

November 26, 2002

FACT SHEET

PROPOSED RULE FOR STATIONARY COMBUSTION TURBINES

TODAY'S ACTION

- ! The Environmental Protection Agency (EPA) is issuing proposed standards to reduce air toxics emissions from stationary combustion turbines. The standards would apply to turbines used at facilities such as power plants, chemical and manufacturing plants, and pipeline compressor stations.
- ! The proposed rule would reduce emissions of a number of toxic air pollutants such as formaldehyde, toluene, acetaldehyde, and benzene, which are known or suspected to cause adverse health and environmental effects. The technology that will be used to meet the requirements of the proposed rule will be a pollution prevention technology.
- ! The proposed rule would affect any stationary combustion turbine built after the date the proposal is published in the Federal Register and existing lean premix combustion turbines. The EPA will take public comment on the proposed rule for 60 days after it is published in the Federal Register. The EPA is specifically requesting comment on three industry-suggested options that could reduce the compliance cost of the proposed rule. The Agency plans to finalize the standards in 2003.
- ! New turbines would have up to 6 months after the rule is final, or 6 months after startup, whichever is later, to comply with the new standards. The EPA estimates that 155 new stationary combustion turbines will be built each year over the next 5 years and will be subject to the proposed rule. Existing turbines will have up to 3 years after the rule is final to comply with the standards. Approximately 160 existing turbines will be subject to the proposed rule.
- ! The proposed rule would either set limits on the amount of air pollution that may be released from exhaust stacks of stationary combustion turbines or would require a standard of performance if certain controls are used.
- ! Affected sources would have the flexibility to meet the proposed limits two ways:
 - < Sources may install controls known as “carbon monoxide catalytic oxidation systems,” the technology on which the proposed rule is based. These systems not only reduce carbon monoxide emissions, they also reduce air toxic emissions such as formaldehyde, toluene, acetaldehyde, and benzene. Sources choosing to use the carbon monoxide catalyst oxidation system must reduce carbon monoxide emissions by 95 percent or more; the other pollutants then will be reduced by similar amounts. About 20 turbines are projected to use this option within the next 5 years after proposal.

- < Sources may use other means to reduce emissions. If they choose to do so, they must reduce formaldehyde emissions to 43 parts per billion, or less. By reducing formaldehyde, sources also will reduce the other air toxics to similar levels. About 145 new turbines and 150 existing turbines are expected to use this option.

HEALTH/ENVIRONMENTAL BENEFITS

- ! The proposed rule would provide improvements in protecting human health and the environment by reducing air toxic emissions. The EPA estimates total annual air toxic reductions of 81 tons per year in the 5th year after the rule is final. The air toxics reduced are listed below:

<u>Pollutant</u>	<u>Emission Reductions</u> (in 5 th yr after proposal)	<u>Percent Reduction</u>
Formaldehyde	55 tons	95 percent
Toluene	14 tons	95 percent
Acetaldehyde	9 tons	95 percent
Benzene	2 tons	95 percent

Most of the turbines affected by the proposed rule will use technology that will emit low levels of HAP and, therefore, no add-on control devices would be used. As a result, the amount of HAP emissions reduced is low; they simply are not emitted.

- ! Exposure to emissions of these air toxics may produce a wide variety of human health effects including irritation of the eyes, skin and mucous membranes, dysfunction of the central nervous system, and narcosis. Formaldehyde exposure has been associated with reproductive effects such as menstrual disorders and pregnancy problems. The EPA has classified formaldehyde as a probable human carcinogen.

COST

- ! The total nationwide capital costs for the proposed rule is estimated at \$68 million within the first 5 years, with an annualized cost of \$21.5 million in the 5th year.

BACKGROUND

- ! The Clean Air Act requires EPA to develop standards for categories of facilities that emit one or more of 188 listed toxic air pollutants. These standards require the application of strict controls known as maximum achievable control technology (MACT).
- ! Stationary Combustion Turbines is a category of major sources for which MACT standards

must be developed.

FOR MORE INFORMATION

- ! To download the proposed standards from EPA's web site, go to "Recent Actions" at the following address: <http://www.epa.gov/ttn/oarpg>.
- ! For further information about the proposal, contact Mr. Sims Roy at EPA's Office of Air Quality Planning and Standards at 919-541-5263.
- ! For information regarding stationary combustion turbines, visit EPA's web site at: <http://www.epa.gov/ttn/atw/combust/turbine/turbpg.html>. For other combustion-related regulations, visit EPA's Combustion Related Rules page at: <http://www.epa.gov/ttn/atw/combust/list.html>.