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Ozone – State Perspectives, Challenges & Strategies



AWMA Presentation
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Virginia has best ozone season in 20 years!

RICHMOND, VA. – The summer of 2017 was the cleanest ground-level ozone season in Virginia in 20 years, the Department of Environmental Quality announced today.

“We have made tremendous improvements in Virginia’s air quality in the past two decades,” DEQ Director David K. Paylor said. “Though we still have work to do to ensure that our air remains clean, the progress we have seen so far is a great benefit to all Virginians.”

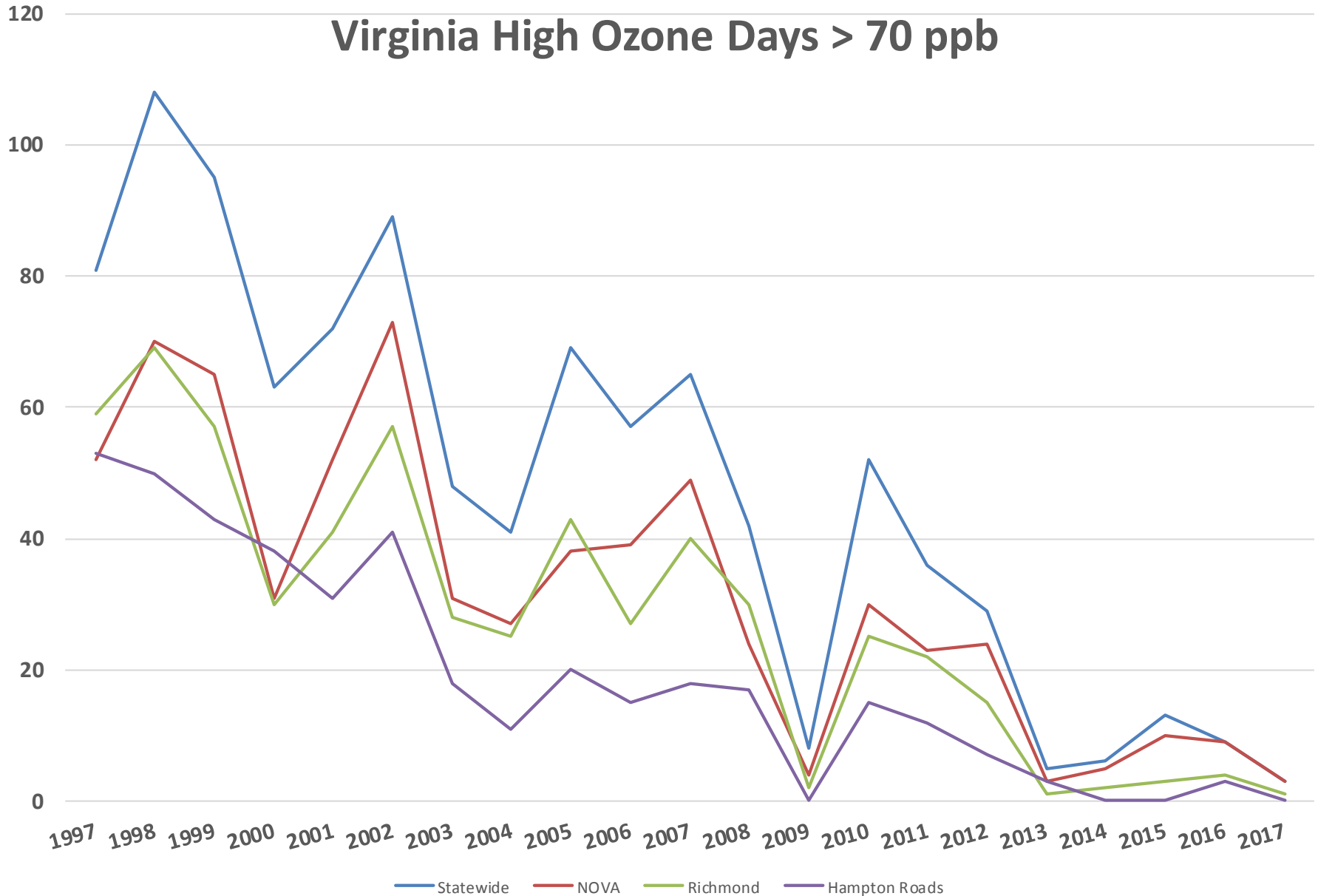
Only **four** days this summer had ozone levels that exceeded the current ozone standard of 70 parts per billion as of the end of September. These high ozone readings were limited to Northern Virginia, with four exceedances, **and Richmond and Giles County both** with one.

