

RECLAIM

(REgional CLean Air Incentive Markets)

A Revolutionary Approach

Laki Tisopulos, Ph.D., P.E.
Deputy Executive Officer
Engineering & Permitting

CDAWG

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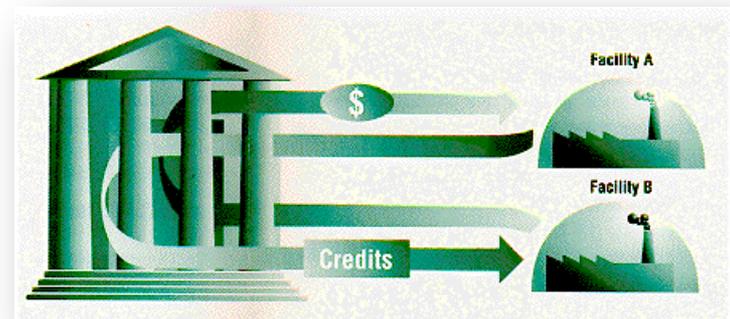


South Coast Air Quality Management District

Background

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- 24th year of the program (adopted in 1994)
- The largest NO_x and SO_x sources (> 4 tons/year)
 - Started with total of 394 facilities – 353 NO_x, 2 SO_x, and 39 NO_x and SO_x
- Facilities existing before 1994 eligible for initial allocations (RECLAIM Trading Credits - RTCs)
- Allocation declines annually to match BARCT
- Reduce emissions or buy credits
- Enhanced monitoring, reporting, and recordkeeping



RECLAIM Program Benefits

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□ For Facilities

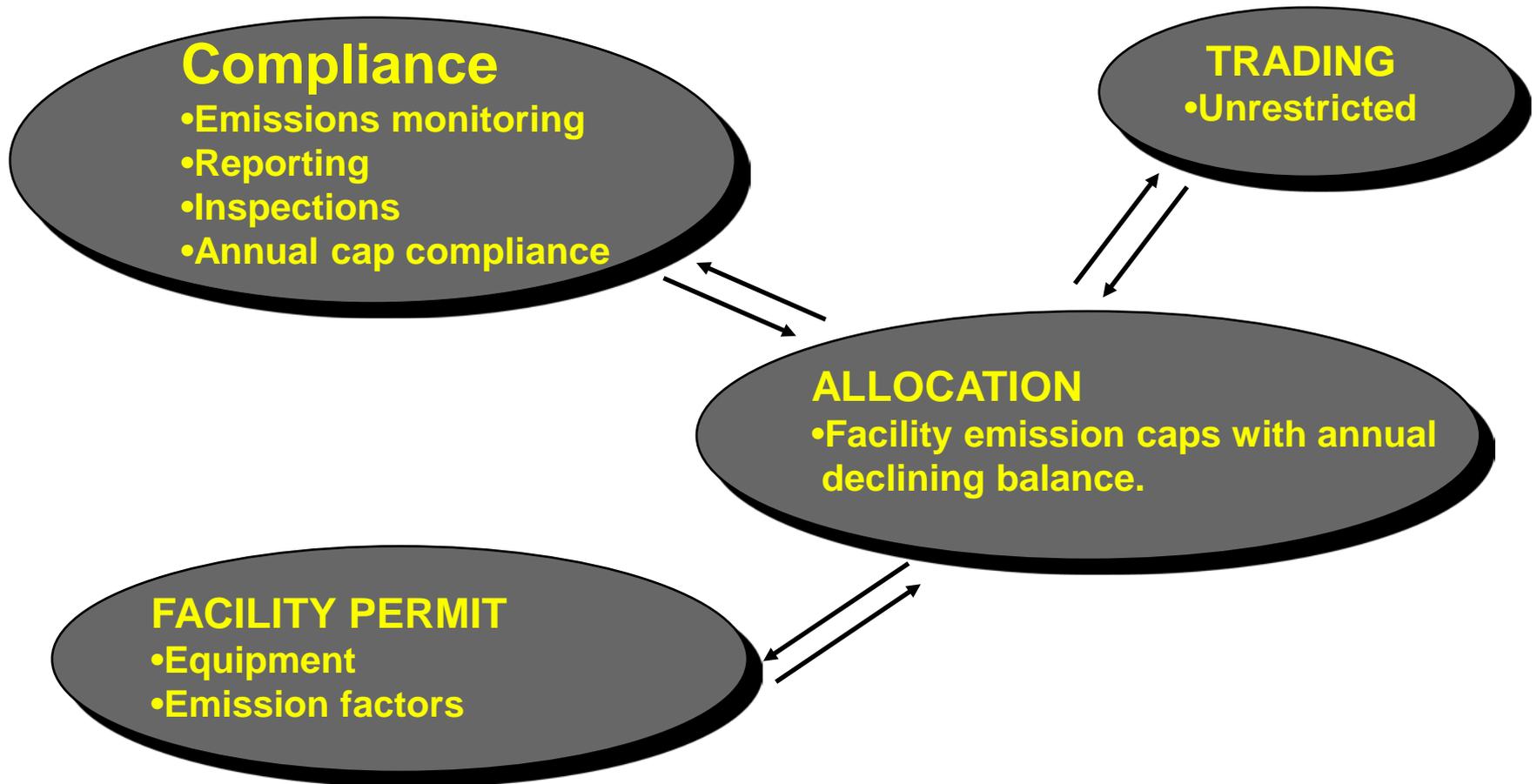
- Maximum Flexibility
- Lower Compliance Costs Through Credit Trading

