

# Adopt Proposed Commercial Underfired Charbroiling Emission Reduction Strategy

San Joaquin Valley Air Pollution Control District  
Governing Board Meeting  
December 17, 2020

# Valley Efforts to Reduce Emissions from Commercial Charbroilers

- District adopted Rule 4692 (Commercial Charbroilers) in 2002 to reduce emissions from chain-driven charbroilers
  - Rule strengthened in 2009 to further reduce emissions
- Chain-driven charbroilers are required to be equipped and operated with a certified catalytic oxidizer control device
  - Required control efficiency of at least 83% for PM and 86% for VOC
  - Record keeping requirements of total quantity of meat cooked per week on each chain-driven charbroiler on the premises
  - Active permitting and enforcement for these units
- Unavailability of feasible and cost-effective controls has been barrier to establishing requirements for underfired charbroilers

# What is a Commercial Charbroiler?

- Two main types of charbroilers used in commercial cooking: chain-driven and underfired
  - Chain-driven charbroilers are automated devices typically used in fast food restaurants (Burger King, etc.) with an exhaust stack on top of the unit
  - Underfired charbroilers are similar to a home BBQ, employing a metal grill with a heat source below, exhaust vents through the restaurant's hood system



Source: Neico, 2020

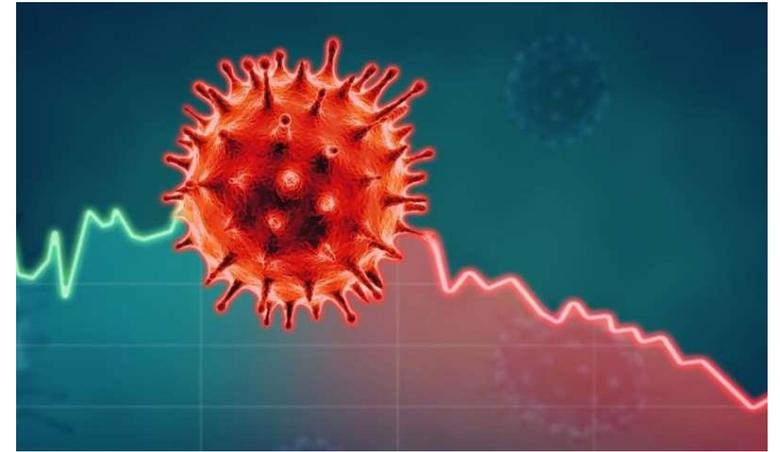


# Ongoing Evaluation of Potential Controls for Commercial Underfired Charbroilers

- *2018 PM2.5 Plan* includes commitments to evaluate potential emission reductions from underfired charbroilers through incentive-based and regulatory approach in urban areas within hot-spot counties of Fresno, Kern, and Madera
- District has been working to identify, develop, and promote underfired charbroiler control equipment
  - Incentive program currently available for Valley restaurants to install and demonstrate controls
  - Extensive review of regulations and installations in other regions to better understand real-world costs and experiences
- 2018: Rule 4692 amended to include survey reporting and registration requirements for underfired charbroilers
  - Provided District with valuable underfired charbroiling inventory and activity data
  - District has received over 4,100 reports from Valley restaurants
  - Quantity and throughput of underfired charbroilers may be significantly less than previously assumed

# Impact of COVID-19 on Restaurant Industry

- Severe COVID-19 pandemic impacts to sector
  - Restaurants in California mandated to restrict operations to take-out and outdoor dining only
  - Supply chain disruptions and decreased consumer spending adversely affect revenues
- National and California economic impacts
  - National Restaurant Association predicts \$240 billion loss by end of 2020
  - Over 30% California restaurants are expected to close by end of 2020
  - Over 900,000 restaurant workers in California have become unemployed
- Impacts of COVID-19 to Valley restaurant industry analyzed by third-party economic consultant (report included as attachment to Board package)
- Recommended commercial charbroiling emission reduction strategy developed in consideration of COVID-19 impacts



Credit: Shutterstock

# Proposed Commercial Charbroiling Emission Reduction Strategy

- Lack of commercially available and feasibly demonstrated control technologies primary barrier in moving forward with control strategies
  - Other air districts in California and other regions have encountered similar difficulties
- Unprecedented impacts of COVID-19 pandemic to restaurant industry has further exacerbated this challenge, with many existing restaurants facing limited revenue streams or closures in coming months and beyond
- In recognition of these impacts, District staff have developed multipronged strategy to promote emission reductions, while minimizing the impact on restaurants during COVID-19 pandemic
- Proposed strategy establishes specific actions in support of District's commitment to identify, evaluate, and pursue additional opportunities for reducing emissions from commercial underfired charbroilers

