



# NO<sub>x</sub> RECLAIM WORKING GROUP MEETING

SEPTEMBER 14, 2017

SCAQMD

DIAMOND BAR, CA

# Agenda

- Previous working group meeting highlights
- Initial overview of analysis for types of facilities with 6 or more pieces of RECLAIM source equipment
- Landing rules outside of RECLAIM
- New Source Review (NSR) considerations
- AB 617 and BARCT for Cap and Trade facilities
- Rulemaking Schedule (Short-Term Amendments)
- Next Steps

# RECLAIM Facility Analysis

- Small facility analysis
- Overview of approach

1<sup>st</sup> Step

- Analyzed facilities with 0-5 pieces of equipment

2<sup>nd</sup> Step

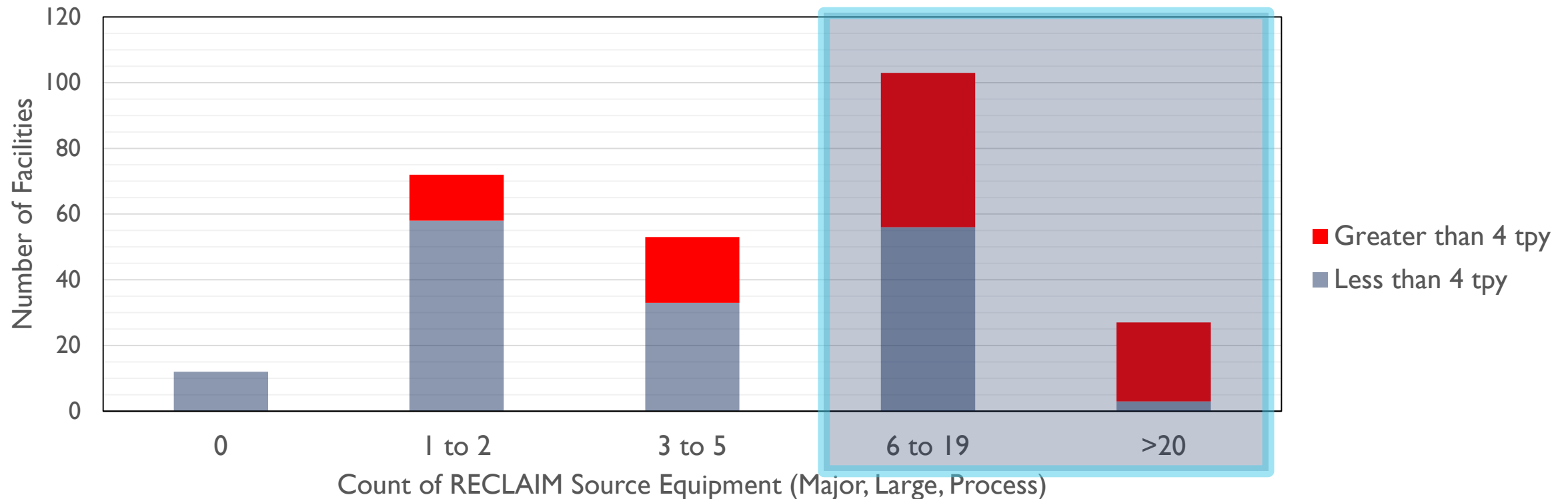
- Categorized RECLAIM source types and equipment categories device by device

3<sup>rd</sup> Step

- Identified facilities with all RECLAIM source equipment that:
  - 1) Meet corresponding Command & Control rule limits and,
  - 2) Currently have no Command and Control landing rules
- Identified facilities that would not be a part of this initial transition

