

RULE 4905 NATURAL GAS-FIRED, FAN-TYPE CENTRAL FURNACES (Adopted October 20, 2005; Amended January 22, 2015; Amended June 21, 2018; Amended October 15, 2020; Amended December 16, 2021; Amended March 21, 2024; Amended March 19, 2026)

1.0 Purpose

The purpose of this rule is to limit NOx emissions from natural gas-fired, fan-type central furnaces.

2.0 Applicability

The provisions of this rule apply to any person who supplies, sells, offers for sale, installs, or solicits the installation of natural gas-fired, fan-type central furnaces for use within the San Joaquin Valley Air Basin with a rated heat input capacity of less than 175,000 British thermal units per hour (Btu/hr), and for combination heating and cooling units with a rated cooling capacity of less than 65,000 Btu/hr.

3.0 Definitions

3.1 Air Pollution Control Officer (APCO): as defined in Rule 1020 (Definitions).

3.2 Annual Fuel Utilization Efficiency: the efficiency descriptor as defined by Section 430.2 of the Code of Federal Regulations, Title 10, Part 430, Subpart A.

3.3 Condensing Unit: for purposes of this rule, a natural gas-fired, fan-type central furnace, that uses a second heat exchanger to extract the latent heat in the flue gas by cooling the combustion gasses to near ambient temperature so that water vapor condenses in the heat exchanger, is collected, and is drained.

3.4 District: as defined in Rule 1020 (Definitions).

3.5 Fan-type Central Furnace: a self-contained space heater providing for circulation of heated air at pressures other than atmospheric, through ducts more than 10 inches in length.

3.6 Heat Output (Central Furnace): the product obtained by multiplying the annual fuel utilization efficiency by the rated heat input capacity of the natural gas-fired, fan-type central furnace.

3.7 Manufactured Home: as defined in 42 United States Code Section 5402 and California Health and Safety Code Section 18007. "Manufactured home" includes a mobile home subject to the National Manufactured Housing Construction and Safety Act of 1974 (42 U.S.C., Sec. 5401, et seq.).

- 3.8 Manufactured Home Unit: a furnace designed specifically and solely for installation to heat a manufactured home.
- 3.9 Natural Gas: a mixture of gaseous hydrocarbons containing at least 80 percent methane by volume, as determined according to Standard Method ASTM D1945-64.
- 3.10 NOx: any oxides of nitrogen.
- 3.11 Rated Cooling Capacity: the amount of heat energy the cooling system can displace in one hour (Btu/hr), as specified on the rating plate of the cooling unit.
- 3.12 Rated Heat Input Capacity: the amount of energy consumed in one hour (British thermal units per hour), as specified on the rating plate of the combustion unit.
- 3.13 Responsible Official: for the purposes of this rule, for a corporation, a president or vice-president of the corporation in charge of a principal business function or a duly authorized person who performs similar policy-making functions; for a partnership or sole proprietorship, a general partner or proprietor, respectively.
- 3.14 Weatherized Unit: for the purposes of this rule, a natural gas-fired, fan-type central furnace designed for installation outside of a building, equipped with a protective jacket and integral venting, and labeled for outdoor installation.

4.0 Exemptions

4.1 Propane

Any natural gas fired, fan-type central furnace that is not certified to meet 14 nanograms per joule (ng/J) of NOx emissions and is to be installed with a propane conversion kit for propane firing only, in the San Joaquin Valley Air Basin, is exempt from Section 5.0, provided the manufacturer complies with the following:

- 4.1.1 The natural gas fired, fan-type central furnace (propane firing only) is certified pursuant to Section 6.1 to have NOx emissions less than or equal to 40 ng/J of heat output.
- 4.1.2 Effective on and after August 1, 2018, the carton or furnace is labeled to clearly display the following, or an alternative APCO-approved language: “This furnace is to be installed for propane firing only. Operating in natural gas mode is in violation of District Rule 4905.”

5.0 Requirements

5.1 No person shall supply, sell, offer for sale, install, or solicit the installation of any natural gas-fired, fan-type central furnace unless it is certified pursuant to Section 6.1 and complies with the applicable emission limit in Table 1.

