New Source Performance Standards (NSPS) and the National Emissions Standards for Hazardous Air Pollutants (NESHAP). The NSPS establish emissions limits for EPA's criteria pollutants and precursors. The NESHAP, often called a maximum achievable control technology (MACT) standard, establishes emissions limits at facilities that emit HAPs.

If your emergency generator is... / Regulations may apply.../	Compression Ignition (CI)	Spark Ignition (SI)
NSPS for Stationary CI-Internal Combustions Engines [40 CRF 60, Subpart IIII]	✓	
NSPS for Stationary SI-Internal Combustions Engines [40 CRF 60, Subpart JJJJ]		✓
NESHAP for Stationary Reciprocating Internal Combustions Engines (RICE) [40 CFR 63 Subpart ZZZZ]	✓	✓
State/local permitting regulations	✓	✓

NSPS FOR STATIONARY COMPRESSION IGNITION ICE-40 CFR 60, SUBPART IIII

Retail facilities that own or operate a CI-ICE must comply with the NSPS for Stationary Compression Ignition ICEs if they ordered the emergency generator after July 11, 2005, and the CI-ICE that powers the generator was manufactured after April 1, 2006. The NSPS also applies to engines modified or reconstructed after July 11, 2005.

A compression ignition engine is an ICE where the ignition of the air-fuel mixture is caused by a rise in temperature due to compression of the mixture in the cylinder. Compression ignition engines run on diesel fuel.

Operating restrictions for Emergency Generators

To be considered an emergency generator under this regulation, only the operations listed below are allowed.

Emergency Operation.

There is no time limit on the use of an emergency generator during an emergency, which generally means anytime the power supply from the utility company is interrupted.

Maintenance and Testing.

An emergency generator can be operated for any combination of maintenance and testing for a maximum of 100 hours per calendar year.

Other nonemergency Operation.

Facilities may operate emergency generators for up to 50 hours per year in other nonemergency situations, which is counted as part of the 100 hours per year for maintenance and testing. In general, the 50 hours cannot be used for peak shaving or demand response, to generate income for a facility connected to an electric grid, or to supply power as part of a financial arrangement with another entity.

Compliance Options

All emergency CI-ICE generators must comply with the EPA emissions standards over the entire life of the generator. Emissions standards depend on the model year of the CI-ICE, date of installation, power output, and engine size, specifically the displacement of the engine cylinders. Manufacturers are required to certify certain CI-ICEs to appropriate emissions standards.

At times, performance tests may be required to demonstrate that the emergency generator is in compliance with emissions standards. In these instances, retailers may opt to have the vendor or a testing firm conduct the test and document the results.

The table below shows certain compliance options by model year and size. Tests must be conducted using methods described in the regulations.

Emergency Generator	Compliance Options Under NSPS for CI-ICE
Pre-2007 model year IC-ICE with a displacement less than 30 liters per cylinder	One of the following: • CI-ICE is certified as meeting appropriate emissions standards, and is installed according to manufacturer's specifications; • Obtain performance test results for a test conducted on a similar engine that show compliance with emissions standards; • Records of engine manufacturer data or control device vendor data that demonstrate compliance with emissions standards; • Conduct initial performance test to demonstrate compliance with the emission standards.
2007 model year or later IC-ICE with a displacement less than 30 liters per cylinder	CI-ICE is certified as meeting appropriate emissions standards, and is installed according to manufacturer's specifications,
IC-ICE with a displacement equal to or greater than 30 liters per cylinder	Conduct an initial performance test to demonstrate compliance with the emission standards.
Modified or reconstructed emergency generators	Conduct a performance test to demonstrate compliance with the emissions standards within 60 days after the modified or reconstructed engine begins operation.
CI-ICE emergency generators not installed, configured, operated, and maintained in accordance with manufacturer's emissions-related written instructions, or where an emissions-related setting was changed in a way not permitted by the manufacturer	All of the following: • Keep a maintenance plan and maintenance records; • Maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions; • Conduct an initial performance test to demonstrate compliance with emissions standards within one year; • For generators with a maximum engine power equal to or greater than 500 hp, conduct subsequent performance tests every 8,760 hours of engine operation or 3 years, whichever comes first

Operation and Maintenance

Emergency CI-ICE generators generally must be operated according to the manufacturer's emissions-related written instructions, with emissions-related settings only changed as specified by the manufacturer.