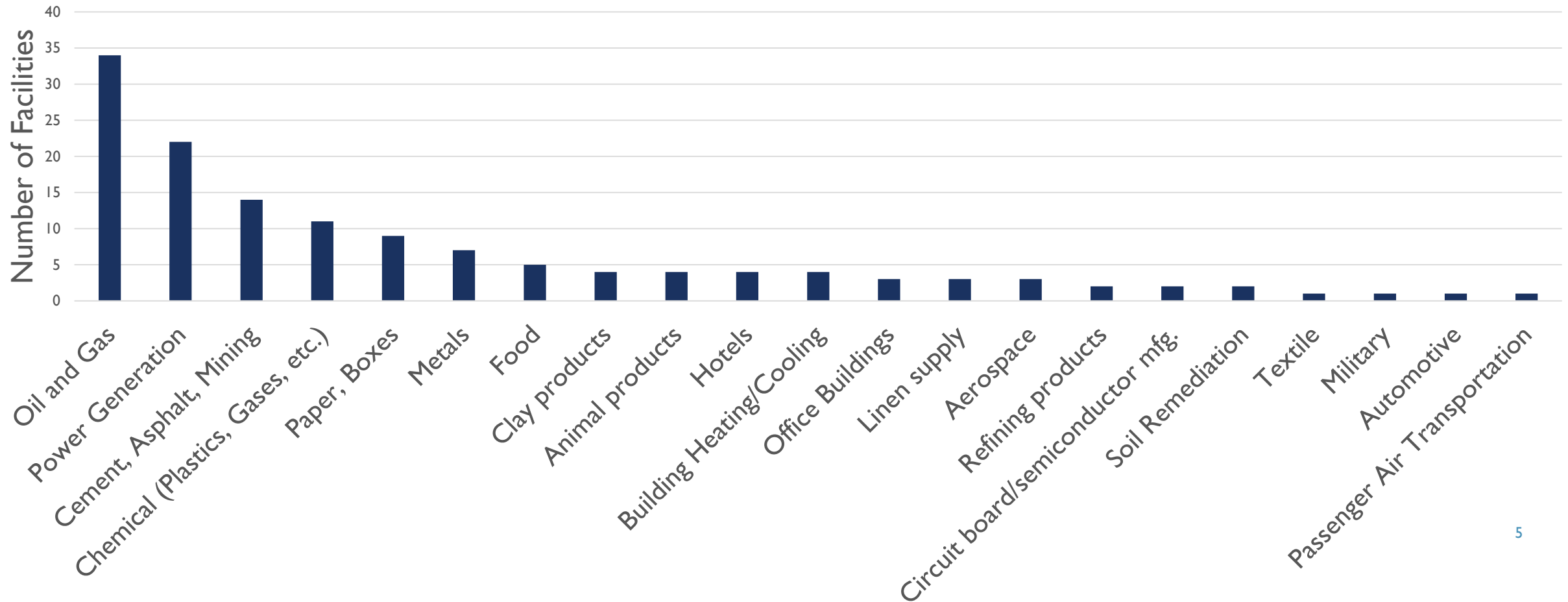
# Initial Analysis of NOx RECLAIM Facility Equipment Counts

## Equipment Counts at RECLAIM Facilities

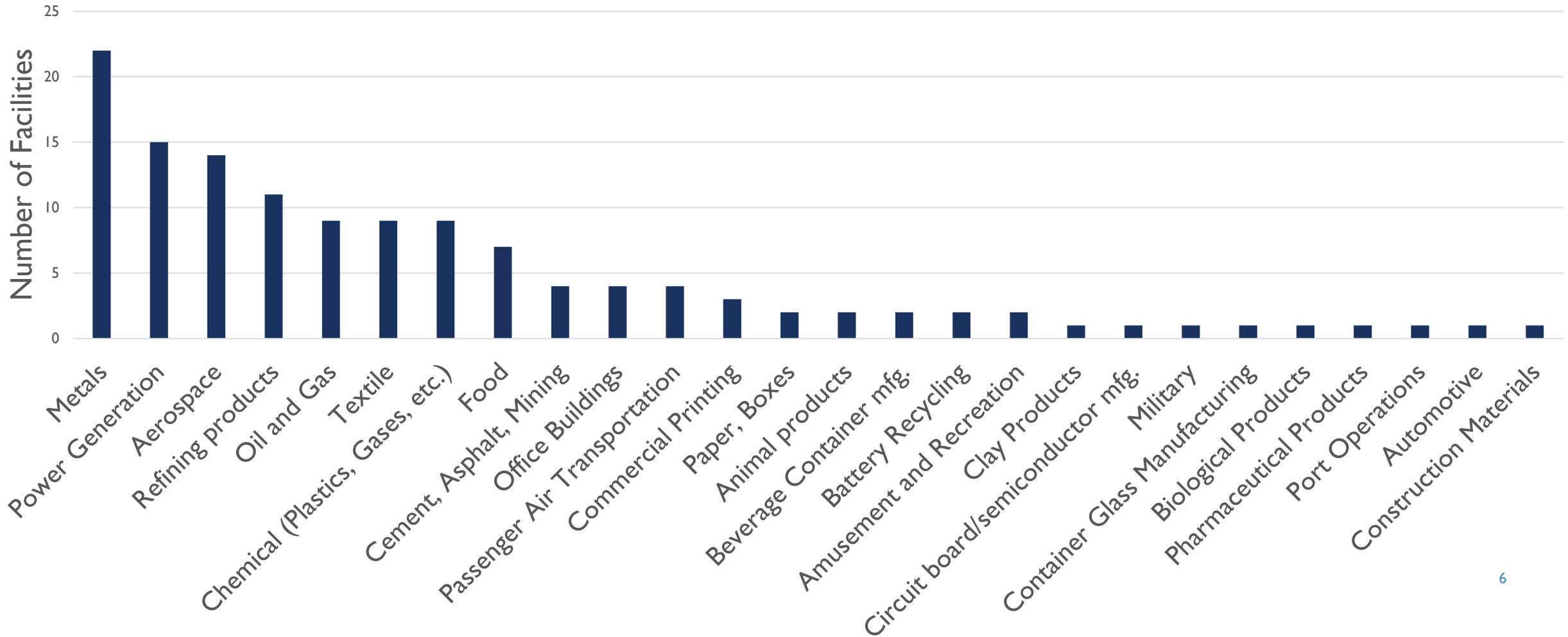


\*Counts are as of September 2017. Facilities with no major/large source, or process unit equipment have either shut down or still operate equipment not requiring a permit.