□ For Environment

- Equivalent or Better Emissions Reductions
- Promotes Control Technology Development
- Enhanced Emission Monitoring
- Higher compliance confidence based on mass emissions

Overview - Program Structure

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RECLAIM RTC Allocations

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- Issued to facilities for all years at the beginning based on facility's historical operation (1987-1992)
- Two Cycle RTCs
 - Cycle 1 - January 1 through December 31
 - Cycle 2 - July 1 through June 30
- 1 pound units and valid only for emissions occurring during the RTC cycle
- Additional credits may be generated from
 - Conversion of traditional Emission Reduction Credits (ERCs)
 - Mobile and Area Source Credits

Program Benefits/Objectives

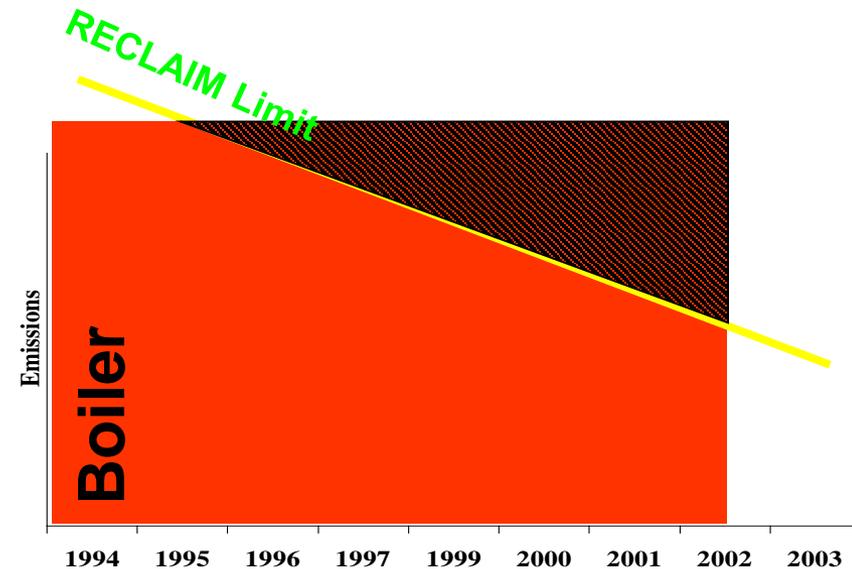
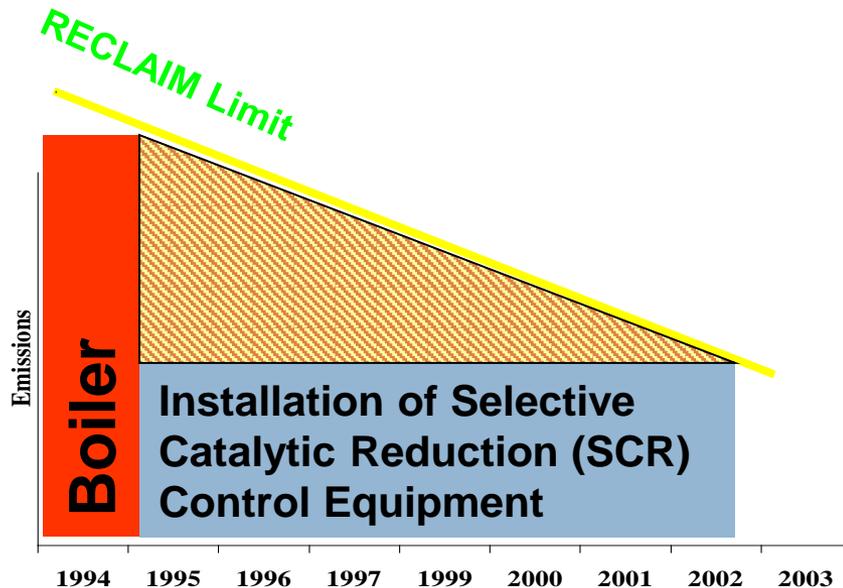
Max. Flexibility/Same or Lower Cost

