
PROPOSED AMENDED RULE 1111 PUBLIC WORKSHOP

SOUTH COAST AQMD

JULY 7, 2021

Zoom Meeting: <https://scaqmd.zoom.us/j/97931144732>
Meeting ID: 979 3114 4732
Conference Call: 1 (669) 900-6833

RULE 1111 BACKGROUND

- Rule 1111 establishes NO_x limit for gas-fired fan-type space heating furnaces with a rated heat input capacity of less than 175,000 BTU per hour
- Applies to manufacturers, distributors, sellers, and installers
- Adopted in December 1978 and established **40 ng/J NO_x** emission limit
- Lowered NO_x limit to **14 ng/J** in November 2009 with a staggered implementation schedule
- Delayed compliance date in the 2014, 2018, 2019, and 2020 amendments by providing:
 - Mitigation fee alternative compliance option for all types of furnaces;
 - Extension of the mitigation option for most categories; and
 - Temporary exemption for installation at elevations $\geq 4,200$ feet above sea level

RULE 1111 BACKGROUND – COMPLIANCE DATE

- Since October 1, 2019, condensing and non-condensing furnaces have been meeting the 14 ng/J NO_x limit, except for high-altitude installation¹
- Other furnace categories will need to meet the lower limit by October 1, 2021

Compliance date for
14 ng/J NO_x limit

October 1, 2019

October 1, 2021

-
- ✓ Condensing
 - ✓ Non-Condensing

- ✓ Weatherized
- ✓ Mobile Home
- ✓ High-Altitude installation

¹ 4,200 feet above sea level or higher

RULE APPROACH

- Staff has been meeting regularly with each manufacturer regarding furnace development and commercialization of furnaces with an October 1, 2021 compliance date
- Meetings to discuss product availability
 - Two Working Group Meetings (April 14, 2021 and June 3, 2021)
 - Two High Altitude Stakeholder Meetings (April 29, 2021 and June 9, 2021)
 - Ongoing meetings with manufacturers, distributors, and installers
- Proposed amendments focused on:

High-Altitude Installation

Weatherized Furnaces

Mobile Home Furnace

FURNACES FOR HIGH ALTITUDE INSTALLATIONS¹



Added 1-Year Exemption for High Altitude Furnaces to Allow Manufacturers to Conduct High Altitude Testing

2019

Extended Exemption 12 Months for Delays in Testing in High Altitude Areas Due to COVID-19

2020

Compliance Date for High Altitude Furnaces

Oct
2021

- **Four** manufacturers will have compliant furnaces available by October 1, 2021, for elevations up to 7,500-7,800 feet
 - **Three** manufacturers have all their certified compliant units for the Basin available for usage in high altitude areas
- Currently no certified models designed for downflow configuration and large capacity units (>100,000 Btu/hour) for high altitude areas
- Staff recommendation:
 - Exemption for downflow furnaces and furnaces greater than 100,000 Btu/hour for installation at high altitude areas
 - All other condensing and non-condensing furnaces will need to meet the NO_x limit of 14 ng/J by October 1, 2021

¹ Condensing and non-condensing furnace installations

DEFINITION OF DOWNFLOW FURNACE



- A new definition for “DOWNFLOW FURNACE” was added to Rule 1111 to provide exemption for a specified category

DOWNFLOW FURNACE means a condensing or non-condensing furnace installed in a configuration that the furnace takes in cool air from the top, warms it, then releases the warm air through the ductwork below.

PROPOSED AMENDMENT – EXEMPTION



- Providing exemption for installing downflow furnaces and large-sized replacement furnaces at high altitude areas
 - Recordkeeping for unit sales information would be required under (g)(7), (g)(8), and (g)(9)

Effective October 1, 2021, in lieu of meeting the NOx limit specified in paragraph (c)(4), a manufacturer, distributor, or installer that elects to manufactures, distributes, offers for sale, or installs a downflow furnace or furnace greater 100,000 BTU per hour in heat input capacity at or above 4,200 feet shall only install:

(A) A downflow furnace certified to meet 40 ng/J NOx limit with a shipping carton or the name plate of the furnace that clearly displays: "This furnace must be installed only in a downflow configuration at or above 4,200 feet above sea level in the South Coast AQMD. Installation of this furnace in any other configuration or at a lower elevation will be a violation of South Coast AQMD Rule 1111"; or

(B) A furnace rated greater than 100,000 BTU per hour in heat input capacity certified to meet 40 ng/J NOx limit, replacing an existing furnace, with a shipping carton or the name plate of the furnace that clearly displays: "This furnace must be installed only as a replacement at or above 4,200 feet above sea level in the South Coast AQMD. Installation of this furnace for new construction or at a lower elevation will be a violation of South Coast AQMD Rule 1111."

