



# RULE 1111 HIGH ALTITUDE STAKEHOLDER MEETING

JUNE 9, 2021

ZOOM MEETING: [HTTPS://SCAQMD.ZOOM.US/J/92042305264](https://scaqmd.zoom.us/j/92042305264)

MEETING ID: 920 4230 5264

CONFERENCE CALL: (669) 900-6833

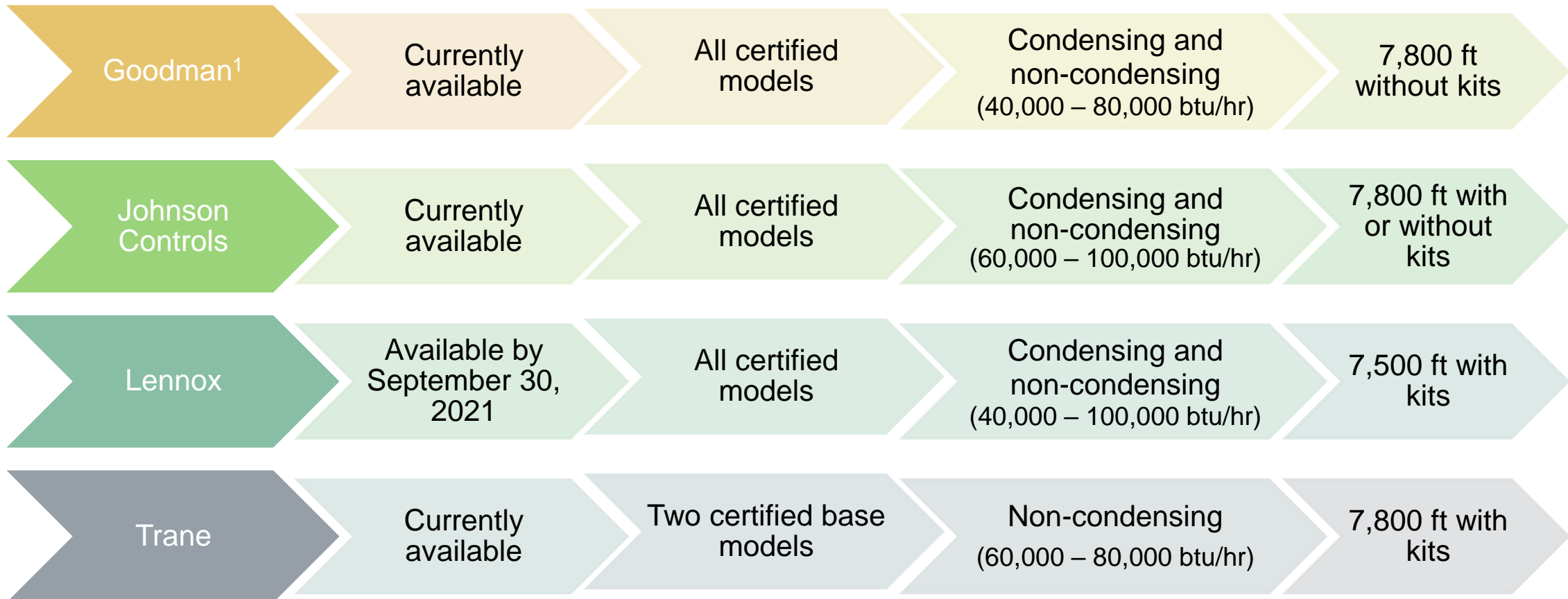
# HIGH ALTITUDE INSTALLATION - KEY ISSUES

Product availability for high altitude installation –  
Especially for large size and downflow models

High altitude exemption

# HIGH ALTITUDE PRODUCT AVAILABILITY

Manufacturers with 14 ng/J NO<sub>x</sub> furnaces available for elevations ≥7,500 feet



<sup>1</sup> Goodman will have all certified weatherized units available for installation at elevations up to 7,800 ft by October 1, 2021

# HIGH ALTITUDE PRODUCT AVAILABILITY - DOWN FLOW AND LARGE SIZE MODELS

## Downflow Models

- No downflow models for altitude higher than 5,400 ft
- Low priority for development due to its small market

## Large Size Models

- Two manufacturers expect to provide large size (100,000 btu/hr) models for high altitude by October 1, 2021
- Low priority for development due to small market
- Manufacturers suggest that with energy efficiency being highly improved, large size furnace would have even less demand

# HIGH ALTITUDE EXEMPTION

High altitude  
installation  
exemption

- Installers expressed concerns on product availability and requested that furnaces in high altitude areas be exempt due to small emission reductions



Staff response

- The emission reductions forgone would be permanent and cumulative overtime
  - Estimating 0.03 tons per day in 30 years, and 0.05 tons per day in 50 years
- Furnace manufacturers have invested resources to complete high altitude testing
- All manufacturers have made progress and have variety of products at different elevations
- A general exemption raises concerns with equity and compliance
- Staff will continue discussion with manufacturers, distributors, and installers to assist in resolving the disconnect between entities

# STAFF RECOMMENDATIONS FOR HIGH ALTITUDE INSTALLATION

- No extension for exemption of condensing and non-condensing furnaces installed in high-altitude areas
- Provide exemption for condensing and non-condensing furnaces installed in high-altitude areas with a downflow configuration
- Will continue to meet with manufacturers, distributors, and installers to resolve any remaining issues

# CONTACTS

## Proposed Amended Rule 1111

Yanrong Zhu  
Air Quality Specialist  
(909) 396-3289  
[yzhu1@aqmd.gov](mailto:yzhu1@aqmd.gov)

Shawn Wang  
Air Quality Specialist  
(909) 396-3319  
[swang@aqmd.gov](mailto:swang@aqmd.gov)

Gary Quinn, P.E.  
Program Supervisor  
(909) 396-3121  
[gquinn@aqmd.gov](mailto:gquinn@aqmd.gov)

Michael Krause  
Planning and Rules Manager  
(909) 396-2706  
[mkrause@aqmd.gov](mailto:mkrause@aqmd.gov)

## General Questions

Susan Nakamura  
Assistant Deputy Executive Officer  
909-396-3105  
[snakamura@aqmd.gov](mailto:snakamura@aqmd.gov)