Ingersoll Rand
industrial Technologies

Energy Systems Business
30 New Hampshire Ave
Portsmouth, NH 03801
603-430-7000
603-431-9575
http://energy.ingersollrand.com/

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Clerk of the Board
Air Resources Board
1001 I Street
Sacramento, California 95814

Comments from Ingersoll Rand to Proposed Regulation Order
Amendments to the Distributed Generation Certification Regulation

Ingersoll-Rand is pleased to have this opportunity to provide comments to the California Air Resources Board's ("the ARB's") proposed regulation changes for the Distributed Generation Certification program (Sections 94200 to 94214 of the California Code of Regulations). As a manufacturer of distributed generation systems, we appreciate the implementation of the Distributed Generation Certification Program by the ARB to facilitate the deployment of distributed generation technologies under a clear set of rules and regulations with respect to air quality. And Ingersoll Rand has received to date three certifications from ARB under this program for its microturbine technology.

Ingersoll Rand is a large diversified Fortune 500 firm that manufactures, distributes and sells a wide variety of environment friendly industrial-quality equipment and components including our family of ultra-clean, reliable, and efficient microturbine systems. Ingersoll Rand currently offers two microturbine models, one rated to produce 70-kilowatts ("kW") of electricity and one rated for 250 kW. Both microturbine models can operate with both pipeline natural gas and gaseous fuels that might otherwise be "wasted" by flaring or venting such as land fill gas, digester-derived methane, and overhead gases from petroleum recovery (oil-field) operations.

Ingersoll Rand supports the two step emissions limit approach proposed for waste gases that follows the pattern already in use for fossil fueled distributed generation. We agree that clean distributed generation technologies commercially available to the market can be certified to the proposed limits that would start on January 1, 2008 using the certified fuels for landfill and digester gases identified in the proposed regulations. However, Ingersoll Rand is not convinced that the 2008 emissions standards can be met for distributed generation technologies using oil-field waste gases.

In addition, Ingersoll Rand does not agree that distributed generation technologies can just be expected to meet the January 1, 2013 emissions standards. As opposed to applications using clean, pipeline quality natural gas, the use of waste gases introduces complicating factors that could very well prevent distributed generation technologies from meeting the stringent 2013 emissions levels.

For example, lower Btu gaseous fuels such as those from landfills, digesters, and the pipeline derive most of their fuel value from methane. However, waste gases from oil-field sources, as the surrogate fuel definition in the proposed regulations shows, typically include significant quantities of gases with higher carbon numbers than methane. These higher carbon number gases can have a significant effect on the combustion process and thus the resulting emissions and may preclude meeting the 2013 emissions standards.

As another example, waste gases from landfills and digesters include various forms of contaminants that can seriously affect the operation and performance of distributed generation technologies. The effect of such contaminants varies by type of contaminant, but one potential problem that could affect emissions is poisoning of catalytic processes. Thus any distributed generation technology that would use a catalytic process (such as post-exhaust treatment) to meet the stringent 2013 emissions standards must assess the practical effect of such contaminants.

Because of the above issues and other possible complicating factors, Ingersoll Rand strongly believes that the proposed regulations should include a technology review to evaluate if the emissions standards for waste gas fueled distributed generation should be modified. Ingersoll Rand does not agree with the statement in the September 1, 2006 staff report that "much of the research and development effort needed to meet the 2013 standards will have already been spent on achieving the 2007 natural gas standard" because of these waste fuel-related complicating factors.

This technical review approach was successfully used in the current program to evaluate the 2007 emissions standard for fossil fueled distributed generation. As part of that review, for example, it was noted that more data is needed to assess the nature of emissions from distributed generation technologies using oil-field waste gases. We would suggest including a description of this new technical review in Section 94203 (e) using the language similar to that used in the original regulations, but referring to sections (c) and (d).

Ingersoll Rand greatly appreciates this opportunity to support your efforts to encourage the use of efficient, environmentally sound, reliable, secure, and diverse energy sources. We believe clean distributed generation resources provide substantial benefits to California taxpayers and ratepayers and programs such as the Distributed Generation Certification Program can significantly help realize those benefits.

Sincerely,

James H. Watts
Global Product Manager
Ingersoll Rand