All other areas of Virginia had no high ozone days in 2017. This year exceeds the second-cleanest year of 2013, when five high ozone days were recorded.

This compares with ozone seasons in the 1990s when multiple ozone exceedances occurred on a single day, and in some cases there were dozens of days statewide that experienced high ozone.

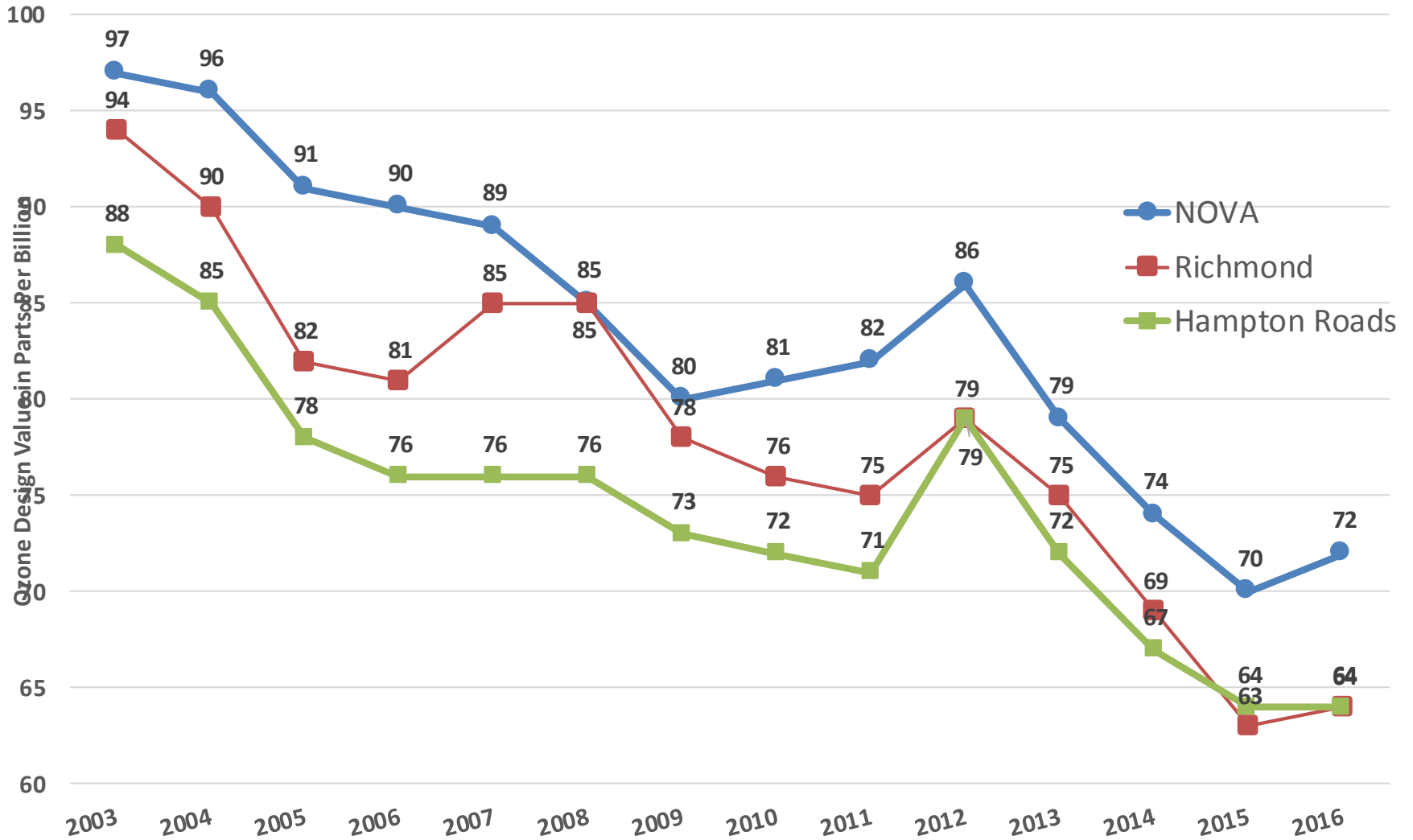
Progress to Date

Virginia High Ozone Days > 70 ppb



Progress to Date

OZONE DESIGN VALUE TRENDS



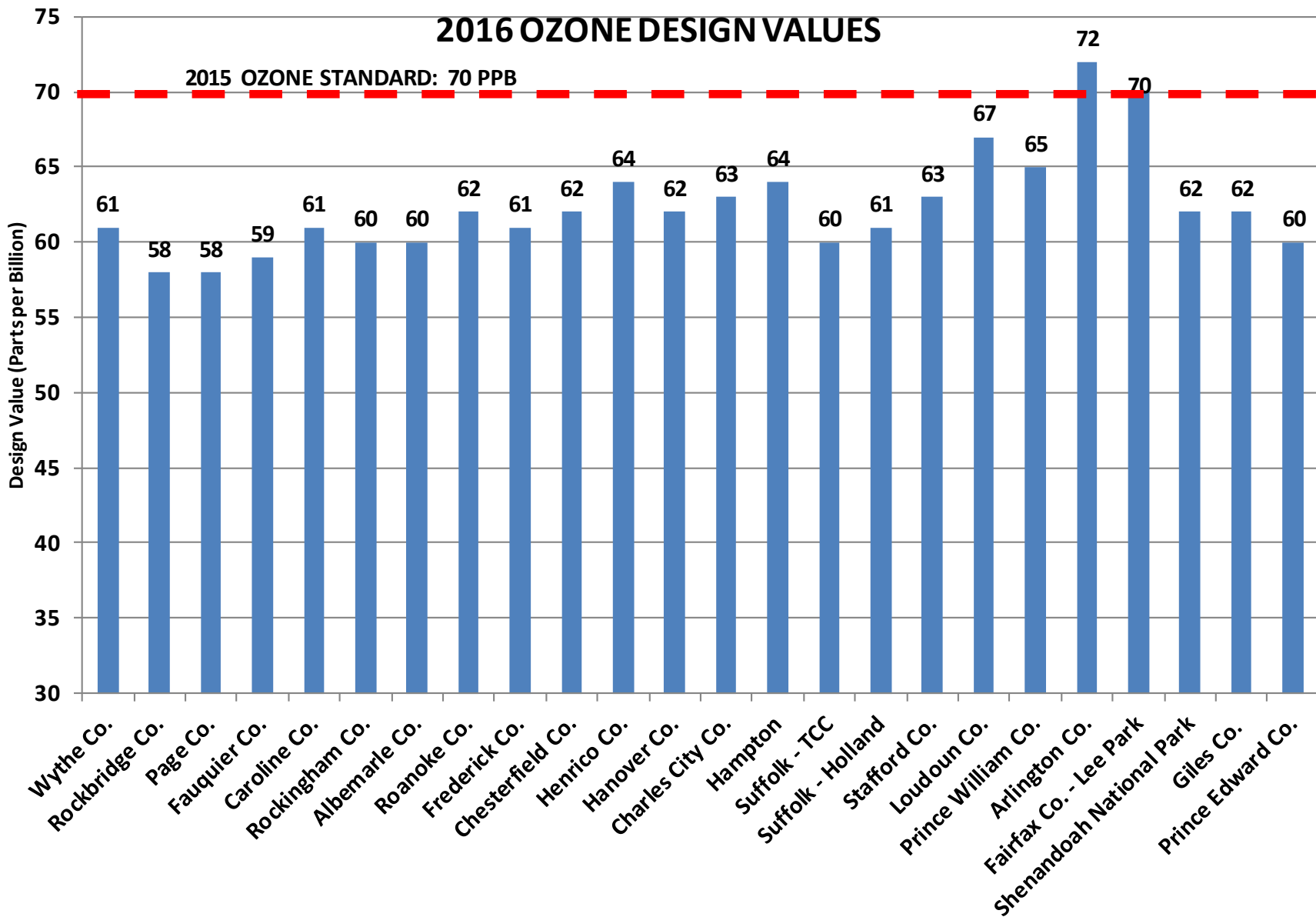
