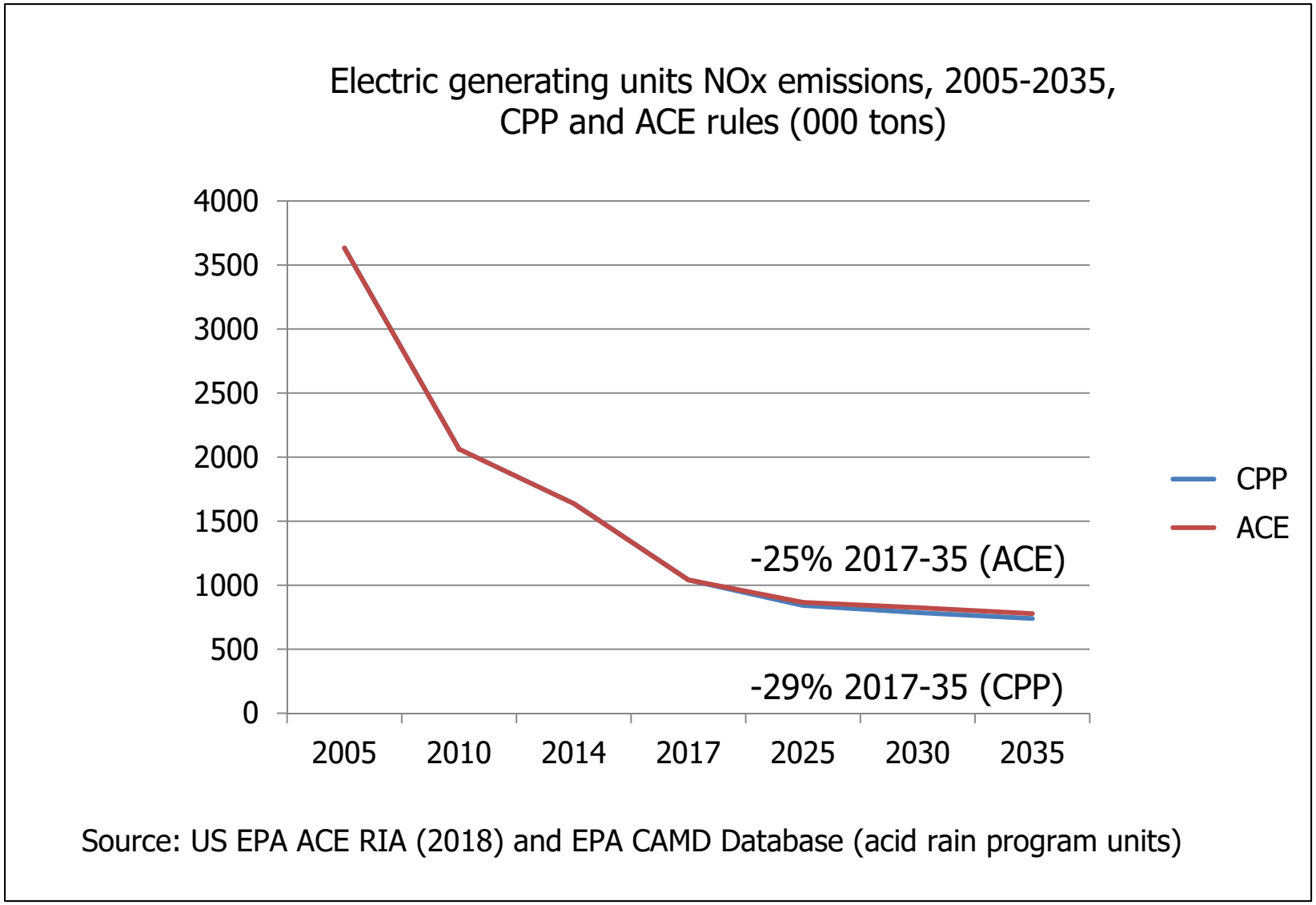
Comparison of emission trends, Clean Power Plan and proposed ACE rule, 2005-2035