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Seller



Buyer



- Emission reduction = Financing for technology



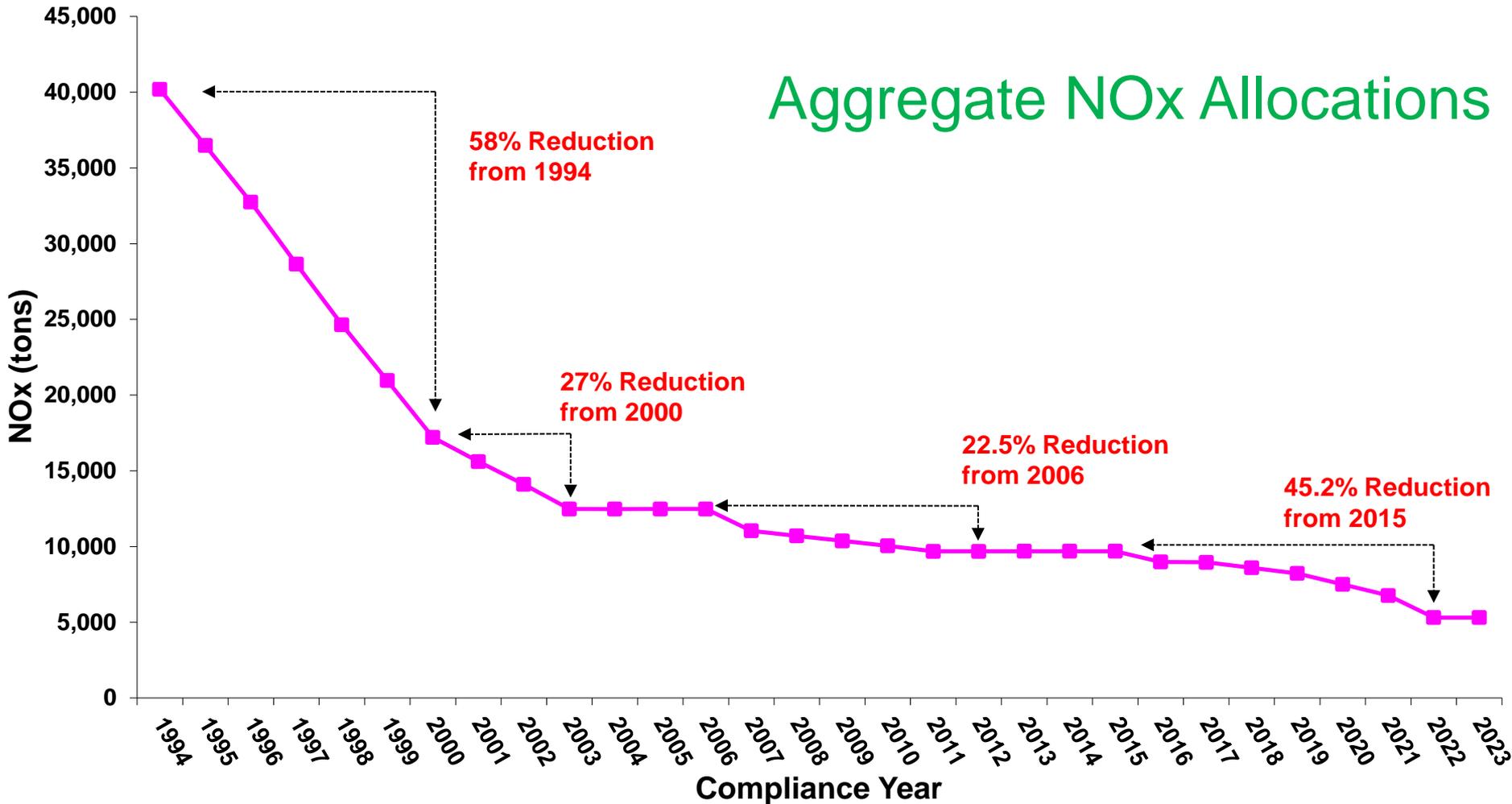
- Emission exceedance for which RTC's need to be purchased

