

## RICE MACT, CHOPPED

**Ali Farnoud, Ph.D., Managing Consultant - Washington, DC**

*July 01, 2015*

In a recent ruling on May 1, 2015, the United States Court of Appeals - DC Circuit (the Court) reversed certain provisions of National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines in Title 40, part 63, Subpart ZZZZ (40 CFR 63, Subpart ZZZZ, also known as the RICE MACT), and extended the reversal to New Source Performance Standards (NSPS), Subpart IIII and Subpart JJJJ. The reversed provisions pertain specifically to stationary engines enrolled in emergency demand response programs, thereby allowing up to 100 hours per year for testing, maintenance, and emergency demand-response. The Court provided multiple reasons to find EPA's rulemaking action arbitrary and capricious, but also noted that the simple fact that EPA did not properly respond to all comments was sufficient to warrant this action.

### Background

The use of standby generators for emergency demand-response constitutes a fairly new idea. Historically, facilities reduced their electricity consumption by voluntarily shutting down major electricity-consuming equipment in exchange for preferred rates or other financial incentives. Turning off large air handlers during peak demand hours, for example, was and still is a common practice. Reducing the stress on the electrical grid, however, did not usually involve operating an alternate emission source. Using emergency backup generators for emergency demand-response purposes allows facilities to use assets (i.e., emergency generators) that were previously underutilized, to provide power. It also allows curtailment service providers to participate in capacity markets by aggregating available emergency backup generators. With the growing popularity of demand-response, EPA decided to include these units in the RICE MACT; however due to the volume of participants impacted by a demand-response regulation, the associated rulemaking turned into a high-wire act.

The first air quality regulation addressing stationary engines used for emergency demand-response was the "final" RICE MACT promulgated in March 2010. While the proposed rule did not allow operation of engines for any financial arrangement, the final rule included a 15-hour allowance for emergency demand-response. EPA mentioned in its response to one of the commenters that "EPA agrees that it would be appropriate to allow emergency engines to operate as part of emergency demand response program for a limited number of hours of operation per year...."<sup>1</sup> In June 2010, EPA also amended NSPS rules for consistency with RICE MACT and to include the emergency demand-response clause. Following the inclusion of the 15-hour clause in the RICE

MACT, EPA was petitioned by several parties. First, several curtailment service providers (EnerNOC, EnergyConnect, Inc., CPower, Inc., and Innoventive, Power, LLC) petitioned EPA to increase the emergency demand-response allotment to 60 hours or the minimum required by the emergency demand-response program. Delaware Department of Natural Resources and Environmental Control (DNREC) petitioned EPA to reconsider the emergency demand-response provision in its entirety. A third petition, by the National Rural Electric Cooperative Association (NRECA), requested that EPA eliminate any limit on emergency demand-response. EPA eventually entered a settlement agreement with curtailment service providers, agreeing to sign a notice of proposed rulemaking including a proposal to revise the RICE MACT and NSPS rules to allow for 60 hours per year of emergency demand-response or the minimum hours required by the demand-response program. To many observers' surprise, after a few reconsiderations and public comment requests, EPA issued the January 2013 version of the RICE MACT and NSPS rules, allowing for 100 hours of testing, maintenance, and emergency demand-response.



Given the history of the rulemaking, the recent court ruling comes as a result of continued disagreement between EPA and DNREC. DNREC's objection was rooted in the position that a financial incentive for the operation of emergency backup generators would result in an increase in the hours of operation, and consequently in elevated levels of criteria pollutant emissions from these emission sources. DNREC has stringent requirements for engines participating in demand-response in Delaware. However, DNREC had no control over the additional pollution being transported from the neighboring states. Consequently, petitioners challenged three different aspects of EPA's rulemaking that came into existence in 2013:

1. The 100-hour allowance for emergency Demand-Response in the RICE MACT;
2. The same provision in both the NSPS rules; and
3. The exemption for certain non-emergency engines in low energy-density areas.

## Court Ruling

Early in the process, the Court ruled that the exemption for certain non-emergency engines in low-energy density areas should be taken out of the Court's consideration. On the other issues, however, the Court performed a very thorough review of the rules and the comments submitted to EPA during the rulemaking process. Eventually, the Court ruled in favor of the petitioners, calling EPA's rulemaking "arbitrary and capricious." The Court provided four reasons for its verdict.

**Grid Reliability:** The Court references numerous comments submitted to EPA agreeing that the use of backup emergency generators for emergency demand-response would disadvantage larger sources of energy generation and capacity, potentially resulting in a less reliable electric grid. The Court did not find EPA's responses regarding these comments satisfactory. In one case, EPA states that using backup generators for demand-response would not discourage the use of cleaner source of energy. In response, the Court noted: "EPA seems to have missed the forest for the trees: the overriding concern of these comments was the

perverse effect the 100-hour exemption would have on the reliability and efficiency of the capacity and energy markets, not the specific clean energy alternatives that could supply the grid instead of backup generators."

Backup Generator Aggregation: The Court noted that EPA failed to respond to comments that asserted that EPA's rulemaking was based on "faulty evidence." Specifically, to establish the 100-hour allowance, EPA relied on a comment previously submitted by PJM in

February 2011.<sup>2</sup> In this comment, PJM stated that sources were required to be available for at least 60 hours for emergency demand-response. PJM then clarified the comment in 2012, stating that the 60-hour requirement was not for each individual generator but for an aggregation. A commenter brought up the discrepancy but EPA did not properly respond to the comment.