Facilities may operate emergency CI-ICE generators for maintenance checks and readiness testing, as long as the tests are recommended by federal, state, or local government; the manufacturer; the vendor; the regional transmission organization; or the insurance company associated with the engine.

Maintenance and testing operation must be within the 100 hours allotted for non-emergency operations. The owner or operator may petition the EPA for additional maintenance and testing hours. A petition is not necessary if records are maintained indicating that federal, state, or local standards require maintenance and testing of emergency CI-ICE generators beyond 100 hours per calendar year.

Any emergency CI-ICE generator equipped with a diesel particulate filter must have a back-pressure monitor that notifies the operator when the high back-pressure limit is being approached.

Monitoring, Recordkeeping, and Reporting

Additional requirements for emergency CI-ICE generators include:

Monitoring. Emergency generators must be equipped with a nonresettable hour meter.

Recordkeeping. How long the generator was operating and the reason, including whether it emergency or nonemergency service must be recorded each time an emergency generator is operated.For emergency CI-ICE generators with diesel particulate filters, records of corrective actions taken after the back-pressure monitor recorded that the high back-pressure limit of the CI-ICE was approached are required.

Reporting. Performance test results must be submitted to the regulatory agency within 60 days.

NSPS FOR STATIONARY COMPRESSION IGNITION ICE-40 CFR 60, SUBPART JJJJ

Retail facilities that own or operate an emergency generator powered by an SI-ICE with a maximum engine power greater than 25 hp must comply with the NSPS for Stationary Spark Ignition ICE if:

- They ordered their emergency generator after June 12, 2006; and
- The SI-ICE was manufactured after January 1, 2009.

NSPS requirements also apply to SI-ICE engines modified or reconstructed after June 12, 2006.

> A spark ignition engine is an ICE where the ignition of the air-fuel mixture is caused by a spark from a spark plug. Spark ignition engines can run on various fuels, including gasoline, propane, or natural gas.

Operating Restrictions for Emergency Generators

In order for a generator to be considered an emergency generator under the NSPS, only the operations listed below are allowed.

Emergency Operation

There is no time limit on the use of an emergency generator during an emergency, which means anytime the power supply from the utility company is interrupted.

A natural gas SI-ICE generator may operate using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations. However, if propane is used for more than 100 hours per year in a natural gas engine, a performance test must be conducted to demonstrate compliance with the propane emissions standards.

Maintenance and Testing

An emergency generator can be operated for any combination of maintenance and testing for a maximum of 100 hours per calendar year.

Other Nonemergency Operation

Facilities may operate emergency generators for up to 50 hours per calendar year in other nonemergency situations. The nonemergency 50 hours are counted towards the 100 hours for maintenance and testing. In general, the nonemergency 50 hours cannot be used for peak shaving or demand response, to generate income for a facility connected to an electric grid, or to supply power as part of a financial arrangement with another entity.

Compliance Options

Under the NSPS, emergency SI-ICE generators must meet the EPA emissions standards over their entire life. Emissions standards depend on the model year of the SI-ICE, power output, and the fuel type. Manufacturers are required to certify that certain SI-ICEs meet emissions standards. Regulatory agencies may require performance tests to demonstrate compliance with emissions standards, which can be conducted by the vendor or a testing firm.

Emergency Generator	Compliance Options Under NSPS for SI-ICE
Emergency generators with maximum power greater than 25 hp	SI-ICE is certified, installed, operated, and maintained according to manufacturer's specifications, and maintenance records are maintained; or All of the following: • Keep a maintenance plan and maintenance records; • Maintain and operate the engine consistent with good air pollution control practice for minimizing emissions; • Conduct an initial performance test within 1 year; and • If the generator has a maximum engine power equal to or greater than 500 hp, conduct subsequent tests every 8,760 hours of engine operation or 3 years, whichever comes first.
Modified or reconstructed emergency generators	SI-ICE is certified; or All of the following: • Keep a maintenance plan and maintenance records; • Maintain and operate the engine consistent with good air pollution control practice for minimizing emissions; • For SI-ICE with a maximum power greater than 25 hp but less than or equal to 500 hp, conduct initial performance test within 60 days after operation starts; or • For SI-ICE with a maximum power greater 500 hp, conduct an initial performance test within 60 days after operation starts, and subsequent tests every 8,760 hours or 3 years, whichever comes first.
SI-ICE emergency generator with a maximum power output greater than 500 hp, manufactured after July 1, 2007, but before July 1, 2008	One of the following: • SI-ICE is certified; • Obtain performance test results for a similar engine, using appropriate test methods, that show compliance; • Keep records of engine manufacturer data or control device vendor data that demonstrate compliance.