2015 Ozone Standard

- Final standard published on October 1, 2015
- Lowered the primary standard to 70 ppb
- Set secondary welfare standard at the same level
- Based on most recent scientific evidence
- Expanded monitoring season & requirements

EPA Ozone Standard Schedule

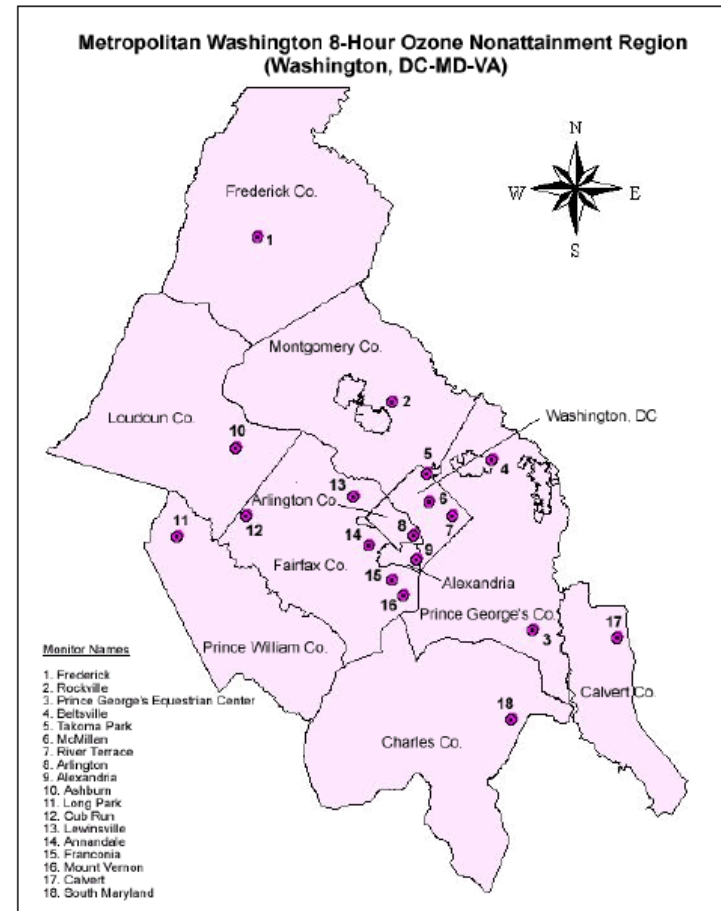
- DEQ area designation recommendations submitted in Oct 2016
- EPA proposes 1-year extension on finalizing area designations - 6/28/17
- Proposal withdrawn – 8/10/17
- Final EPA area designations are due by Oct 2017 but may be delayed – could impact future dates
- Attainment plans due by 2020
- Attainment dates based on classification (2020-2037)

Ozone Standard Compliance Data



2015 Ozone Designations

- Northern Virginia likely to be marginal nonattainment for the new standard:
 - No formal air quality plan (SIP) required
 - Basic requirements still apply; emissions inventory, RACT, conformity, offsets
 - Attainment by 2020
- All other areas of Virginia are in compliance