Credit Trading

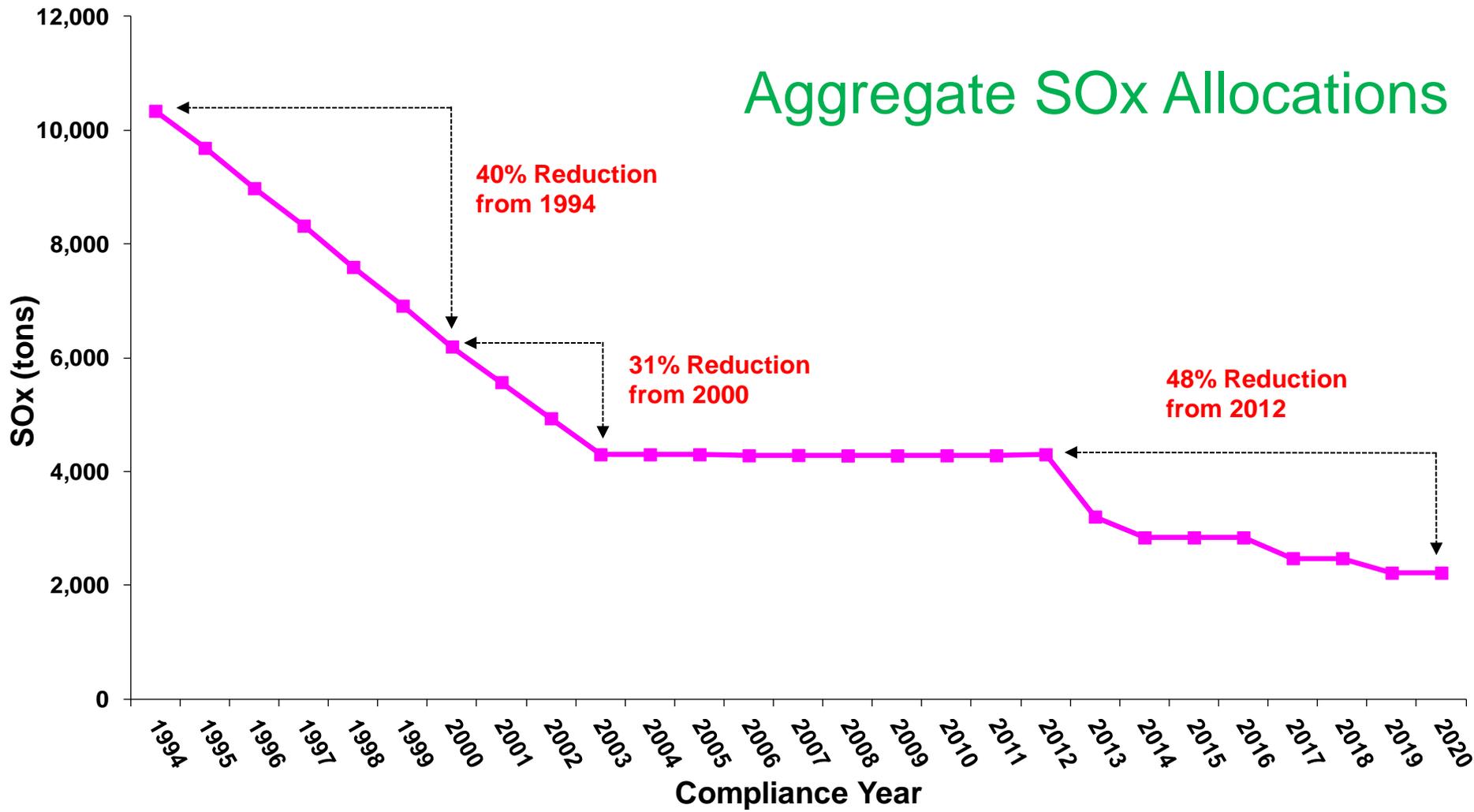
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- Buyers and sellers agree on transactions
- Transfers registered with the District
- Prices posted on the Internet
- Most trades facilitated by brokers
- RECLAIM Trading Credits as investments
- Markets for Options and Futures

NOx Allocation Adjustments



SOx Allocation Adjustments



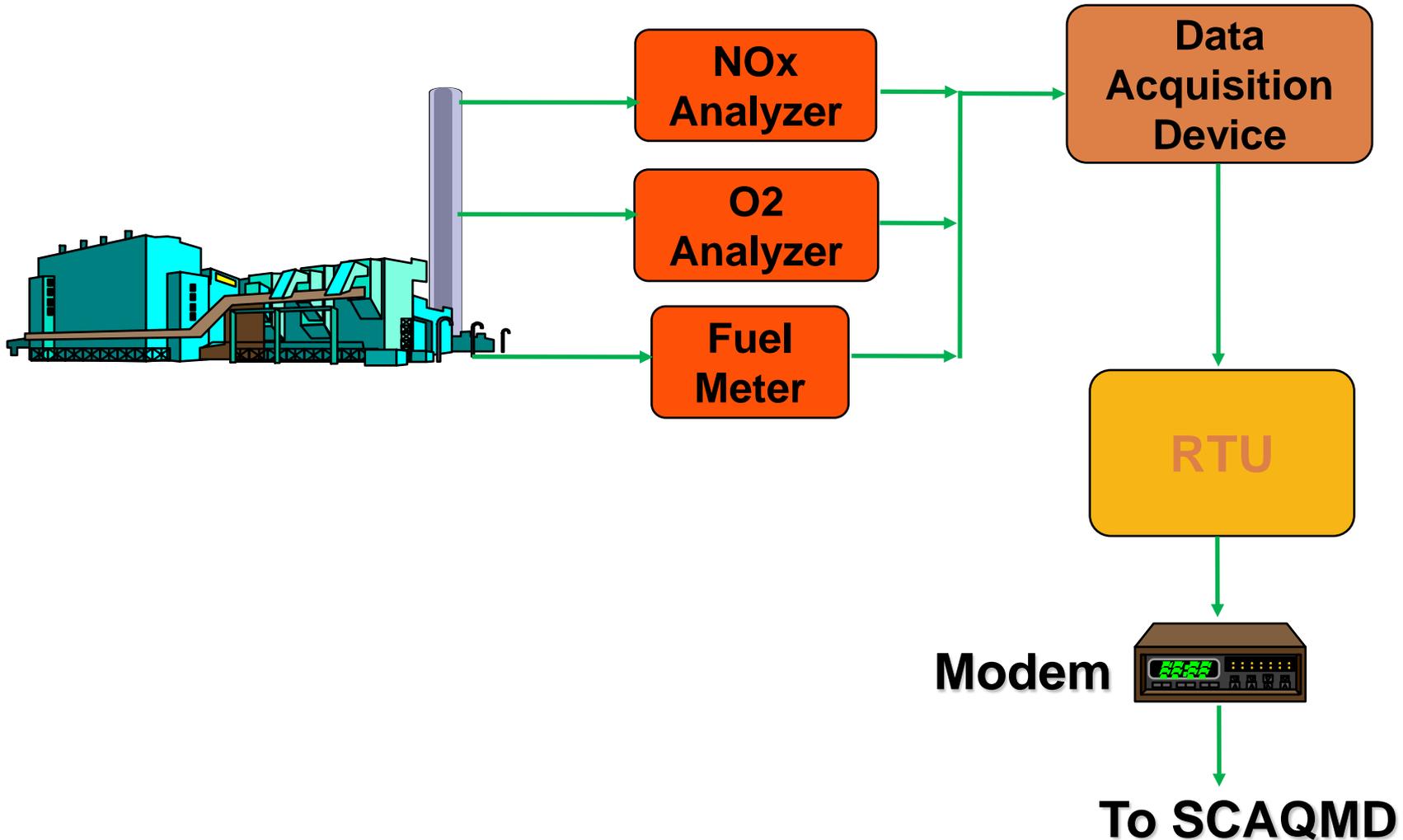
Monitoring, Reporting, and Recordkeeping (MRR)