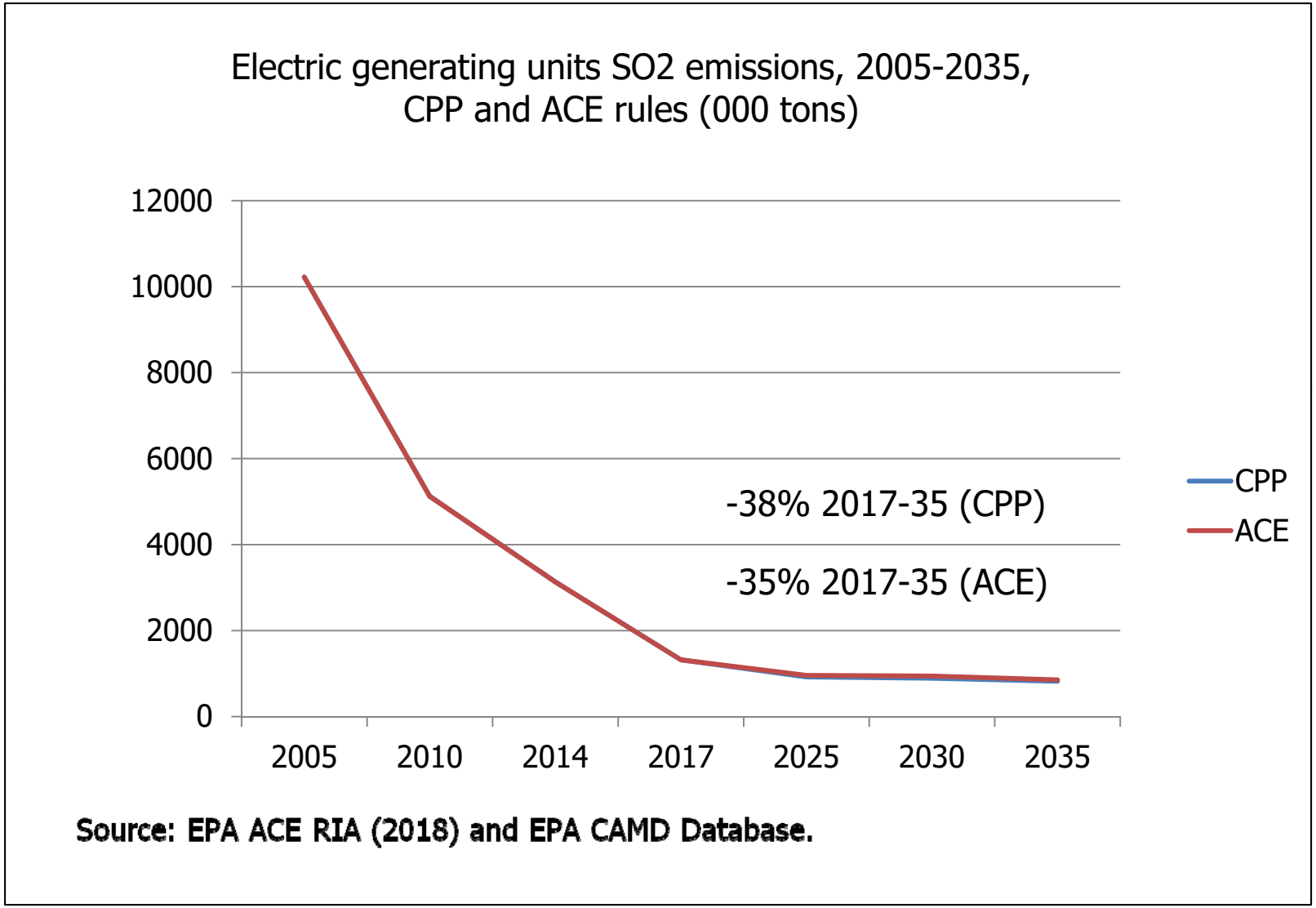
Stakeholder comment for Ozone Transport Commission Webinar, September 21, 2018