# Proposed Strategy 1: Enhance Restaurant Charbroiler Technology Partnership (RCTP) Incentive Program

- Develop enhancements to RCTP program to significantly increase participation by Valley restaurants in successfully demonstrating PM2.5 emission reduction technologies
  - Extend maintenance of control equipment from 2 years to 5 years to increase willingness of Valley restaurant operations to install controls
  - Prioritize outreach and funding for operations that may be adversely impacting nearby residences and other sensitive receptors
- Work with restaurants to develop more effective outreach
  - Develop a more effective outreach strategy for disseminating information about RCTP program
  - Work with Valley restaurants, and cities/counties to promote incentive program
- Advocate for State Funding Support
  - District would continue to work with Valley stakeholders to advocate for state funding resources to support implementation of the RCTP program
- If approved by your Board, District, working closely with restaurant working group will return to your Board for any necessary actions regarding program enhancements in 2021

# Proposed Strategy 2: Authorize Staff to Develop Guidance for Interested Cities and Counties

- Work closely with cities/counties to develop ordinance & land use guidance for commercial underfired charbroilers, for use based on individual municipality interest
  - Health impacts of emissions from underfired charbroiling
  - Siting of new operations and distance considerations to residents/sensitive receptors
  - Potentially available control technologies
  - Grant funding opportunities available through RCTP program
  - Other areas of interest to Valley cities and counties
- If approved by your Board, next step in developing District guidance for Valley cities/counties is to reach out to our local municipalities

## Proposed Strategy 3: Assist in Development of CARB's New Statewide Suggested Control Measure (SCM) for Commercial Underfired Charbroilers

- CARB has expressed commitment to develop statewide Suggested Control Measure for controlling emissions from underfired charbroiling
  - Provide for uniform statewide approach, equity in reducing community-level emissions and expectations for restaurants
- As CARB considers SCM, District will stay closely involved to provide a Valley perspective and feedback on local lessons learned
- Advocate for needed funding to support the continued development of technology and operation of incentive programs
- Work with CARB and other air districts to develop a technology clearinghouse and technology certification process for commercial underfired charbroiler controls

# Proposed Strategy 4: Work with CARB and U.S. EPA to Update Emissions Inventory and Attainment Modeling

- Recent information provided by Valley restaurants through reporting efforts indicates emissions may be lower than previously calculated
  - Current methodology estimates that 50% of all restaurants operate underfired charbroilers – actual data indicates percentage is under 20% Valley-wide
  - Current methodology assumes 3.52 tons of meat cooked per device per month - actual data indicates 1.33 tons of meat cooked per device per month (62% lower)
- District is continuing to refine analysis, will work closely with CARB and EPA to ensure that emissions inventory data is incorporated into emissions inventory through an approved inventory update

# Proposed Strategy 5: Establish New Restaurant Working Group to Collaboratively Explore Opportunities

- District has worked with local restaurant owners, technology vendors, installation vendors, and California Restaurant Association to gain perspectives on opportunities and challenges
  - Meetings have been critical to understanding challenges of industry, especially throughout COVID-19 pandemic
- District proposing to formalize creation of a restaurant workgroup
  - Create a forum to guide enhancements to RCTP program
  - Allow District to stay connected to industry and real-world costs/experiences
  - Review ongoing development of emissions control technologies, which will also be key in pursuing potential future regulations (evaluation ongoing in 2021)

# Next Steps

- If approved by your Board, District will move forward with implementing the specific actions included in the proposed commercial underfired charbroiling emission reduction strategy
- Benefiting from any information gained through these efforts, and in anticipation of economic recovery in the coming year, staff will continue evaluating potential additional actions, including regulatory amendments, in 2021 to achieve additional emissions reductions from commercial charbroiling operations, as technologically and economically feasible

# Today's Recommendation

Adopt the proposed emission reduction strategy for commercial underfired charbroiling, including the following elements:

1. Enhance the District's Restaurant Charbroiler Technology Partnership incentive program to increase participation by Valley restaurants in successfully demonstrating new PM2.5 emission reduction technologies
2. Authorize staff to develop guidance for interested cities and counties to assist in promoting PM2.5 control technologies during the approval of new large restaurants equipped with commercial underfired charbroilers
3. Direct staff to assist CARB in the development of their intended new statewide Suggested Control Measures to provide consistent guidance for equitably reducing emissions from commercial charbroiling operations throughout the state
4. Direct staff to work with CARB and U.S. EPA to update the emissions inventory and attainment modeling, as appropriate based on the latest available information, to assist the District and CARB in developing new control strategies
5. Authorize staff to form a new restaurant working group to collaboratively explore opportunities for underfired charbroiling control technologies