Further Emission Reductions

- Several programs already in place to further reduce ozone:
 - Power sector transition to less polluting generation (ongoing for many reasons)
 - Industry fuel conversions (ongoing)
 - Tier III motor vehicle and fuel standards (2017)
 - Voluntary ozone “advance” programs in key urban areas (in place)
 - Richmond, Hampton Roads, and Fredericksburg
 - Implementation of 2008 NO_x RACT in No. Va.
 - Large sources, big reductions

Ozone Update – The Path forward

- Much progress has been made in reducing ozone levels in Virginia
- All monitors but one are currently meeting the new standard
- 2017-2019 will be important compliance years in Northern Virginia
- Continued ozone air quality improvement & emissions reductions are expected, but
- Probably at a slower pace

Interstate Transport Background

- Thru 1980s nonattainment problems were thought to be of local or regional concern
- Nonattainment areas such as DC/NoVa/Md were addressed through multi-jurisdictional organizations related to the region directly affected
- By 1990 the evolving science made clear that long-range interstate transport of pollutants contribute to nonattainment

Congress Addressed Interstate Transport

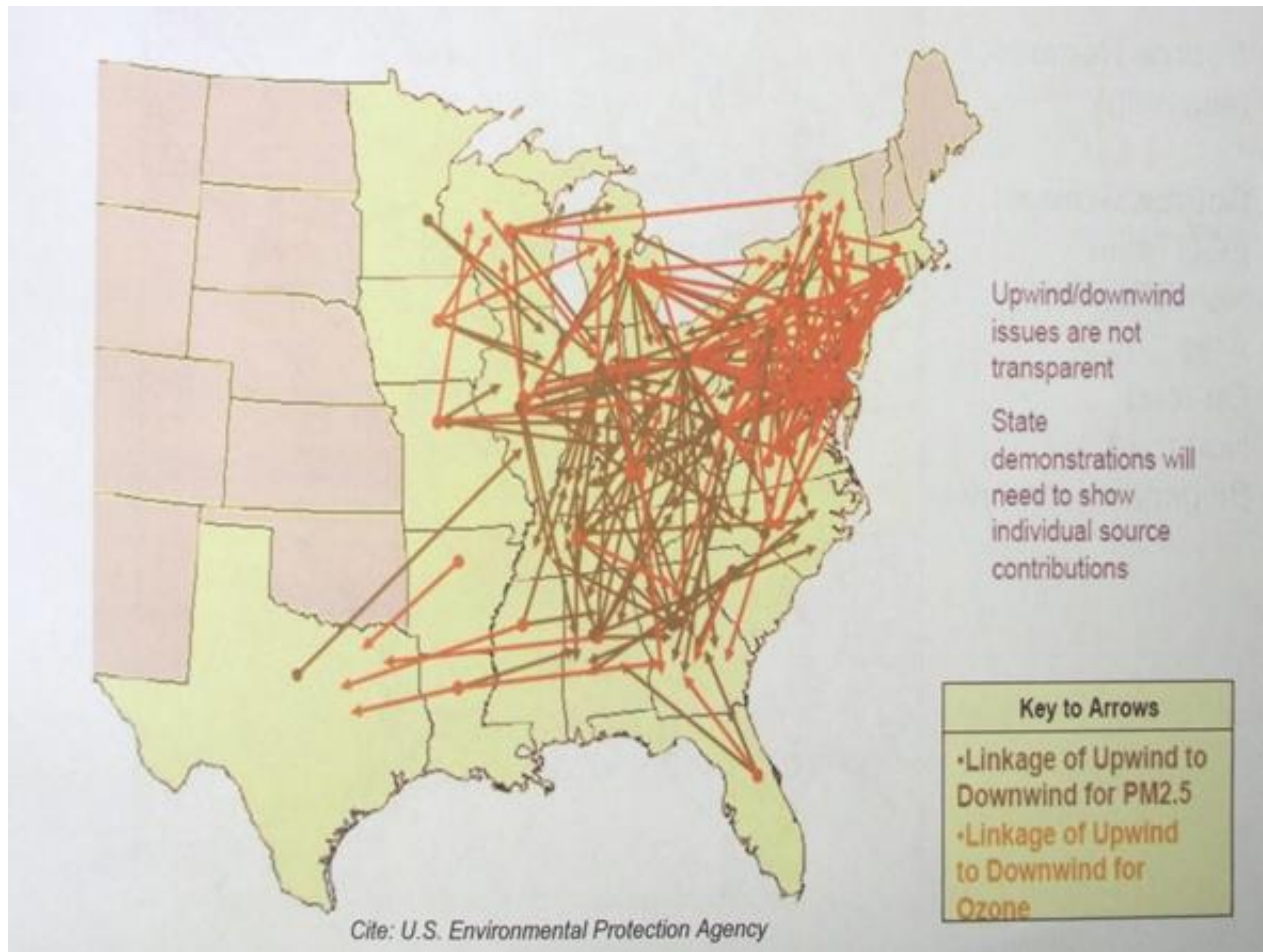
The Clean Air Act Amendments of 1990 create –