Comparison of CPP and ACE emission trends

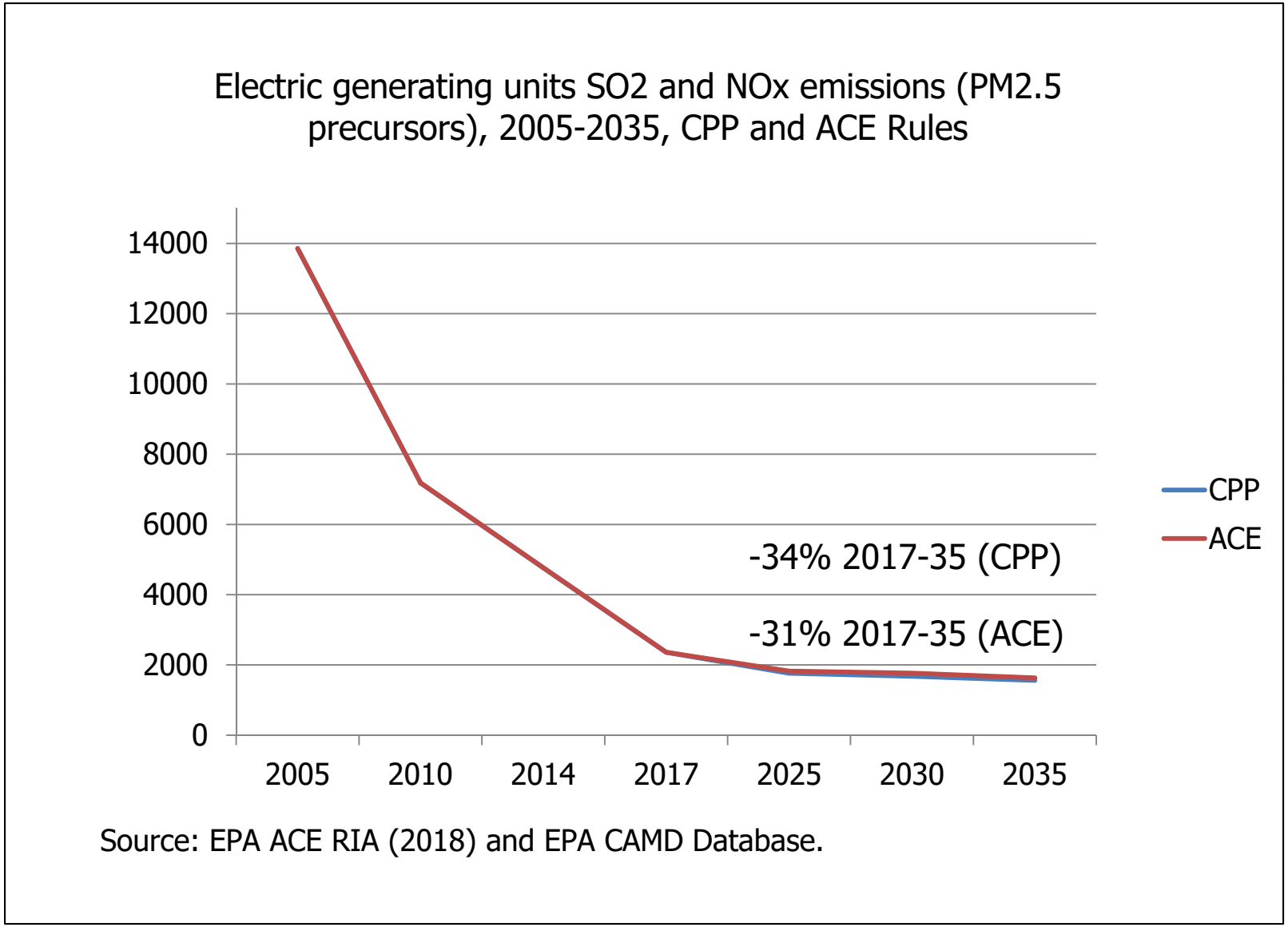
- EPA's RIA for the proposed Affordable Clean Energy (ACE) rule suggests that the rule will slightly increase emissions of criteria pollutants (SO2, NOx, etc.) and CO2 in 2025 and later years relative to the Clean Power Plan.
- The proposed ACE rule would require coal power plants to achieve energy efficiency improvements through a specific list of boiler and other equipment upgrades, determined by states on a unit-by-unit basis.
- Analysis of longer term-emission trends from EPA's RIA (HRI 2% case) and CAMD database shows that there is no significant environmental performance difference between the two rules.
- Both rules also meet the Obama Administration's 32% target for EGU reductions needed to meet the Paris Agreement.



Source: US EPA ACE RIA (2018) and EPA CAMD Database (acid rain program units)



Source: EPA ACE RIA (2018) and EPA CAMD Database.