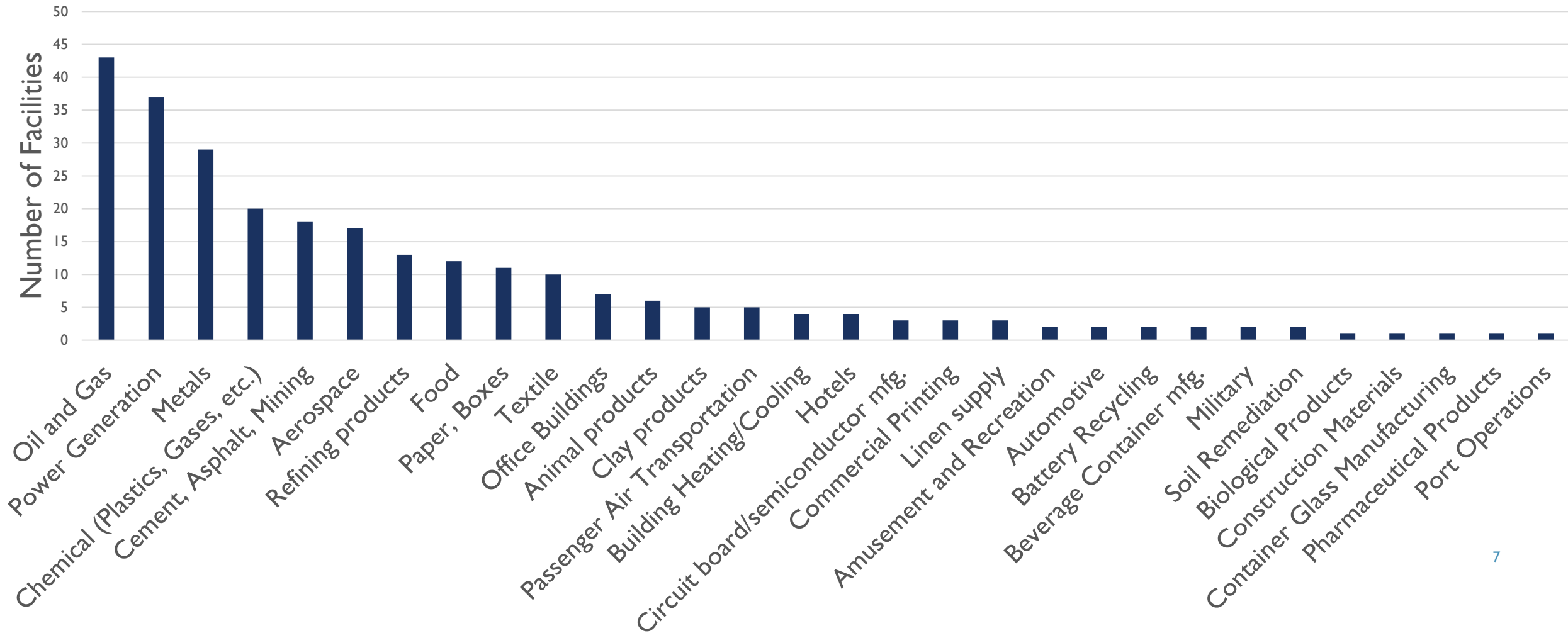
# Industry Category Breakdown Facilities with 0-5 Pieces of Equipment