Operation and Maintenance

Owners and operators must generally operate and maintain emergency SI-ICE generators according to the manufacturer's emissions-related written instructions.

Facilities may operate emergency SI-ICE generators for maintenance checks and readiness testing, as long as the tests are recommended by federal, state, or local government; the manufacturer; the vendor; the regional power transmission organization; or the insurance company associated with the engine.

Maintenance and testing operation must be within the 100 hours allotted for nonemergency operations. The owner or operator may petition the EPA for additional maintenance and testing hours, although a petition is not necessary if records are maintained indicating that federal, state, or local standards require maintenance and testing beyond 100 hours per calendar year.

Monitoring, Recordkeeping, and Reporting

Additional requirements for emergency SI-ICE generators include:

Monitoring

The following SI-ICE emergency generators must have nonresettable hour meters:

- Built on or after July 1, 2010 -- maximum engine power equal to or greater than 500 hp;
- Built on or after July 1, 2011 -- maximum engine power equal to or greater than 130 hp but less than 500 hp; and
- Built on or after July 1, 2008 -- maximum engine power equal to or less than 130 hp.

Recordkeeping

The following records are required:

- Each time the emergency generator is operated and the reason, including if emergency or nonemergency service;
- Submissions to the EPA or other regulatory agency;
- All maintenance conducted;
- If certified, documentation from the manufacturer stating that the engine is certified to meet the appropriate emissions standards;
- If not certified, documentation that the engine meets the appropriate emissions standards;
- The occurrence and duration of any start-up, shutdown, or malfunction in the operation of the SI-ICE; and
- If applicable, the amount of time a natural gas generator operates using propane.

Reporting

Performance test results must be submitted to the regulatory agency within 60 days of the test.

Notification

A written or electronic notification of the date of installation must be made within 30 days after installation of a noncertified SI-ICE emergency generator with a maximum power output equal to or greater than 500 hp.

NESHAP FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES (RICE)—40 CFR 63, SUBPART ZZZZ

This NESHAP for Stationary Reciprocating Internal Combustion Engines covers new, or reconstructed RICE emergency generators at major or area sources of HAPs. It's possible, but unlikely, that a retailer could be considered a major source of HAPs. A major source of HAPs is a facility, not just a single piece of equipment, that emits or has the potential to emit over 10 tons per year (tpy) of one HAP or over 25 tpy of a combination of HAPs.

> A RICE is an internal combustion engine that uses reciprocating motion to convert heat energy into mechanical work. A RICE can be either spark ignition or compression ignition.

Retail facilities that emit HAPs are most likely area sources, meaning that the HAP emissions are under the amount needed to be considered a major source.

Area Source Exceptions

Emergency demand response includes periods when there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency and when an Energy Emergency Alert Level 2 has been declared by the NERC.

Existing Emergency Generators

An existing RICE emergency generators (i.e., ordered or reconstructed before June 12, 2006) at an area source is exempt from this NESHAP, as long as it does not operate or is not contractually obligated to be available for emergency demand response and it satisfies the other operational restrictions that define an emergency generator, including:

- Operating for no more than 100 hours per calendar year for any combination of maintenance and testing; and
- Operating for not more than 50 hours per year in other nonemergency situations, which is counted as part of the 100 hours per year for maintenance and testing. In general, the 50 hours cannot be used for peak shaving or demand response, to generate income for a facility connected to an electric grid, or to supply power as part of a financial arrangement with another entity.

New or Reconstructed Emergency Generators

New or reconstructed RICE emergency generators at an area source meets the requirements of this NESHAP by complying with either NSPS Subpart IIII for CI-ICE or NSPS Subpart JJJJ for SI-ICE. (See NSPS for Stationary Compression Ignition ICE—40 CFR 60, Subpart IIII or NSPS for Stationary Spark Ignition ICE—40 CFR 60, Subpart JJJJ above.)