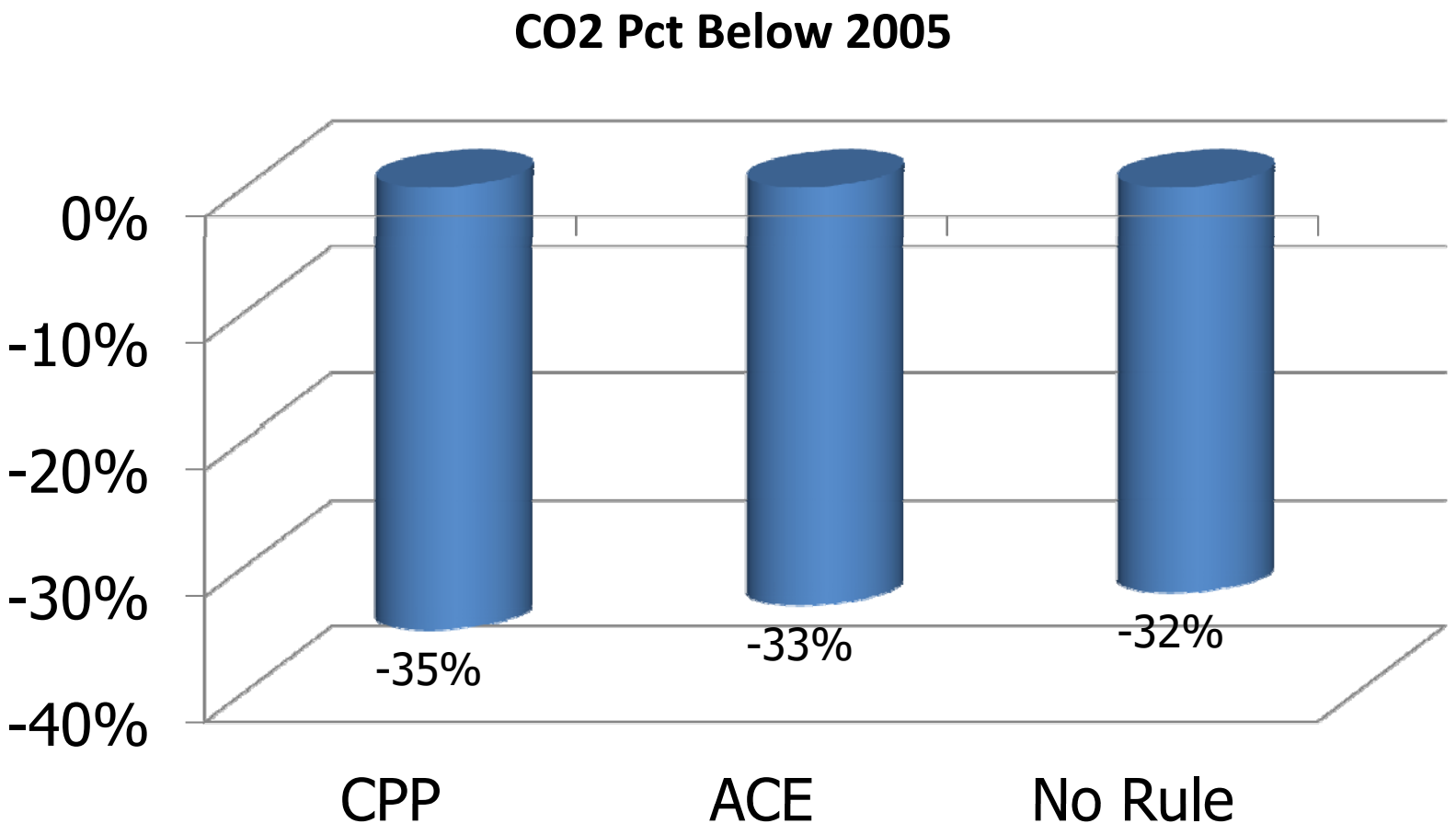


Source: EPA ACE RIA (2018) and EPA CAMD Database.

Criteria emissions in perspective

- Both rules achieve large reductions in SO2 and NOx emissions from 2005 to 2035: an 88% reduction for ACE and an 89% reduction for CPP (combined SO2 and NOx).
- 2005-17 reductions reflect other EPA programs such as CAIR, CSAPR, MATS, plant retirements, and greater dependence on natural gas.
- Both rules also achieve major criteria emission reductions from 2017 to 2035: combined emissions of SO2/NOx – the principal precursors of PM2.5 - decline 31% with ACE and 34% with CPP. These trends signal steady improvements in air quality regardless of the rule in place.

Both CPP and ACE meet 32% Paris Target (2025 EGU CO2 emission reduction from 2005 levels)



Source: US EPA ACE RIA (August 2018), Table 3-6.

ELECTRIC UTILITY EMISSIONS OF CRITERIA POLLUTANTS 2005-2035
CPP AND ACE RULES

NOx

			Pct. Chg from 2005		Pct Chg from 2017	
	CPP	ACE	CPP	ACE	CPP	ACE
2005	3633	3633	NA	NA		
2010	2063	2063	-43%	-43%		
2014	1637	1637	-55%	-55%		
2017	1041	1041	-71%	-71%		
2025	842	866	-77%	-76%	-19%	-17%
2030	786	825	-78%	-77%	-24%	-21%
2035	740	778	-80%	-79%	-29%	-25%

SO2

	CPP	ACE	CPP	ACE	CPP	ACE
2005	10223	10223	NA	NA		
2010	5121	5121	-50%	-50%		
2014	3130	3130	-69%	-69%		
2017	1319	1319	-87%	-87%		
2025	923	959	-91%	-91%	-30%	-27%
2030	891	943	-91%	-91%	-32%	-29%
2035	821	855	-92%	-92%	-38%	-35%

NOx + SO2 (PM2.5 precursors)

	CPP	ACE	CPP	ACE	CPP	ACE
2005	13856	13856	NA	NA		
2010	7184	7184	-48%	-48%		
2014	4767	4767	-66%	-66%		
2017	2360	2360	-83%	-83%		
2025	1765	1825	-87%	-87%	-25%	-23%
2030	1677	1768	-88%	-87%	-29%	-25%
2035	1561	1633	-89%	-88%	-34%	-31%

Sources: Data for 2025-2035 from US EPA ACE RIA 2% HRI Case (August 2018).
Data for 2005-2017 from EPA CAMD database (acid rain program, all units).