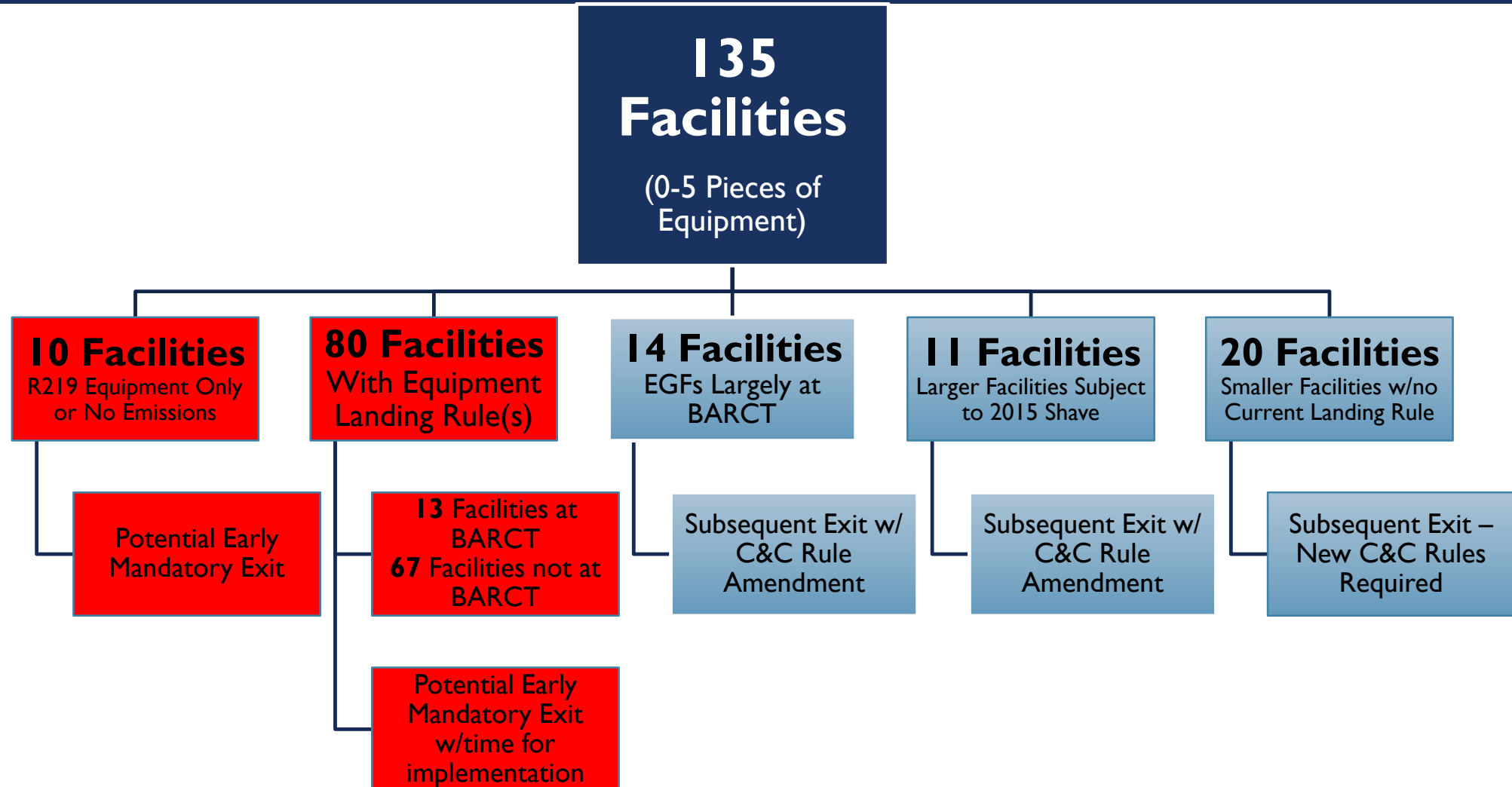
# Industry Category Breakdown Facilities with $\geq 6$ Pieces of Equipment



