



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

**AGENDA: 8**

# **Rule Development Update**

**Greg Nudd**  
**Rule Development Manager**

**Board of Directors Meeting**  
**February 1, 2017**



# Overview

- Refinery Rulemaking History
- Overview of Draft Rule 12-16
- Overview of Draft Rule 13-1
- Overview of Draft Rule 11-18
- Schedule / Next Steps



# Refinery Rulemaking History

## *Board Resolution 2014-07*

### **In October 2014, Board provided direction to staff**

- Continue work on Rule 12-15 to monitor refinery emissions
- Develop Rule 12-16 to prevent increases in refinery emissions
- Develop additional rules to reduce refinery emissions by 20% by 2020, or as much as feasible

*In 2015 and 2016, the first suite of emission reduction rules were approved. These rules will reduce refinery emissions by more than 15%*



# Refinery Rulemaking History

## *Progress*

### On track towards *Refinery Strategy* goals

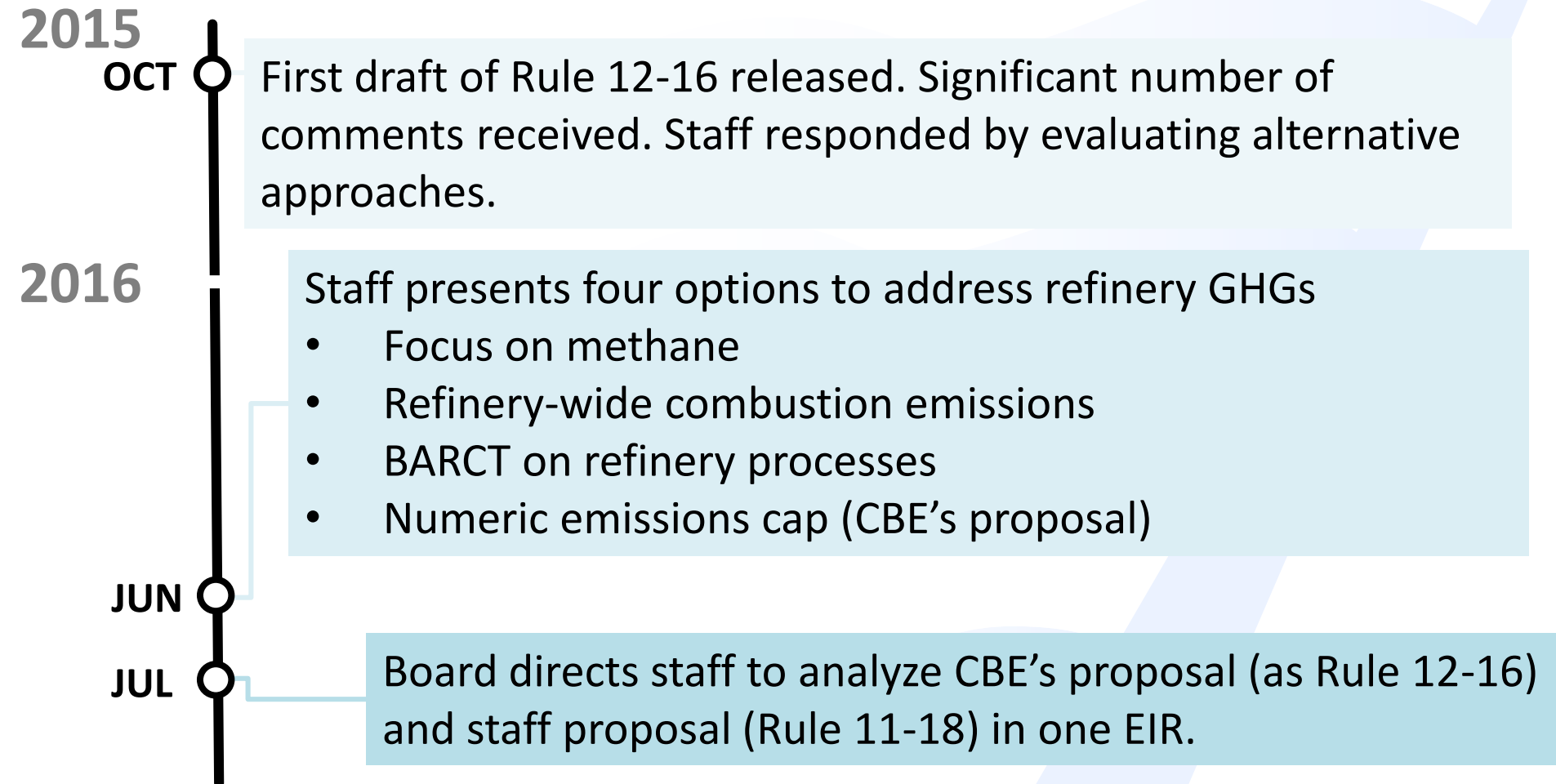
- Six rules adopted
- Criteria pollutant emissions reductions of over 15%

Rule	Addresses	Adopted
6-5	Reduces PM from FCCUs	Dec. 2015
8-18	Reduces VOC from equipment leaks	
11-10	Reduces VOC and toxics from cooling towers	
9-14	Reduces SO <sub>2</sub> from coke calcining operations	Apr. 2016
12-15	<i>Tracks crude slate changes and emissions</i>	
2-5	<i>New Source Review for Toxics</i>	Dec. 2016