WEATHERIZED FURNACES



Added Mitigation Fee
Compliance Option to
October 2019

Extended Mitigation Fee
for all Furnace Categories

Extended Mitigation Fee 12
Months for Manufacturer
Delays Due to COVID-19

Compliance Date
for Weatherized
Furnaces

2014

2018

2020

Oct
2021

- September 2020 amendment extended the compliance date for weatherized furnaces from October 1, 2020 to October 1, 2021
- All manufacturers except one are expected to meet the October 1, 2021 compliance date
- One manufacturer anticipates a delay for their commercial weatherized furnaces
 - Staff working with manufacturer on potential compliance pathway
- Staff recommends weatherized furnaces meet the October 1, 2021 compliance data with no further extension of the mitigation fee

MOBILE HOME FURNACE

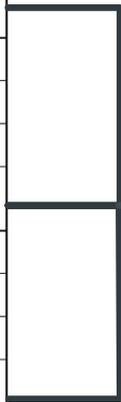


- Mitigation period fee for mobile home furnaces ends October 1, 2021
- None of the manufacturers have developed a compliant 14 ng/J furnace for mobile homes
- The manufacturers will need to:
 - Develop propane kits for compliant split systems to meet the Department of Housing and Urban Development requirement for propane compatibility; and
 - Meet the Department of Energy upcoming energy efficiency standards
- Manufacturers suggested a January 1, 2023 compliance date to better align with other regulatory requirements
- Staff recommendation:
 - Extend the mitigation fee to September 30, 2023

PROPOSED AMENDMENT – EXTENSION FOR MOBILE HOME UNITS

Table 2 – Alternate Compliance Plan with the Phase One and Phase Two Mitigation Fee Schedules

Furnace		Phase One Mitigation Fee		Phase Two Mitigation Fee		Phase Two Mitigation Fee Option End Date
Size Range	Furnace Category	Phase One Mitigation Fee Start Date	Phase One Mitigation Fee (\$/Unit)	Phase Two Mitigation Fee Start Date	Phase Two Mitigation Fee (\$/Unit)	
≤ 60,000 BTU/hr	Condensing	May 1, 2018	\$275	October 1, 2018	\$350	September 30, 2019
	Non-condensing	October 1, 2018	\$225	April 1, 2019	\$300	September 30, 2019
	Weatherized	October 1, 2018	\$225	April 1, 2019	\$300	September 30, 2021
	Mobile Home	October 1, 2018	\$150	April 1, 2019	\$150	September 30, 2021 2023
> 60,000 Btu/hr and ≤ 90,000 BTU/hr	Condensing	May 1, 2018	\$300	October 1, 2018	\$400	September 30, 2019
	Non-condensing	October 1, 2018	\$250	April 1, 2019	\$350	September 30, 2019
	Weatherized	October 1, 2018	\$250	April 1, 2019	\$350	September 30, 2021
	Mobile Home	October 1, 2018	\$150	April 1, 2019	\$150	September 30, 2021 2023
> 90,000 BTU/hr	Condensing	May 1, 2018	\$325	October 1, 2018	\$450	September 30, 2019
	Non-condensing	October 1, 2018	\$275	April 1, 2019	\$400	September 30, 2019
	Weatherized	October 1, 2018	\$275	April 1, 2019	\$400	September 30, 2021
	Mobile Home	October 1, 2018	\$150	April 1, 2019	\$150	September 30, 2021 2023



Extending the mitigation fee alternative compliance option for mobile home furnaces until September 30, 2023

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

- PAR 1111 does not have any project elements requiring physical modifications that would cause a significant adverse effect on the environment
- PAR 1111 is exempt from CEQA and a Notice of Exemption will be prepared pursuant to CEQA Guidelines Section 15061 (b)(3) – Common Sense Exemption, which exempts actions where it can be seen with certainty that there is no possibility that the proposed project may have a significant adverse effect on the environment

NEXT STEPS

End of Public Comment Period

- July 21, 2021

Set Hearing

- August 6, 2021

Public Hearing

- September 3,
2021

CONTACTS

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