

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Commissioners **Date:** May 28, 2010

Thru: LaDonna Castañuela, Chief Clerk
Mark R. Vickery, P.G., Executive Director

From: Susana M. Hildebrand, P.E.,
Chief Engineer

Subject: Consideration of a Petition for Proposed Rulemaking

Docket No.: 2010-0672-RUL

Rule Project No. 2010-026-PET-NR

Who Submitted the Petition:

A petition was submitted by Ameresco Dallas L.L.C., of Texas. The petition was received April 27, 2010.

What the Petitioner Requests:

The petitioner, Ameresco of Texas, is requesting an amendment to the emission specifications for the 1997 eight-hour ozone demonstration in 30 Texas Administrative Code (TAC) §117.2110(a)(1)(B)(ii)(I). The current §117.2110(a)(1)(B)(ii)(I) states gas-fired lean-burn engines fired on landfill gas are limited to 0.60 grams per horsepower-hour (g/hp-hr).

Ameresco of Texas will operate the Ameresco Biogas Energy (the facility) in Dallas, Texas. The facility will combust digester biogas from the Dallas Southside Wastewater Treatment Plant (SWTP) in lean-burn internal combustion engines to produce electricity and thermal energy. The facility currently has an authorization for a Texas Commission on Environmental Quality (TCEQ) standard permit for electric generating units and has been designed to achieve the permit's nitrogen oxides (NO_x) emission limit for digester fuel. The petitioner asserts that the current rule inadvertently sets more stringent NO_x requirements for gas-fired lean-burn engines fired on biogases. The petitioner's proposed rule amendment for §117.2110(a)(1)(B)(ii)(I) is as follows:

“(a) The owner or operator of any source subject to this division (relating to Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area Minor Sources) shall..., following emission specifications:

(I) fired on landfill gas or digester gas, 0.60 g/hp-hr”

Alternatively, the petitioner proposed that §117.2110(a)(1)(B)(ii)(I) be modified to read:

“(I) fired on landfill gas or other biogas, 0.60 g/hp-hr”

The proposed amendment would expand the emission specification for lean-burn engines fired on landfill gas to include lean-burn engines fired on digester gas at minor sources of NO_x in the Dallas-Fort Worth (DFW) 1997 eight-hour ozone nonattainment area. The current applicable NO_x emission specification in

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§117.2110(a)(1)(B)(ii)(II) for gas-fired lean-burn engines using gaseous fuels other than landfill gas that are installed, modified, reconstructed, or relocated on or after June 1, 2007, is 0.50 g/hp-hr.

Recommended Action and Justification:

Air Quality Division staff support the petition and recommend that the petition be approved. Both landfill gas and digester gas have similar fuel and combustion characteristics. Landfill gas and digester gas are produced from the same biological process, anaerobic digestion (or decomposition), of organic matter. The same anaerobic digestion process that produces biogas from animal manure and wastewater occurs naturally underground in landfills. Additionally, engines fired on digester gas can have technological feasibility issues with regard to the installation of a NO_x control catalyst that are similar to landfill gas-fired engines, which is the basis of the 0.60 g/hp-hr emission standard in the current rule. For the reasons stated previously, staff request the petition be approved.

Applicable Law:

Texas Government Code, §2001.021 establishes the procedures by which an interested person may petition a state agency for the adoption of a rule and 30 TAC §20.15 provides such procedures specific to the commission.

Other laws applicable to the rules the petition affects include Texas Water Code (TWC), §5.102, concerning General Powers, §5.103, concerning Rules, and §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the TWC; and Texas Health and Safety Code (THSC), §382.017, concerning Rules, which authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act; THSC, §382.002, concerning Policy and Purpose, which establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; and §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air.

Also, Texas Clean Air Act; §382.016, concerning Monitoring Requirements; Examination of Records, authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; and §382.021, concerning Sampling Methods and Procedures, authorizes the commission to prescribe the sampling methods and procedures.

Affected Public:

The proposed rule amendment would affect owners and operators of stationary gas-fired lean-burn internal combustion engines fired on biogas other than landfill gas that are located at minor sources of NO_x in the DFW eight-hour ozone nonattainment area. If adopted, owners or operators of stationary gas-fired lean-burn internal combustion engines fired on biogas fuels other than landfill gas that are installed, modified, reconstructed, or relocated on or after June 1, 2007, would be limited to 0.60 g/hp-hr instead of 0.50 g/hp-hr. The slight increase in NO_x emissions is anticipated to be negligible. For the facility operated by the petitioner, the net increase in NO_x emissions is estimated to be less than 0.02 tons per day.

Affected Agency Programs:

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The Air Quality Division would be required to initiate the required rulemaking. In the 2007 Chapter 117 rulemaking for the DFW 1997 eight-hour ozone attainment demonstration, no gas-fired engines fired on digester gas or other non-landfill gaseous fuels were relied upon for creditable reductions for the state implementation plan (SIP). Therefore, if the petitioner's proposed change is adopted, allowing the slightly higher emission specification of 0.60 g/hp-hr on gas-fired engines fired on other biogas fuels would not result in a loss of any SIP creditable reductions for the DFW area. However, the Air Quality Division would also be required to submit to the United States Environmental Protection Agency a demonstration of noninterference with the 1997 eight-hour ozone National Ambient Air Quality Standards under the Federal Clean Air Act, Section 110(l).

Agency Contacts:

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Attachment: Petition

cc: 2 copies to the Chief Clerk for distribution
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