# Industry Category Breakdown for All RECLAIM Facilities

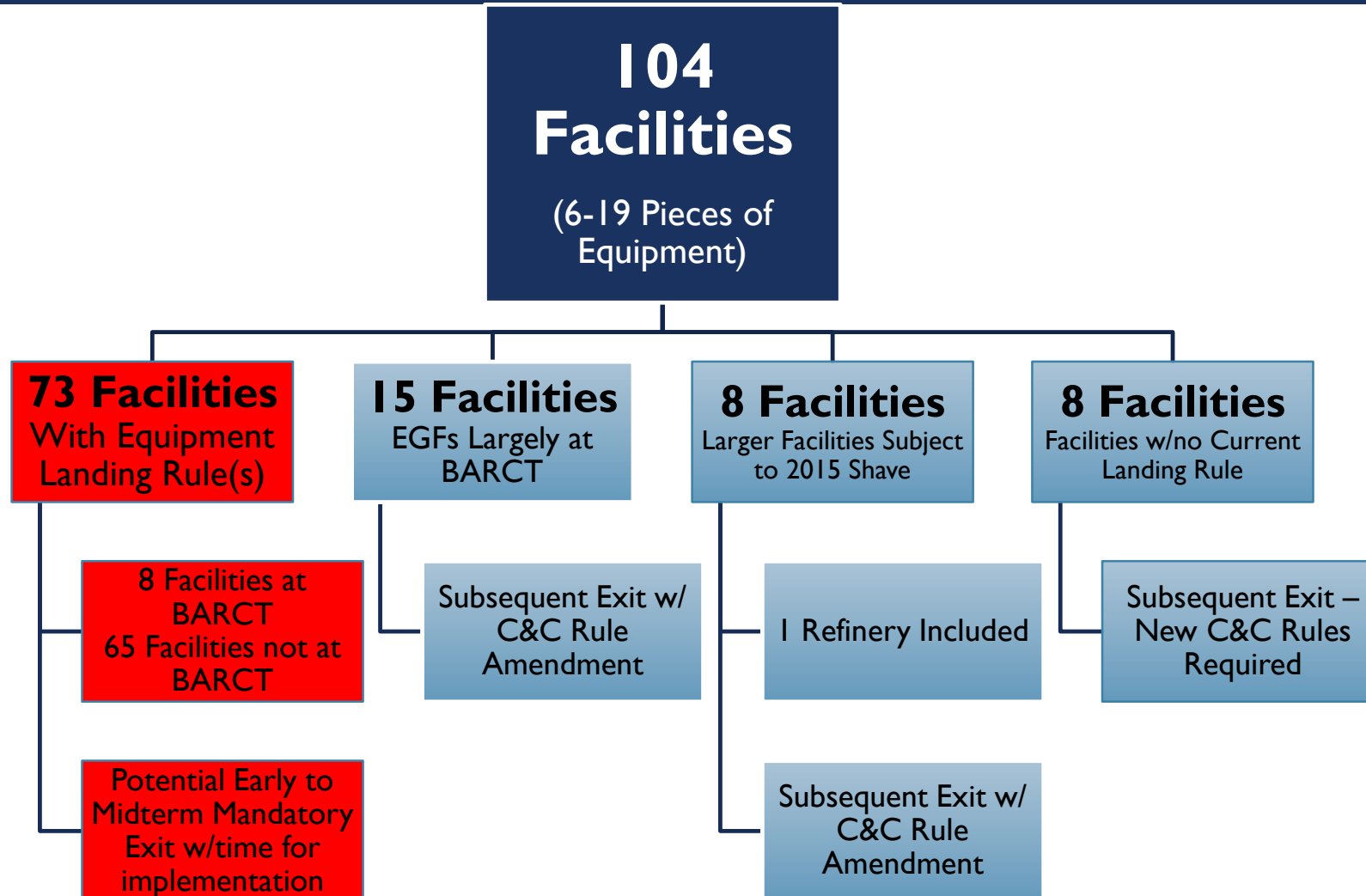


# Summary of $\leq 5$ Pieces of Equipment Facilities

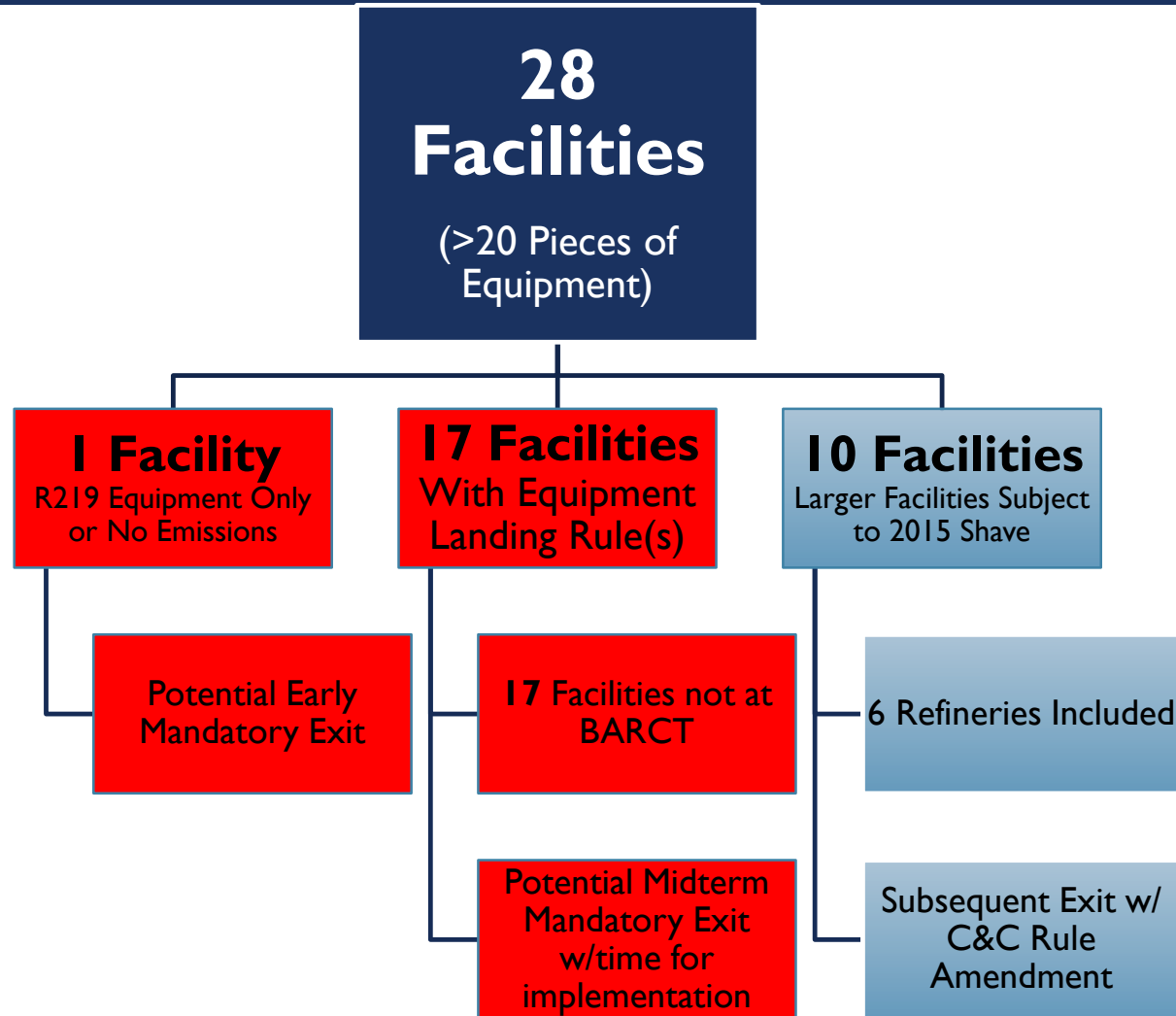




# Summary of 6-19 Pieces of Equipment Facilities



# Summary of $\geq 20$ Pieces of Equipment Facilities



# Evaluation of Existing Landing Rules

- Must ensure as facilities transition out of RECLAIM, there is a corresponding command and control “landing rule” with up-to-date BARCT requirements
- Amendments to corresponding command and control landing rules may be needed to account for:
  - Implementation timeframe to achieve BARCT compliance limits
  - Monitoring and recordkeeping requirements
- Up to 27 amendments to existing BARCT command and control rules will be needed