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- Enhanced MRR, base on source classification:
- Major Sources
 - Continuous Emission Monitoring System (CEMS)
 - Daily emission reporting
- Large Sources
 - Concentration limits with fuel meters/timers
- Minor Sources
 - Emission factors with fuel meters/timers

NOx Continuous Emissions Monitoring System (CEMS)

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Monitoring and Reporting

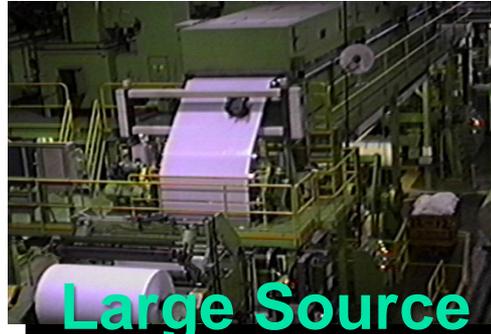
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Major Source

**Monitored by
CEMS**

DAILY



Large Source

MONTHLY



Minor Source

QUARTERLY



Facility Audit

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Annual Audit at every facility:

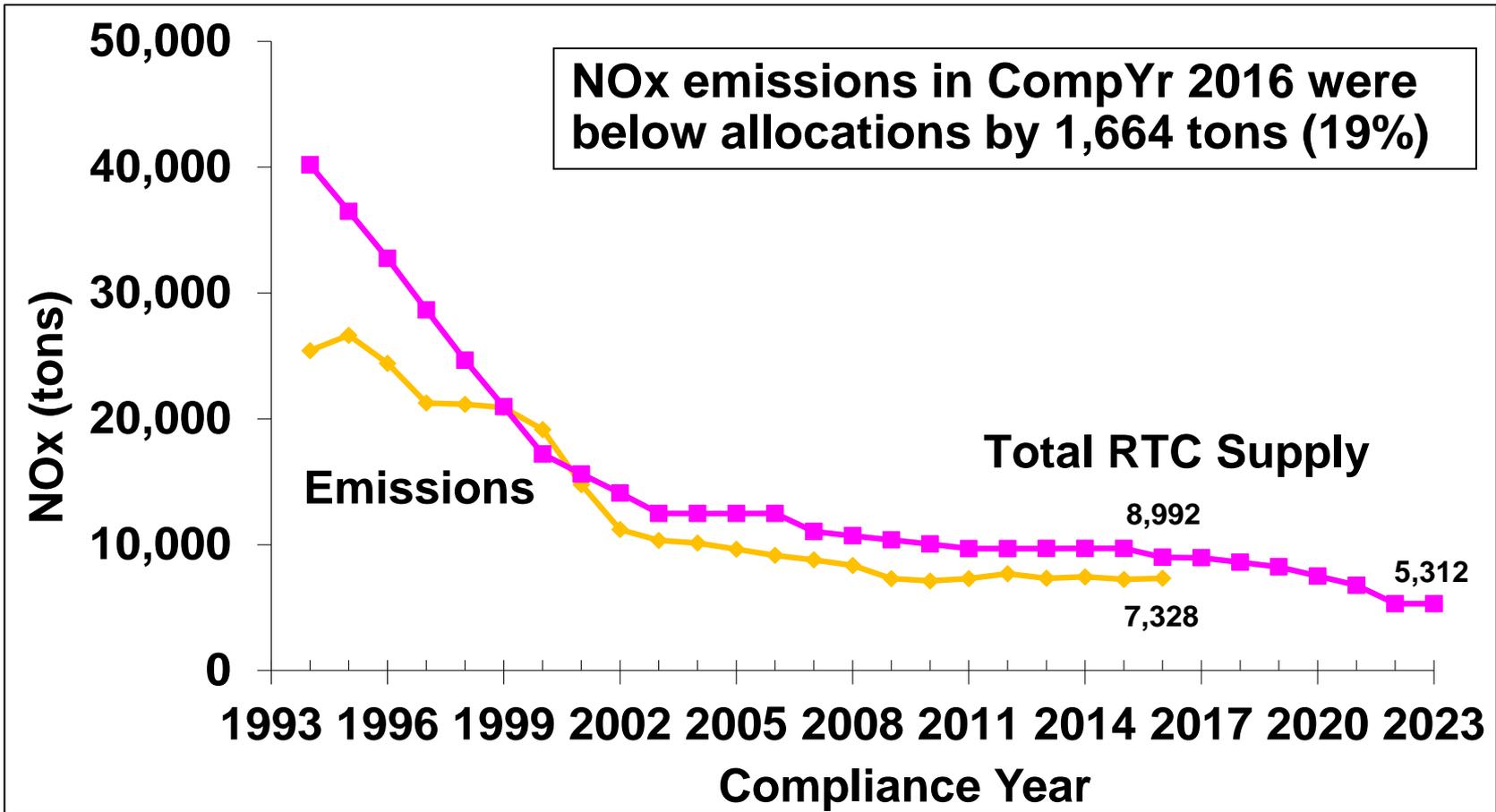
- Review operational records
- Check CEMS operations
- Review test results
- Emission calculation verifications
- Other rule compliance
- Determine allocation compliance