A new emergency generator is an emergency generator that is not considered existing or reconstructed. A RICE generator is considered reconstructed if the fixed capital cost of new components exceeds 50 percent of the fixed capital cost of a new RICE.

Major Sources

RICE emergency generators operating at major sources of HAPs must follow operating restrictions similar to those for emergency generators under NSPS requirements but include additional notification, operating and maintenance, monitoring, and recordkeeping requirements. Given that it is unlikely that a retail facility would be a major source of HAPs, these requirements are not discussed in detail in this fact sheet.

State Regulations

Most states have authority from the EPA to implement and enforce the NSPS and NESHAP regulations.

State or local regulatory agencies often have their own emergency generator regulations and require owners and operators to obtain air permits for their emergency generators. (See Permits/approvals above.)

COMPLIANCE WITH FUEL STORAGE REGULATIONS

USTs

USTs are regulated at the federal level by EPA, but EPA has authorized some states to implement the UST program. Also, many states have their own UST regulatory programs, which can be more extensive in scope than the federal program or impose more stringent requirements.

EPA's 2015 revised UST regulations now cover sources that had previously been deferred from full coverage of EPA's UST regulations, including emergency power generators. Owners and operators of UST systems that store fuel solely for use by emergency power generators must comply with the new regulations. Among other requirements, systems installed on or before October 13, 2015, must meet release detection requirements on or before October 13, 2018. Systems installed after October 13, 2015, must meet the requirements when installed. Systems that cannot meet release detection requirements by the compliance date must be closed consistent with EPA's UST closure regulations.

Release Detection

Under the 2015 federal regulations, UST systems storing fuel solely for emergency power generators must include release detection, and the release detection equipment must be tested annually starting on October 13, 2018.

If release detection equipment indicates a release, owners and operators must notify the appropriate regulatory agency within 24 hours or the reporting period specified by the state agency (in states where EPA has authorized state implementation of the UST program). The RCC Spill Reporting Matrix has information on state requirements for the reporting of oil and hazardous substances.

Other Federal Requirements

In addition to release detection requirements, other federal provisions that may cover USTs include:

- Clean Air Act (CAA) regulations for tank vapor control, and emissions of VOCs and air toxics;
- Emergency Planning and Community Right-to-Know Act (EPCRA) requirements for maintaining SDS sheets, inventory reporting of certain hazardous substances stored above certain thresholds, including fuels, and release reporting;
- Clean Water Act's (CWA) Oil Spill Prevention, Control, and Countermeasure (SPCC) plan requirements for petroleum storage above certain thresholds; and
- Occupational Safety and Health Act (OSH Act) standards for the design, construction, labeling, and testing of tanks storing flammable and combustible liquids.

ASTs

A complex, overlapping network of federal statutes and regulations directly or indirectly governs ASTs, as well as state and local requirements. Generally, what rules apply are determined by the tank contents, size, and location. Federal programs that may cover ASTs include those listed under Other Federal Requirements for USTs. In particular, it is important to consider whether ASTs trigger SPCC requirements.

State AST regulations may be stricter and require tank registration, installation permits, and fees. In addition, states may have stricter AST requirements for tank design, spill prevention and planning, spill response, tank inspection, and notification, as well as secondary containment standards.

Most ASTs must also meet state and local fire codes, which usually have a mix of construction, installation, and operation and maintenance requirements. These codes often require construction and operating permits as preconditions to these activities.

Coverage under state regulatory programs for ASTs usually hinges on tank size, and the threshold varies greatly from state to state. Here are a few examples of states' capacity thresholds:

- California: ASTs at facilities with an aggregate storage capacity of 1,320 gallons or more of petroleum
- Texas: Petroleum product ASTs with a capacity greater than 1,100 gallons
- Florida: Petroleum product ASTs with a capacity greater than 550 gallons

The RCC Storage Tank page has more information on regulations that cover petroleum storage tanks.

ABOUT THE RETAIL COMPLIANCE CENTER

The Retail Compliance Center (RCC) provides resources on environmental compliance and sustainability for all types and sizes of retailers. The RCC's goal is to develop retail-specific resources, tools and innovative solutions to help companies cost-effectively improve their compliance and environmental performance.