- About 5 new BARCT command and control rules will be needed

# Subsequent Rulemaking

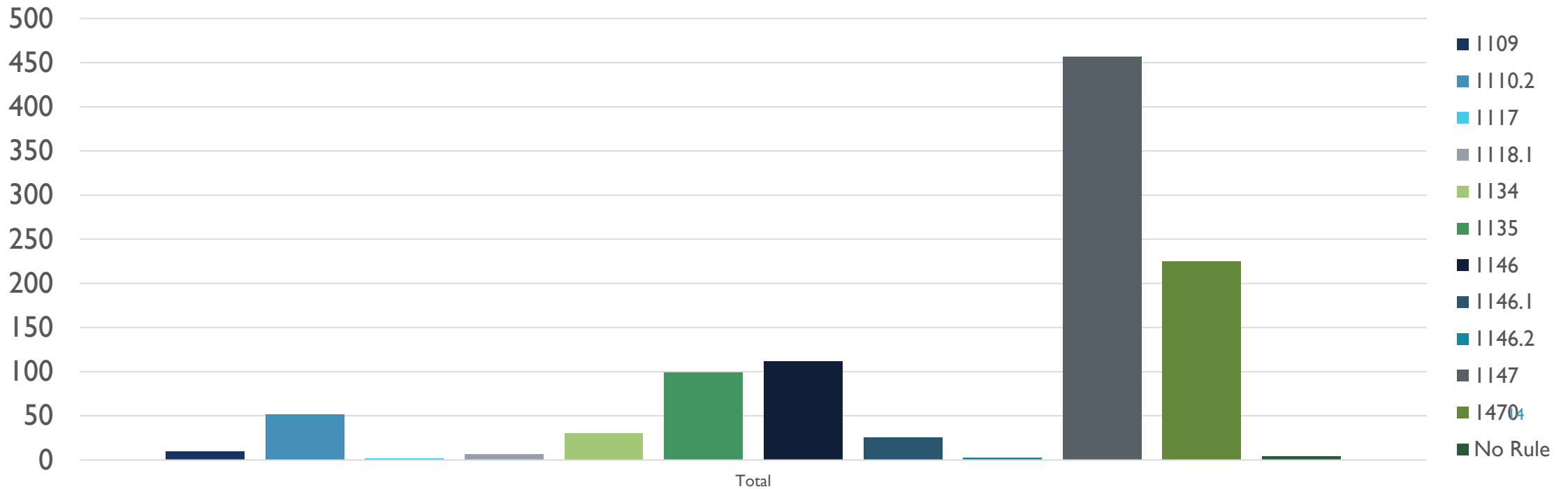
- To arrive at the projected 5 new and 27 amended rules, staff reviewed existing rules for:
  - Basic equipment applicability
  - BARCT levels (concentration limits)
  - Implementation timelines for compliance dates
  - References to RECLAIM
- A new rule for Monitoring, Reporting, and Recordkeeping would be required and be based on the current Rule 2011 and 2012 Protocols
- Other new rules may be required for specific industry categories (e.g., Refineries, EGFs)
- Rescindment of existing rules that are outdated and/or were subsumed by RECLAIM at the beginning of the program may be required