2016 Annual RECLAIM Audit Findings

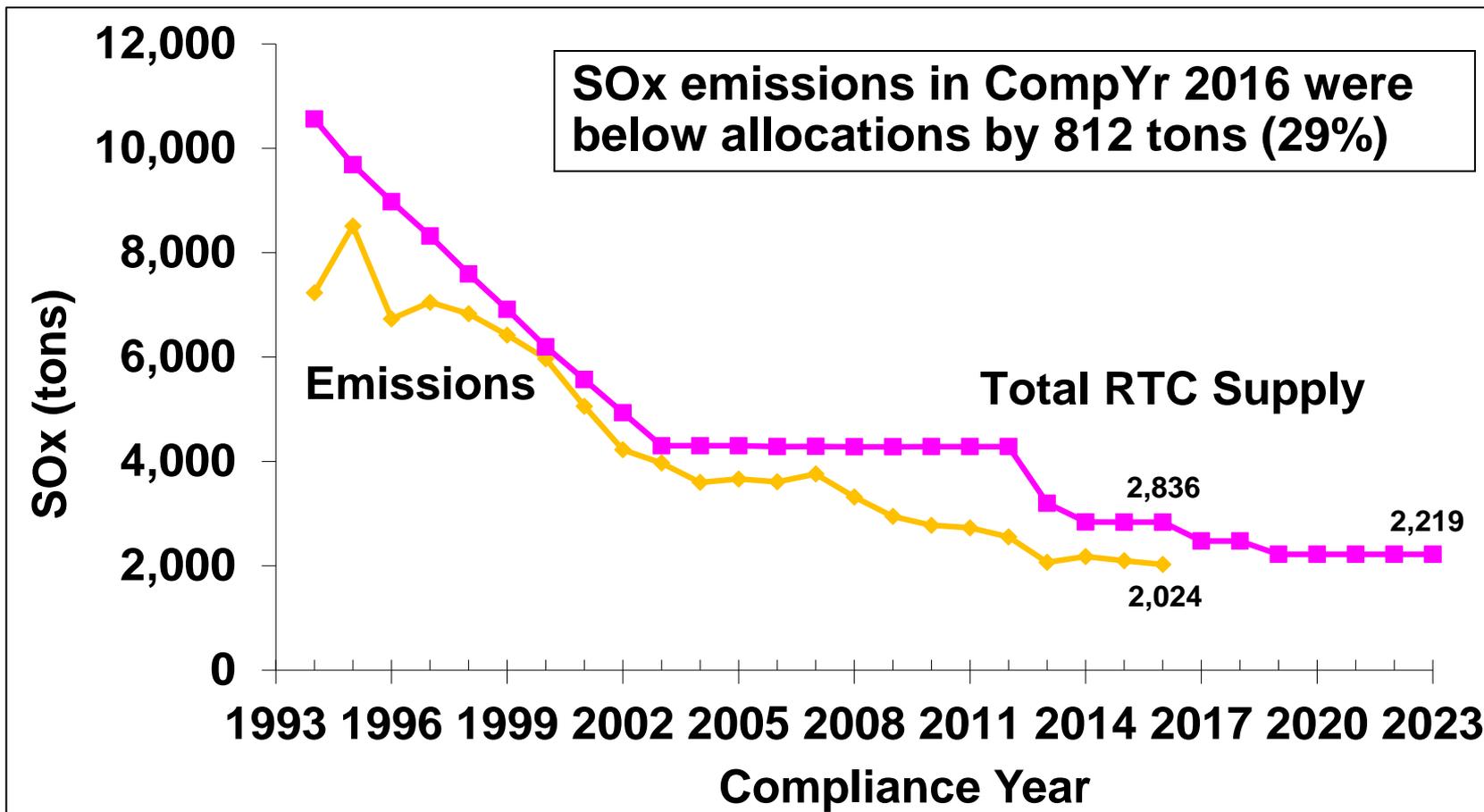
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- RECLAIM had 262 facilities (230 NO_x, 32 NO_x and SO_x) at the end of Compliance Year (CompYr) 2016
- RECLAIM met overall NO_x and SO_x emission goals:
 - NO_x emissions 19% below allocations
 - SO_x emissions 29% below allocations
- RECLAIM had a high rate of facility compliance:
 - NO_x Facilities – 95%
 - SO_x Facilities – 97%