Alternative Option: The Court found that EPA did not entertain the possibility of limiting emergency demand-response to parts of the country where there are no alternative sources of generation.

FERC Input: Most importantly, the Court stated that grid reliability is not a subject of the Clean Air Act and EPA's reliability concerns are "beyond its purview." The Court specifically noted that EPA would need to seek input from Federal Regulatory Energy Commission (FERC) and North America Electric Reliability Corporation (NERC) to address grid reliability.

On these bases, the Court remanded the 100-hour emergency demand-response exemptions to EPA and sided with the petitioners.

## Future Path and Implications

As a result of the court ruling, the 100-hour exemption for emergency demand-response is remanded in all three engine rules (RICE MACT, NSPS IIII, and NSPS JJJJ), and the rules automatically revert to previous final versions. Note that the previous version of the RICE MACT allowed 15 hours of emergency demand-response whereas there were no such provisions under the NSPS rules. Emergency demand-response was simply not allowed for these engines, which was problematic for curtailment service providers enrolling stationary generators in demand-response programs. Since the 100-hour exemption was initially allowed, thousands of sources were contracted for participation in emergency demand-response by curtailment providers. These contracts are typically multi-year contracts that are reviewed and renewed on a periodic basis.

Based on the court ruling, all NSPS engines participating in emergency demand-response must meet emission standards for non-emergency engines. The change in requirements does not impact all sizes of engines equally. For example, consider the case of a 1500 horsepower diesel engine, manufactured in 2014, under contract for emergency demand-response, and equipped with a 1,000 kilowatt generator. Prior to the vacatur, a stationary engine used for this purpose would need to meet the emergency use NSPS, which could be met by purchasing a Tier 2 engine. In fact, many of the larger diesel emergency generators that have been installed in the past three to four years are Tier 2 units. Due to the vacatur, the generator must now meet the

**Based on the court ruling, all NSPS engines participating in emergency demand-response must meet emission standards for non-emergency engines.**

non-emergency standards, and compliance is demonstrated only by meeting Tier 4 limits. Older engines subject to RICE MACT that participate in emergency demand-response still have a 15-hour allowance. However, the majority of them are "contractually obligated" to operate for more than 15 hours and therefore will be considered non-emergency units. The installation of an oxidation catalyst and a continuous performance monitoring system (CPMS) will likely be required for most of the engines in this category. In practice, however, retrofit can be costly and, depending on the age of the engine, may not be effective.

A major uncertainty stems from the fact that in its RICE MACT Q&A document, issued in April 2013, EPA specifically notes that switching from non-emergency to emergency status is possible prior to the compliance date. Although the document is silent about switching status after the compliance date, a common sense read of the response seems to imply that EPA did not intend to allow non-emergency engines to revert to emergency status. Since the compliance date has long passed, engines that will now be considered non-emergency will remain non-emergency for the life of the engine. Due to the volume of engines impacted by the court ruling, EPA will likely publish additional guidance to address this and related issues.

There are, of course, even bigger implications associated with this court ruling, related to power capacity and grid reliability. The ruling discusses how the increase in emergency demand-response participation "distorts" capacity markets; however, it is possible that a significant decrease in emergency demand-response participation could also impact capacity markets. The potential capacity of emergency demand-response engines participating in the auction has been calculated at a certain number of hours (e.g., 60 hrs) per generator. Capacity auctions are typically performed based on demand projections three years in the future. As a result of the court ruling, capacity markets into 2017 could be immediately impacted.

The Court notes "If vacating these portions of the 2013 Rule will cause administrative or other difficulties, EPA...may file a motion to delay issuance of the mandate to request either that the current standards remain in place or that EPA be allowed reasonable time to develop interim standards." Given the complexity of the issue and its significant impact across the United States, it is likely that EPA will request a delay in the issuance of the mandate. The form and content of the future rule will depend largely on input from FERC and NERC, and the nature of that input is very difficult to predict. After all, direct involvement of FERC and NERC, in a MACT rulemaking is uncharted territory.

<sup>1</sup> 75 FR 9667.

<sup>2</sup> PJM is the Regional Transmission Organization (RTO) that coordinates the movement of electricity in part or all of 13 northeastern states and the District of Columbia.



## Share

 Twitter ([http://twitter.com/home?status=RICE MACT, Chopped | Trinity Consultants](http://twitter.com/home?status=RICE%20MACT,%20Chopped%20|%20Trinity%20Consultants))

 Facebook ([https://www.facebook.com/sharer/sharer.php?u=RICE MACT, Chopped | Trinity Consultants](https://www.facebook.com/sharer/sharer.php?u=RICE%20MACT,%20Chopped%20|%20Trinity%20Consultants))

 LinkedIn ([https://www.linkedin.com/shareArticle?](https://www.linkedin.com/shareArticle?mini=true&url=http://www.trinityconsultants.com/news/environmental-quarterly/rice-mact,-)

[mini=true&url=http://www.trinityconsultants.com/news/environmental-quarterly/rice-mact,-](http://www.trinityconsultants.com/news/environmental-quarterly/rice-mact,-)