# Landing Rules Outside of RECLAIM

- Equipment counts of applicable landing rules were collected and are color-coded on the following two slides based on the following criteria:
  - **RED** – Landing rule not representative of BARCT
  - **YELLOW** – Further analysis of BARCT needed and other requirements
  - **GREEN** – Landing rule reflects current BARCT, but need to assess compliance dates and other requirements

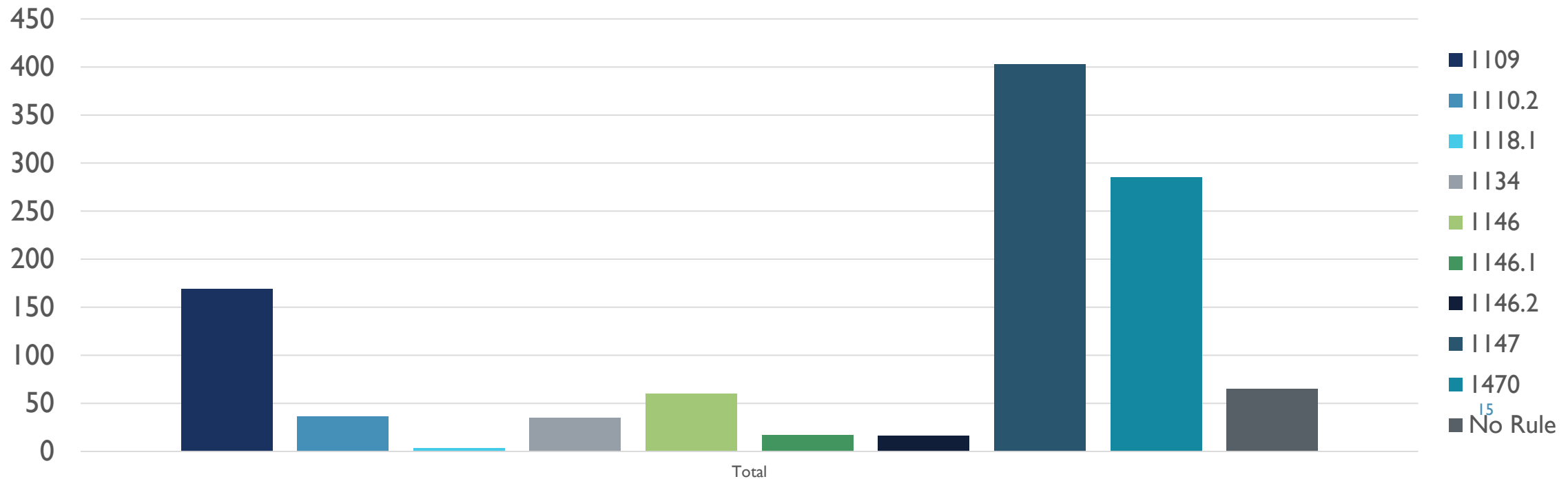
# Landing Rules Outside of RECLAIM (6-19 eq.)

	1109	1110.2	1117	PR 1118.1	1134	1135	1146	1146.1	1146.2	1147	1470	No Rule	Grand Total
Equipment Count of Potential Landing Rules	10	52	2	7	30	99	112	26	3	457	225	4	<b>1027</b>



# Landing Rules Outside of RECLAIM ( $\geq 20$ eq.)

	1109	1110.2	PR 1118.1	1134	1146	1146.1	1146.2	1147	1470	No Rule	Grand Total
Equipment Count of Potential Landing Rules	169	36	3	35	60	17	16	403	285	65	<b>1089</b>



# Existing Command and Control Rules Evaluated

- Existing rules were evaluated based on the categories of RECLAIM equipment
- The following command and control rules as potential landing rules were evaluated:
  - Rule 1110.2 (Internal Combustion Engines)
  - Rule 1146 (Boilers and Process Heaters)
  - Rule 1146.1 (Boilers and Process Heaters)
  - Rule 1146.2 (Small Boilers and Process Heaters)
  - Rule 1147 (Miscellaneous NOx Sources)
  - Rule 1470 (Diesel Internal Combustion Engines)
  - Rule 1134 (Stationary Gas Turbines)
  - Rule 1135 (Electricity Generating Facilities)
  - Rule 1109 (Refinery Boilers and Heaters)
  - Rule 1117 (Glass Melting Furnaces)