RECLAIM NOx Emissions vs. Allocations



RECLAIM SOx Emissions vs. Allocations



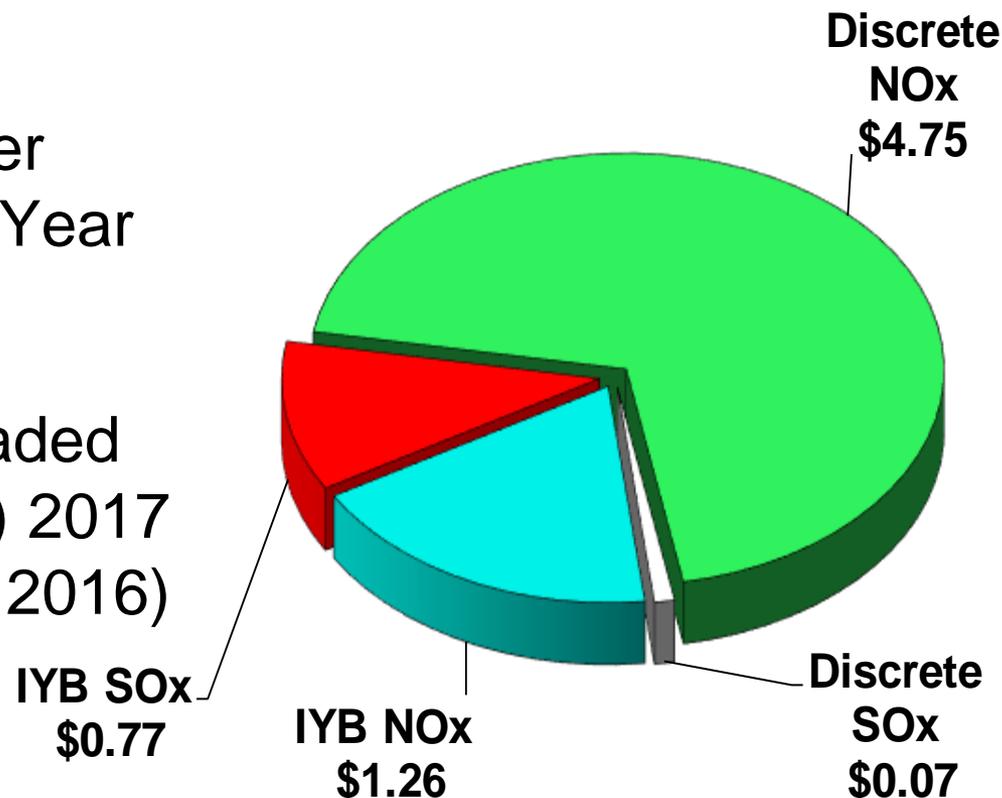
2016 Annual RECLAIM Audit Findings

Credit Trading and Prices

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- Over \$1.48 billion of RTCs traded since program inception
- RTCs are traded as either Discrete Year or Infinite-Year Block (IYB)
- \$6.86 million of RTCs traded in Calendar Year (CalYr) 2017 (\$ 118.6 million in CalYr 2016)