Table 1 NOx Emission Limits and Compliance Schedule		
Furnace Category	NOx Emission Limit (ng/J)	Compliance Date
Manufactured Home Units	40	February 1, 2015
Condensing Units	14	April 1, 2015
Non-condensing Units	14	October 1, 2015
Weatherized Units	14	October 1, 2016
Manufactured Home Units	14	October 1, 2018

5.2 Emissions Fee Option

Until September 30, 2030, any manufacturer of manufactured home units regulated by this rule may elect to pay a per unit emissions fee of \$150, in lieu of meeting the 14 ng/J NOx emission limit in Table 1 of this rule, provided the unit is certified pursuant to Section 6.1 to have NOx emissions less than or equal to 40 ng/J of heat output and the manufacturer complies with the following requirements:

5.2.1 Units manufactured prior to September 30, may not be supplied, sold, offered for sale, or installed into the San Joaquin Valley Air Basin after March 31, 2031.

5.2.2 Manufacturer must submit to the APCO a compliance plan for each 12-month time period after the applicable Table 1 compliance date during which the manufacturer elects to pay the emissions fee in lieu of meeting the NOx emission limit. The compliance plan must be submitted no later than 30 days prior to the applicable compliance date. The compliance plan shall include the following:

5.2.2.1 A letter with the name of the manufacturer requesting the emissions fee option signed by a responsible official identifying the unit type and the 12-month emissions fee option compliance period that the emissions fees cover.

5.2.2.2 An estimate of the quantity of applicable units to be distributed or sold into the San Joaquin Valley Air Basin during the emissions fee option compliance period and supporting documentation. The estimate shall be based on total distribution

and sales records or invoices of manufactured home fan-type central furnaces that were distributed or sold into the San Joaquin Valley Air Basin during the 12-month period of July 1 to June 30 prior to the applicable compliance date, along with supporting documentation.

- 5.2.3 Manufacturer must submit a report to the APCO, signed by the responsible official for the manufacturer, identifying by model number the quantity of applicable units actually distributed or sold into the San Joaquin Valley Air Basin during the applicable 12-month emissions fee option compliance period and a check for payment of emissions fees for those units. The report and payment of emissions fees must be submitted to the APCO no later than sixty (60) days after the end of each 12-month emissions fee option compliance period.

For units sold as provided by section 5.2.1, a report and payment of emissions fees must be submitted to the APCO no later than eight months after the end of the 12-month emissions fee option compliance period.

6.0 Administrative Requirements

6.1 Emission Certification

- 6.1.1 Certified emissions levels shall be demonstrated by an emission certification approved under any of the following:

- 6.1.1.1 Certification testing as described in Section 6.2 of this rule, or

- 6.1.1.2 Other emission certification programs approved by the APCO and the United States Environmental Protection Agency.

- 6.1.2 The manufacturer of the natural gas-fired, fan-type central furnace shall comply with the following labeling requirements:

- 6.1.2.1 Display the model number of the unit on the shipping container and the rating plate of the unit; and

- 6.1.2.2 Units manufactured after the applicable compliance date in Table 1 shall display the following on the shipping container and the rating plate of the unit, in addition to the labeling requirements under Section 6.1.2.1:

- 6.1.2.2.1 Rated heat input capacity or rated cooling capacity,

6.1.2.2.2 The applicable NOx emission limit, and

6.1.2.2.3 The date of manufacture or date code of the unit.

6.1.3 Upon request of the APCO, each manufacturer shall submit to the District a statement confirming the unit subject to this rule is in compliance with the emission limit. The statement shall be signed, dated, and shall attest to the accuracy of all information. The statement shall include:

6.1.3.1 Name and address of manufacturer,

6.1.3.2 Brand name,

6.1.3.3 Model number, as it appears on the rating plate of the unit,

6.1.3.4 Rated heat input capacity, British thermal units per hour, and

6.1.3.5 A source test report verifying compliance.

6.2 Certification Testing

6.2.1 During testing, each tested natural gas-fired, fan-type central furnace model shall be operated in accordance with the procedures specified in 10 CFR 430, Subpart B, Appendix N.

6.2.2 Compliance with the NOx emission requirements shall be determined using California Air Resources Board Method 100, South Coast Air Quality Management District Method 100.1, or United States Environmental Protection Agency Methods 7E and 3A.

6.3 Recordkeeping

Any manufacturer, distributor, or contractor who supplies, distributes, sells, offers for sale or installs a furnace in or into the San Joaquin Valley Air Basin shall maintain such records as necessary to demonstrate compliance with this rule for a period of not less than five years and make such records available to the APCO upon request.

6.4 Non-Compliant Unit Labeling

Any furnace manufactured after October 1, 2018, using the emissions fee option shall have a label with APCO-approved language on the carton or furnace that clearly displays that the unit does not comply with the NOx limits in Table 1 of this rule.

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