# Command and Control vs. RECLAIM Rule 2002 Limits

Command and Control Rule	Command and Control Rule NOx Limit	RECLAIM Rule 2002 NOx Limit
Rule 1110.2	11 ppm @15%O <sub>2</sub>	11 ppm @15%O <sub>2</sub>
Rule 1146	12 ppm @3%O <sub>2</sub> for atmospheric units 9 ppm @3%O <sub>2</sub> for units 5-≤75 MMBTU/hr 5 ppm @3%O <sub>2</sub> for units 75 MMBTU/hr and above	12 ppm @3%O <sub>2</sub> for units 2-20 MMBTU/hr 9 ppm @3%O <sub>2</sub> for units >20 MMBTU/hr 5 ppm @3%O <sub>2</sub> for units >110 MMBTU/hr
Rule 1146.1	12 ppm @3%O <sub>2</sub> for atmospheric units 9 ppm @3%O <sub>2</sub> for units >2 and <5 MMBTU/hr	12 ppm @3%O <sub>2</sub> for units 2-20 MMBTU/hr
Rule 1146.2	20 ppm @3%O <sub>2</sub> for units ≤2 MMBTU/hr	102 ppm @3%O <sub>2</sub> for unpermitted process units
Rule 1147	30-60 ppm @3%O <sub>2</sub> , depending on equipment type and process temperature	30-45 ppm @3%O <sub>2</sub> , depending on equipment type
Rule 1470	Varies, depending on Tier at time of permitting	Varies, depending on Tier at time of permitting

# Command and Control vs. RECLAIM Rule 2002 Limits (con't)

Command and Control Rule	Command and Control Rule NOx Limit	RECLAIM Rule 2002 NOx Limit
Rule 1134	9-25 ppm @15%O <sub>2</sub> , depending on size	2 ppm @15%O <sub>2</sub>
Rule 1135	Varies, depending on plant-wide emissions rate and emissions cap	2 ppm @15%O <sub>2</sub> for turbines, 7 ppm @3%O <sub>2</sub> for utility boilers
Rule 1109	25 ppm @3%O <sub>2</sub>	2 ppm @3%O <sub>2</sub>
Rule 1117	4.0 lbs/ton of glass pulled	0.24 lbs/ton of glass pulled

# Other Rules to be Amended/Adopted

- Regulation XIII
- Regulation III
- Regulation IV
- Rule 1112
  - No cements plants currently in operation, but a rule is required for this source category if any new sources commence operation
- Rule 1118.1 (Non-Refinery Flares)
- Other refinery equipment rules

# New Source Review

- Staff is considering potential NSR issues and options as facilities transition out of RECLAIM
- Staff has discussed SB-288 with CARB to ensure compliance
  - SB-288 (The Protect California Act) is a “no backsliding” statute
  - NSR rule revisions can be made as long as program equivalency is still met and there is no relaxation of existing State Health and Safety Code NSR provisions as of December 30, 2002

# New Source Review (con't)

- A separate meeting with interested stakeholders will be convened to discuss:
  - Background information to frame potential NSR issues
  - Facilities that converted ERCs to RTCs
  - New equipment permitted after RECLAIM adoption
  - Assurance of proper tracking (R1315)
  - Generation of ERCs post-RECLAIM
  - State and Federal approval
  - Other?

# AB-617

- Companion bill to Cap & Trade signed by the Governor on July 26, 2017
- RECLAIM facilities that are in the California GHG Cap and Trade program are affected and would be required to install BARCT
- An expedited schedule for implementing BARCT is required to be developed by January 1, 2019, with full implementation no later than December 31, 2023
- Highest priority to be placed on units that have not modified emissions-related permit conditions for the greatest period of time

# AB-617 (con't)

- Staff continues to assess impact to RECLAIM transition planning
  - Increased urgency for larger facilities
  - Need to establish BARCT levels sooner to allow time for implementation
  - Resources needed to complete rulemaking by January 2019

# Update on Proposed Amended Rule 2001

- Key elements of amendment:
  - No new facilities would be added to RECLAIM
  - No facilities can elect to enter RECLAIM
  - Concepts for which provisions are being developed
    - Mandatory exit provisions
    - Opt-out provisions – reassess existing provisions (i.e., EGFs) and establish additional provisions
    - Provisions for “Structural Buyer” (i.e., those without an initial allocation)
- Schedule: 1<sup>st</sup> Quarter 2018



# Next Steps

- Begin development of high priority rules
  - AB 617 BARCT rule development/adoption by January 1, 2019
  - Reg XX, refineries, power plants, other...
  - Provide regulatory certainty as soon as possible (i.e., BARCT effective dates)
- Sub-topic working group meetings will be convened for:
  - New Source Review
  - Permitting
  - Possibly other topics
- Continue with the development of the RECLAIM Transition Plan
- Work with facilities to identify any new issues

# Next Steps (con't)

- Working Group Meetings (monthly)
  - October 12, 2017
  - November **8**, 2017 @ **1:30 p.m.**  
(Regular meeting date & time change due to rescheduling of Administrative Committee meeting to accommodate the Veteran's Day Holiday)
  - December 14, 2017

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