**Value Traded in CalYr 2017
(Million \$)**



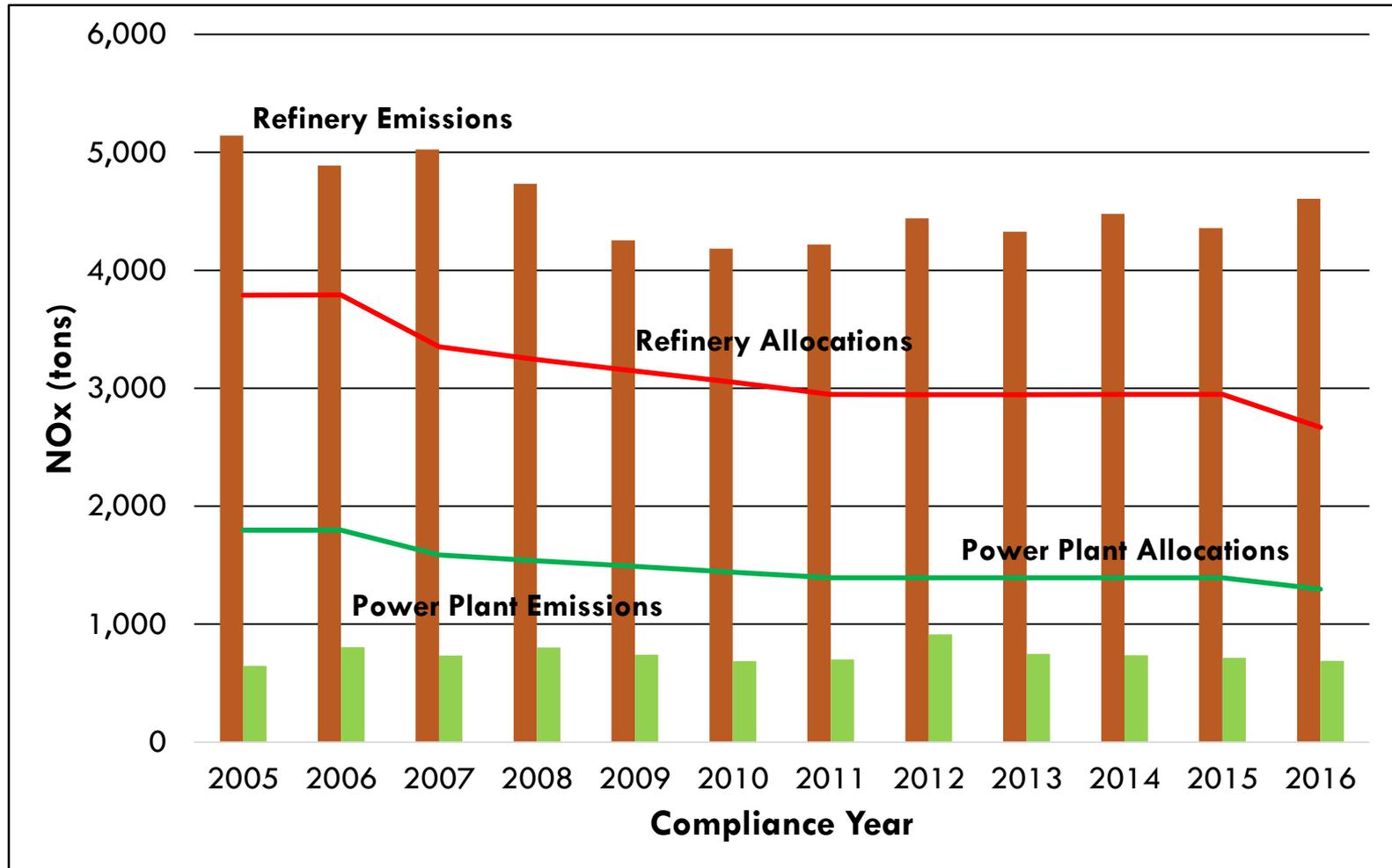
Lessons Learned

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- Allocate Resources
- Allow Time for Implementation
- Believe in the Power of the Market
- Identify Unique Monitoring Cases
- Specify tools for Deterring Violations
- Provide on-going Communications
- Provided flexibility to operators
- Met overall emission reduction objective
 - But with uneven installation of controls
- Program outlived its usefulness

Emissions vs. Allocations

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Recent RECLAIM Program Actions

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- 2016 Air Quality Management Plan Board resolution directed staff to “transition the RECLAIM program to a command and control regulatory structure requiring BARCT level controls as soon as practicable”
 - Primary reason : some facilities chose to rely heavily on shutdown credits and resulted in imbalance of local emission reduction (EJ issues)
- 2016 Air Quality Management Plan Control Measure CMB-05 called for an additional 5 tons per day of NO_x reductions by 2031

AB 617: BARCT at Cap and Trade Facilities

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- Companion bill to Cap and Trade extension signed by the Governor on July 26, 2017
- RECLAIM facilities that are in the CA GHG Cap and Trade program are 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

NO_x BARCT Rule

Development Schedule

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2018

1135 – Electric Generating Facilities

1146 Series – Boilers, Steam generators, and Heaters

1118.1 – Non-Refinery Flares

2019

2nd Quarter:

1134 – Turbines

3rd Quarter:

1109.1 – Refineries

1110.2 – Internal Combustion Engine

Reg XIII –New Source Review

1153.1 – Bakery Ovens

4th Quarter:

1147 Series – Miscellaneous Sources

1117 – Glass Melting Furnaces

113 – General Monitoring,
Recordkeeping and Reporting

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Thank You!

Any Questions?