

facts & impacts

The much debated Boiler MACT rule sets new, lower limits for the emission of hazardous air pollutants (HAPs) from industrial, commercial, and institutional boilers. It also requires boiler facilities to follow certain work practice standards. Facilities across the country are, wisely, creating their compliance plans now.

Read more...



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Inside: If your boiler is among the 14,000 that are likely to be affected by the Boiler MACT Rule, it's time to get serious about a compliance plan. Read more.

www.ssoe.com/mact

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overview

The rule covers new, reconstructed, and existing boilers located at either major sources or area sources of HAPs.

A major source is any facility that has the potential to emit at least 10 tons-per-year of any single HAP, or at least 25 tons of a combination of HAPS. Facilities will need to demonstrate that they are in compliance through testing and/or continuous monitoring.

In addition to stricter emissions limits, the rule includes measures such as required tune-ups for some boilers and a one-time energy assessment (referred to by some as an "energy audit") to identify cost-effective energy conservation measures for facilities that are considered a major source of emissions. Companies have three years to comply but may apply for a one-year extension.

Go to www.ssoe.com/mact for a link to the legislation, additional resources, and steps to compliance.

how will this impact your facility?

The EPA estimates this rule will apply to about 14,000 industrial, institutional, and commercial boilers, with those currently burning solid fuels (coal or biomass) feeling the greatest impact. The extent of the impact will also depend on the type and level of emissions your facility generates, the heat input capacity of your boilers, and the type of fuels burned. It's very important to determine as soon as possible what you will need to do to comply and consider the lead time needed to satisfy the new rule.

- If your boilers are currently burning solid fuels, you may need to add pollution control equipment or change the type of fuel your boilers use. Either option involves significant cost and requires significant time to execute.
- There may be a substantial rise in energy costs in coming years. The reason is that utility providers are facing several environmental regulations that may significantly increase their costs to supply you with energy. This is especially true if your utility provider relies on coal for fuel.
- When you factor in potential rate increases from electric suppliers, the payback period (ROI) for co-generation of your own energy may be quite different than when you previously considered this option. You may now find it makes good economic sense to co-generate at least a portion of your own energy. Since this requires a significant capital investment, it merits careful analysis.
- Many facilities will be required to conduct a one-time energy assessment and periodic boiler tune-ups.

continued on the inside



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The major impacts listed on the cover will trigger other tasks or considerations you need to plan for and budget for.

- You will need to conduct more frequent monitoring and reporting. This may require changes to equipment and work practices, and involve training staff as well.
- Startup and shut down procedures will change, creating a need for new operating procedures.
- Adding air pollution control equipment to meet MACT regulations may also increase the solid waste your facility generates, the cost of disposing it, and truck traffic required to haul it away. Your water usage may also increase. If you are considering switching to natural gas, you need to take into account its long-term cost and availability. Many natural gas lines are already fully subscribed, thereby requiring you to go farther than expected to reach an adequate supply. Before choosing either of these valid options, you'll want to thoroughly understand the costs and other implications of both solutions.

Any combination of these actions can add up to a significant increase in the cost of doing business in the short term and long term. The good news is that these new regulations could be an incentive for you to conduct an expert analysis that can reveal considerable savings and ways to avoid significant costs.

SAVE THE DATE: July 15–16, 2013
Evolving Energy Landscape:
Practical Tips for the Present /
Strategies for the Future

SSOE will host an Energy Seminar at beautiful Maumee Bay State Park. This event will feature expert speakers from the Council of Industrial Boiler Operators (CIBO), American Municipal Power (AMP), and many others on topics such as trends that will impact your energy consumption, upcoming government regulations, the future of energy prices and reliability, energy management, permitting considerations, and alternative energy options. Attendees will receive continuing education hours for participation. For more information, to sign up for future information, to submit ideas for topics or speakers, or to ask questions, visit www.ssoe.com/mact.

HOW SSOE CAN HELP

Through our Power / Energy Group, we provide comprehensive services to help you with any and all of the steps toward successful compliance with the Boiler MACT Rule. We'll involve our in-house experts from a wide range of disciplines whenever that would be an advantage to your project. We're here for you if you want to put the entire compliance issue into the hands of an experienced resource. More focused needs? We're ready and able to tailor our involvement to specific tasks.

You can rely on us to...

- Help you understand and interpret the specific requirements of the Rule and most important, their impact on your specific operations.
- Provide a technical and economic analysis of your best options for compliance. We'll apply the insight and creativity our experts have gained from performing these large-scale analyses for the power industry. They will work side by side with experts who work on your process (or processes like yours) every day.
- Create a plan to bring your equipment and systems into compliance including creative options for co-generation or fuel sources.
- Develop detailed estimates of any options.
- Perform the required energy assessments and comprehensive boiler studies.
- Identify areas and strategies to increase efficiency and reduce energy costs.
- Provide the engineering and project management to implement the plan.
- Create an energy master plan. This will give you a long-term perspective and energy strategy so you can proactively plan for your business's future energy needs and anticipate external factors that impact cost and availability.

Go to www.ssoe.com/mact for a link to the legislation, additional resources, and steps to compliance.

About SSOE'S Power / Energy Group

Advantages of our power and energy services

- We are process engineering experts, with experience in a wide range of markets. Our power / energy team will work elbow to elbow with this group to formulate energy solutions that are designed for your specific process requirements. If you have worked with an SSOE engineering team in the past, we will draw on their knowledge of your business processes and standards in generating the appropriate solution.
- Our dedicated power team is part of our comprehensive EPCM staff. Having a broad range of engineering and construction management disciplines in-house is the pre-requisite to offering fully integrated, beginning-to-end solutions to your power and energy needs.
- We have worked with more than 40 fuel sources and apply this valuable knowledge when assessing the potential to repurpose waste to generate energy.
- Your needs may be basic—involving easily implementable conservation measures—or you may require assessment, planning, and implementing large scale changes to your power generation and consumption. Our power team is capable and eager to provide quality services on projects of any scale.
- Our goal is to reduce your energy costs so that your savings exceed our fees.

project types

- Air pollution control systems
- Boiler upgrades / replacements
- Co-generation
- Combustion systems
- Control system upgrades
- Electrical generation
- Energy conservation and audits
- Energy master plans
- Equipment evaluation
- Fuel source evaluation
- Fuel switching
- Heat reclamation
- Net zero initiatives
- Peak shaving
- Rate negotiation / metering evaluation
- Regulatory compliance, monitoring, and reporting
- Renewable solutions / sustainability
- Substations
- Waste to energy plants

technical specialties

- Conceptual to detailed design and construction documents
- Construction management
- Cost estimating
- Energy modeling
- Engineering studies
- Permitting
- Procurement

SSOE FACTS

- Founded in 1948.
- International EPCM firm with projects in more than 30 countries.
- Our project management standards are drawn from the Project Management Institute. Our goal is to have 100% of our project managers certified.
- SSOE offers program management services from design through construction, to commissioning and start-up, for seamless project delivery.
- Our energy consulting group offers a holistic approach to meeting your renewable energy, conservation, and sustainable design goals. We have more than \$1 billion in projects that have been LEED® certified.
- Frontrunner in the practical utilization of Building Information Modeling (BIM).
- ISO 9001 certified.