# Refinery Rulemaking History

## *Work on Rule 12-16*





# Draft Rule 12-16

## Limits refinery GHG & criteria pollutant emissions

- Affects five refineries and three associated facilities
- Caps GHG, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> emissions
- Limits set at 7% above each refinery's five-year max

## Has significant issues

- Conflicts with state and federal law on permitting
- Court would likely find it to be arbitrary and capricious
- May cause gasoline shortages if consumption increases

# Draft Rule 13-1

## *First Rule of Combustion Strategy*

### Limits refinery GHGs by focusing on carbon intensity

- Caps GHG emissions at each refinery's current, actual capacity operation
  - Accounts for GHGs from all power and H<sub>2</sub> inputs
  - Requires execution of cost-effective efficiency projects
- Does not interfere with Cap-and-Trade or the gasoline market
- Prevents refineries from re-tooling to process tar sands crude

$$\text{Carbon Intensity Limit} = \frac{\text{Annual GHG Emissions (CO}_2\text{e)}}{\text{Annual Crude Volume (barrels)}}$$

# Comparison of Rule 12-16 & Rule 13-1

	Rule 12-16	Rule 13-1
<u>Goals / Objectives</u>		
• Prevents Significant Increases in PM Emissions	Yes	Yes
• Prevents Significant GHG Emission Increases	Yes	Yes
• Reduces Toxic Emissions	No	No
<u>Harmony with...</u>		
• Health and Safety Code	No	Yes
• AB 32 Cap-and-Trade Program	No	Yes
New Source Review	No	Yes





# Draft Rule 13-1 and Draft Rule 12-16

- Staff believes that draft Rule 13-1 meets the GHG-related goals of draft Rule 12-16, but more analysis and consultation with stakeholders is still required.
- Draft Rule 13-1 will be evaluated as an alternative to draft Rule 12-16 in the EIR for 12-16.
- Analysis of draft Rule 13-1 will not impact the schedule for the analysis of draft Rule 12-16.



# Draft Rule 11-18

## **Reduces public's exposure to localized health risks**

- Hundreds of facilities will be evaluated, including refineries
- Health Risk Assessments (HRAs) conducted by Air District staff using latest OEHHA guidelines
- Threshold for facilities to develop and execute District-approved Risk Reduction Plans reduced from 100 per million (100/M) to 10/M
- Refineries have among highest priority for HRAs (Phase 1)
- Rule 11-18 ensures public transparency and continuous improvement



# Schedule / Next Steps

## **On track with 12-16/11-18 rulemaking process**

- MAR 2017 – Second round of workshops / hearing package published
- MAY 17, 2017 – Board hearing

## **Proposed schedule for Rule 13-1**

- FEB 2017 – Workshop package published
- MAR 2017 – Outreach in refinery communities
- APR 2017 – Update to Stationary Source Committee
- MAY 2017 – Hearing package published
- AUG 2017 – Board hearing



# Rule 11-18 Planned *Implementation Approach*

1. Prioritize Facilities
2. Conduct Health Risk Assessments
  - Setup Model
  - Validate Model
  - Conduct Health Risk Assessments
3. Public Comment on HRAs
4. Publish HRA Results to Air District website & email subscription list
5. Risk Reduction Plan
  - Publish Requirement, Submission and Implementation Status to Air District website & email subscription list
  - 3-year implementation timeline



# Rule 11-18 Planned *Implementation Phases*

- **Phase 1 (Prioritization Score > 250)**
  - Health Risk Assessments (2017-2018) - 1 Year to complete
  - Risk Reduction Plan Development and Approval (2018-2019) ~ 9 months
  - Risk Reduction Plan Implementation (2019-2022) – 3 years
- **Phase 2 (Prioritization Score > 10)**
  - Mixed Source Facilities (2019-2025)
- **Phase 3**
  - Diesel Internal Combustion Engines (2021-2027)
- **Phase 4**
  - Retail Gas Stations (2023-2028)



# Summary of Ozone Seasons

Year	National 8-Hour	State 1-Hour	State 8-Hour
2013*	3	3	3
2014*	5	3	10
2015*	5	4	11
2016	15	5	15

Spare the Air Alerts: 6/2, 6/3, 6/4, 6/21, 6/28, 7/13, 7/14, 7/15, 7/25, 7/26, 7/27, 7/28, 7/29, 8/11, 8/12, 8/13, 8/18, 8/19, 9/7, 9/17, 9/18, 9/19, 9/25, 9/26, 9/27, 10/8, 10/9

Days > 0.070 ppm 8-hour NAAQS: 6/2, 6/3, 6/4, 6/30, 7/14, 7/15, 7/25, 7/26, 7/27, 8/12, 8/13, 8/17, 9/26, 10/8, 10/9

\*Based on NAAQS of 0.075 ppm that was in place during those years

# Winter PM<sub>2.5</sub> Seasons

Year	Days > 35 μg/m <sup>3</sup>	Winter Spare the Air Alerts
2013/2014	15	30
2014/2015	6	23
2015/2016	0	1
2016/2017	0	7

- **Spare the Air Alert Called for:** 12/19/16, 12/20/16, 12/21/16, 12/22/16, 1/17/17, 1/30/2017, 2/1/2017
- **Days > 35 μg/m<sup>3</sup> 24-hr NAAQS:**