- §126(b) interstate pollution petition process
- The Ozone Transport Region (OTR)
- The Ozone Transport Commission (OTC)
- §176A petition process to enlarge OTR/OTC
- §110(a)(2)(D) (“Good Neighbor” provision)

Interstate Transport and Good Neighbor Requirements

- Clean Air Act §110(a)(2)(D) requires all State Implementation Plans:
 - To prohibit any source or other type of emissions activity within the State from emitting any air pollutant in amounts which **contribute significantly** to nonattainment in or interfere with maintenance by any other State with respect a National Ambient Air Quality Standard (NAAQS)

Evaluating Significant Contribution



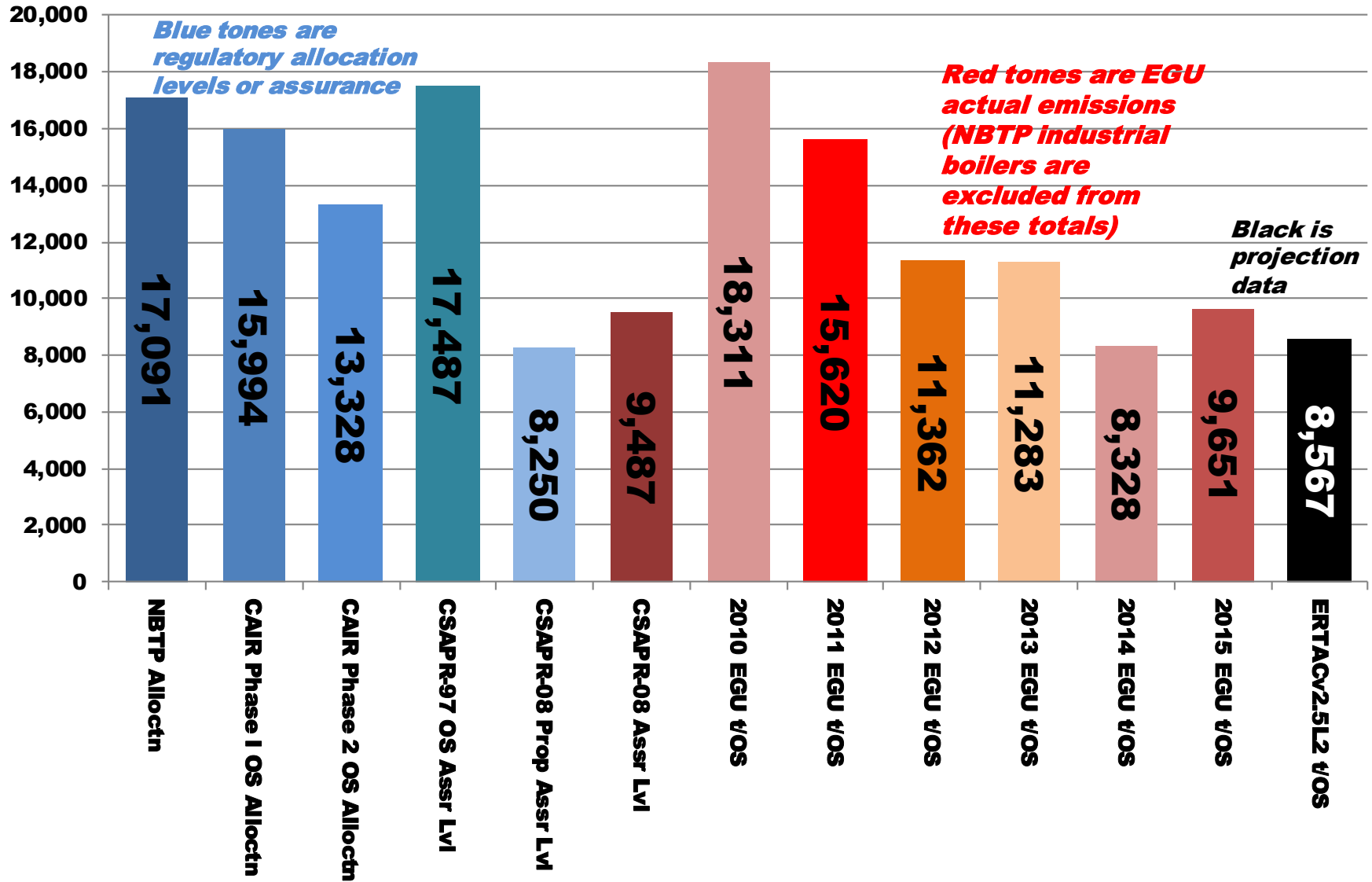
EPA Attempts at Addressing Interstate Transport Pre-CSAPR

