IMPLEMENTATION STATUS OF RULE 1111

NOX EMISSIONS FROM NATURAL-GAS-FIRED, FAN-TYPE CENTRAL FURNACES

TASK FORCE MEETING

MAY 25, 2017

SCAQMD HEADQUARTERS
DIAMOND BAR, CALIFORNIA
AGENDA

- Recap and discussion highlights of the Rule 1111 Task Force meeting on April 27, 2017
- Follow up individual meetings with Manufacturers in May, 2017
- Summary of Stakeholders’ recommendations
- Rule 1111 considerations
- Future activities and schedules
- Lantec Demonstration
RECAP - RULE 1111 TASK FORCE MEETING ON APRIL 27, 2017

- Rule 1111 background
- Individual meetings with Manufacturers in March – April, 2017
- Implementation status and challenges
- Product availability
- Manufacturers’ recommendations
- Staff considerations
DISCUSSION HIGHLIGHTS - RULE 1111 TASK FORCE MEETING ON APRIL 27, 2017

- Stakeholder feedback:
  - Rebate may be an option to incentivize compliant products
  - High efficiency units should have a later compliance date
  - Lower limit results in rapid change of technology which may bring about safety hazards
  - It is not fair to raise the limit or have 14 ng/J limit only applying to new constructions, for OEMs who already developed compliant units
DISCUSSION HIGHLIGHTS - RULE 1111 TASK FORCE MEETING ON APRIL 27, 2017- continued

- Staff needs to have further discussion with OEMs for low-volume market product development and cost increase information related to commercialized compliance products

- Illegal sales, propane furnaces not regulated, different emission limit for retrofit market, economic impact related to low-volume market product, etc.

- No additional recommendation was provided for mitigation option extension and mitigation fee change
FOLLOW UP INDIVIDUAL MEETINGS – MAY, 2017

- Updates to status:
  - Standard units: One more OEM expects to start field test in the fall of 2017
  - Weatherized units: One more OEM is in lab test phase; another OEM is in discussion phase
  - Mobile home units: One OEM is in discussion phase

- Updates to recommendations previously provided:
  - Eliminate mitigation fee for OEMs who are in active commercialization process for compliant products
  - A greater variety of products could be commercialized if the compliance date is extended
  - One stakeholder suggested that 14 ng/J performed better than if raising the emission limit
  - Rebate was recommended and discussed
Cost increase relative to commercializing compliance products

- Manufacturing cost increase is similar to mitigation fee
- In the lower end for standard units and in the higher end for other type of units
- Retail markup – refer to DOE rule development data

Safety and reliability for new technology

- OEMs that expect compliant products are confident with their safety and reliability
- Other than the national standards (i.e., ANSI), internal reliability testing, field test, OEMs conduct extensive testing for new products
- Training installers is crucial to proper implementation

Other concerns

- Commercialization may be delayed until the rule amendment is finalized
- Rule 1111 test method needs to be updated to reflect frequent start-ups
### STAKEHOLDERS’ RECOMMENDATIONS – MAY, 2017 (SUMMARY)

<table>
<thead>
<tr>
<th></th>
<th>Condensing (High Efficiency)</th>
<th>Non-condensing (Standard)</th>
<th>Weatherized</th>
<th>Mobile Home</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Compliance Date</strong></td>
<td>April 1, 2015</td>
<td>October 1, 2015</td>
<td>October 1, 2016</td>
<td>October 1, 2018</td>
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<tr>
<td><strong>Compliance date - Mitigation End</strong></td>
<td>April 1, 2018</td>
<td>October 1, 2018</td>
<td>October 1, 2019</td>
<td>October 1, 2021</td>
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<tr>
<td><strong>Mitigation Fee (per unit)</strong></td>
<td>$200</td>
<td>$150</td>
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#### Recommendations

- **Mitigation option extension**
  - 1 yr/2 yrs
  - no extension/1 yr/ 2 yrs
  - 1 yr
  - 1 yr

- **Others:** 2 yrs/3 yrs/5 yrs, but no distinction made for which type

- **Mitigation Fee (per unit)**
  - $150 for all types; eliminating mitigation fee for OEMs in active commercialization; phased approach for mitigation fee from 40 to 30 then 14 ng/J

- **Emission limit (ng/J)**
  - 14 (no change)/20/29/30
STAFF CONSIDERATIONS REGARDING RULE 1111

- OEMs who have developed compliant standard units need assurance that the Rule 1111 emission limit of 14 ng/J is maintained so that they have the proper incentive to proceed with the capital investment to commercialize their units.

- Continue to maintain a competitive market among OEMs and burner manufacturers; this will help ensure more reasonably priced units for the consumers.
STAFF CONSIDERATIONS REGARDING RULE 1111
- continued

- Ensure that the compliant products adequately cover the size ranges
- Safety and reliability should not be compromised by current emission limit
- Make sure that there is a clear path for the higher efficiency furnaces; the application of high efficiency equipment is in line with the 2016 AQMP goal
FUTURE ACTIVITIES AND SCHEDULES

- Continue stakeholder meetings
- Stationary Source Committee – June 16, 2017
- Next Task Force meeting
  - Late June to mid July, 2017 (pending Committee guidance)
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LANTEC DEMONSTRATION
DISCUSSION