

Natural Gas Prime Movers Model Rule: INGAA Issues Summary for November 10, 2011 OTC Meeting

The Interstate Natural Gas Association of America (INGAA) submitted comments on the draft OTC Model Rule for Natural Gas Transmission Prime Movers (model rule). The draft model rule is specifically focused on reciprocating engines and turbines operated by INGAA members, and we have a unique understanding of technical issues and limitations associated with installation of NO_x controls on existing natural gas transmission prime movers. It appears that the current version of the draft rule attempted to address some of INGAA comments. However, significant concerns and questions remain, including:

- As identified in INGAA's comments, the vast majority of natural gas transmission compressor drivers in the OTC are already controlled – but typically to levels marginally higher than those proposed in the model rule. For example, there are approximately 500 reciprocating engine prime movers in the OTC and over 400 of these engines already include NO_x control. About 335 of these engines include a high level of NO_x reduction – i.e., 70 to 90% from uncontrolled levels. Another 80 of these units include a moderate level of reduction – approximately 40 to 70% from uncontrolled levels. However, many of these engines do not meet the proposed NO_x limits, so the model rule would primarily result in a paperwork exercise as operators pursue alternative RACT determinations.
- Similarly, when small turbines (approximately 1000 hp) are excluded from the database, over 60% of the remaining 124 turbines include NO_x controls, and controlled levels are typically marginally higher than the proposed emission standards.
- In addition to these counts, when horsepower capacity and operating hours or utilization are considered, the control percentage increases. This shows that the controls are appropriately focused on larger, more highly utilized prime movers.
- To reiterate, the vast majority of natural gas transmission prime movers in the OTC are controlled, so significant NO_x reductions will not be realized from this sector. Instead, the model rule will increase administrative burden for operators and states when alternative RACT determinations are pursued for the vast majority of affected units.
- Compressor drivers in natural gas transmission are primarily large bore slow speed "integral" reciprocating engines that are unique to this industry. Not all engines respond similarly to retrofit NO_x control, so flexibility is desired. To address this, emissions averaging was originally used as a compliance option in EPA's Model Rule developed in response to the NO_x SIP Call Phase 2 Rule, and emissions averaging was added to the current version of the model rule. However, by limiting averaging to a single facility rather than a company's statewide operations and revising the previous 80% reduction target to 90% reduction for some engines, flexibility afforded by emissions averaging is lost. INGAA recommends an 80% reduction target and statewide emissions averaging.
- The White Paper references federal NSPS standards as one source of information for the emission rate standards – in grams per horsepower-hour for reciprocating engines and parts per million for turbines. However, both the spark ignition engine NSPS and turbine NSPS include special consideration of NO_x control performance for *retrofit* control, with emission limits that are marginally above those in the model rule – and consistent with recommendations in INGAA comments.
- There are a very limited number of service providers available for engineering and installing retrofit NO_x controls on existing integral reciprocating engines. Compliance should be phased in over multiple years to address market limitations and stakeholder budget cycles.
- There are additional implementation nuances that should be addressed. For example, portable analyzer methods are included in the current version of the model rule, but the method should reference consensus standards such as the ASTM portable analyzer method or EPA conditional test methods rather than EPA reference methods.
- The OTC White Paper indicates a similar model rule should be considered for compressor drivers in upstream operations such as field gathering. Rather than acting on the model rule today, INGAA recommends that a single rule be developed for compressor drivers based on a new schedule.

INGAA welcomes the opportunity to address questions and continue to work with the OTC Stationary and Area Source Committee on developing a model rule.