- NOx SIP Call
 - Effective but Insufficient
- CAIR
 - Remanded
- CSAPR
 - Original rule promulgated in 2011 to address the 1997 ozone and fine particle standards
 - Established state power plant caps for SO₂ and NO_x
- Rule challenged, stayed, then vacated
- Supreme Court reversed this decision in 2014

CSAPR Update

- New compliance dates set for Phase 1 (2015) and Phase 2 (2017)
- New ozone season NOX caps to address the 2008 ozone standard
- VA power plant SO₂ emissions well below the cap
- NOX emissions caps are tighter (next slide)
- Findings of failure to submit §110a2d “Good Neighbor” SIP
 - Infrastructure SIPs due by Oct 2018, Including interstate transport requirements

CSAPR NO_x Comparisons



OTC Initiatives

Section 176A Petition

- Petition filed by several Ozone Transport Commission states to expand the region
- For Virginia, only No. Va. now included
 - This would cover the remainder of the state
- Goal to “Level the Playing Field”
- Makes other states “come to the table” by being part of the OTC
- Expands requirements of OTC such as lower NSR permitting thresholds for NO_x and VOC regardless of attainment status
- Offsets
- Expands applicability of RACT regardless of attainment status



OTC Initiatives

Section 176A Petition

- Most OTR controls are out-of-date and have little impact on transport
- Requiring VOC controls on area sources can be costly with little or no benefit in an area that is “NO_x limited,” which is the case for Va. and most if not all Southern states
- Offsets may be impossible to get
- Likely to be ineffective
- Once in, always in
- EPA proposed to deny the petition 1/19/17
- Public hearing held 4/13/17
 - DEQ spoke in favor of the EPA proposal
- Final EPA action is pending
- Litigation is likely from petitioning states



OTC Initiatives

Large Non-Attainment Area

- Goal to “Level the Playing Field”
- Expand Non-attainment NSR and all the pitfalls associated with it
 - Offsets may be impossible to obtain
- Focus on VOCs inappropriate
 - Va. And most of Southeast is “NO_x” limited
- Expand Conformity Requirements
- Expand applicability of RACT
- Likely to be ineffective



Virginia's Position

- Virginia favors a national EPA CSAPR/CAIR type rule
- Transport issues are very technically complicated
- Regional problem requires regional solution
- Patchwork of multiple individual state “Good Neighbor” plans will be inefficient, extremely time consuming and not likely effective
- Rule must be fair and fully account for impacts of local transportation