



Office of Atmospheric Programs

Reid Harvey, Director
Clean Air Markets Division

**AAPCA Spring Meeting
April 2018**



- EPA's Office of Atmospheric Programs
 - Who we are and what we do
- Clean Air Progress
- Resources
 - Initiatives and tools to help states achieve clean air goals



- OAP programs:
 - Focus on air pollution that crosses state, regional, and international boundaries
 - Facilitate cost-effective solutions to addressing local and state air quality attainment goals
- International engagement:
 - Montreal Protocol
 - UN Framework Convention on Climate Change
- Domestic regulatory programs include:
 - Acid Rain
 - Cross-State Air Pollution Rule (CSAPR)
 - CSAPR Update
 - Ozone-Depleting Substance Phaseout
 - GHG Reporting Program
- Public/private partnerships include:
 - ENERGY STAR
 - Green Power Partnership
 - Combined Heat and Power Partnership
 - Responsible Appliance Disposal Program
 - Other efficiency programs (e.g., Gas Star, Landfill Methane Outreach Program)

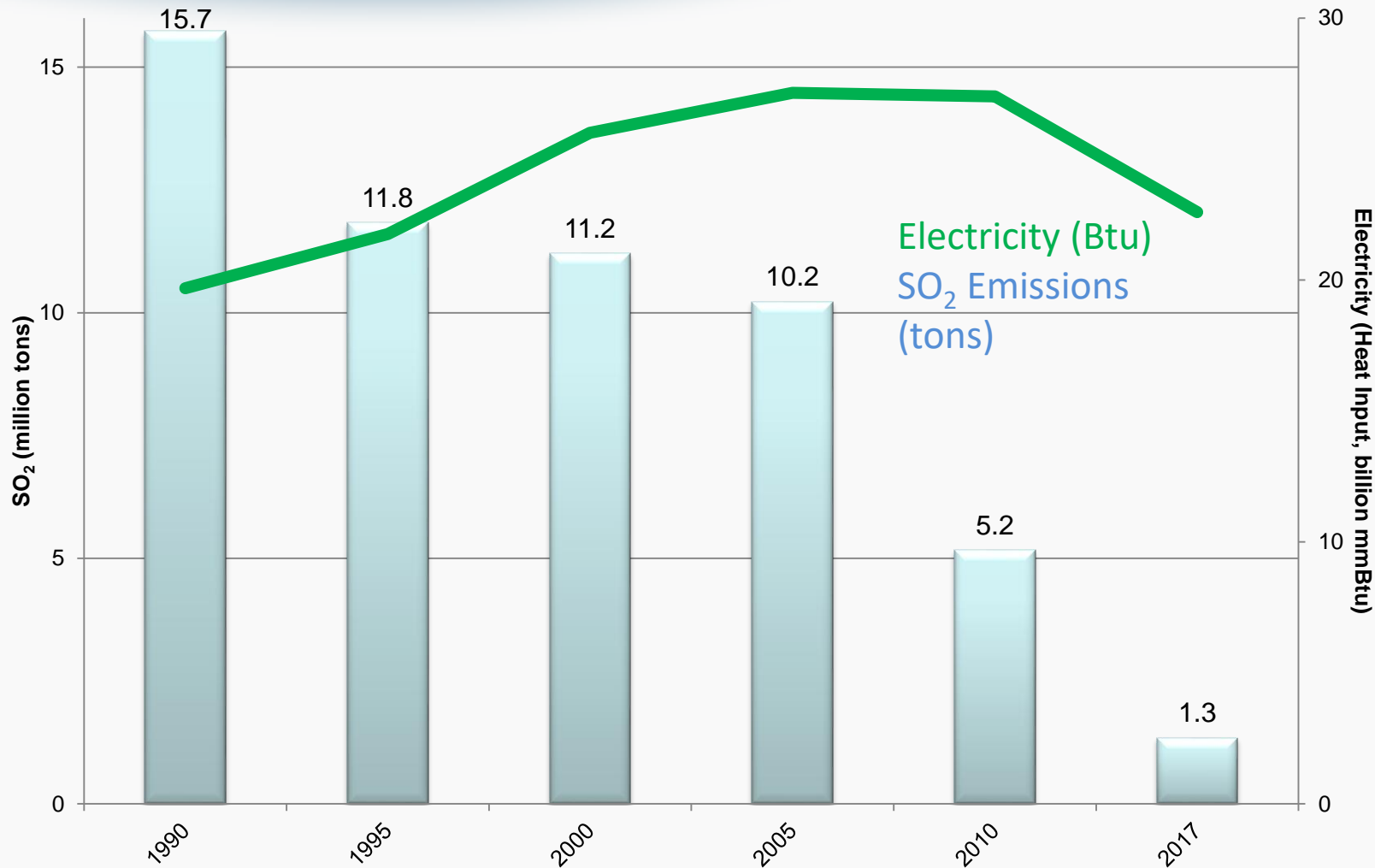


- Tools, data and resources for state, local and tribal governments include:
 - AVOIDed Emissions and geneRation Tool (AVERT)
 - Emissions & Generation Resource Integrated Database (eGRID)
 - Air Markets Program Data (AMPD)
- Areas of expertise include:
 - Emissions accounting and electronic reporting
 - Environmental monitoring and atmospheric chemistry
 - Economy-wide energy and economic modeling as well as sector-specific analyses



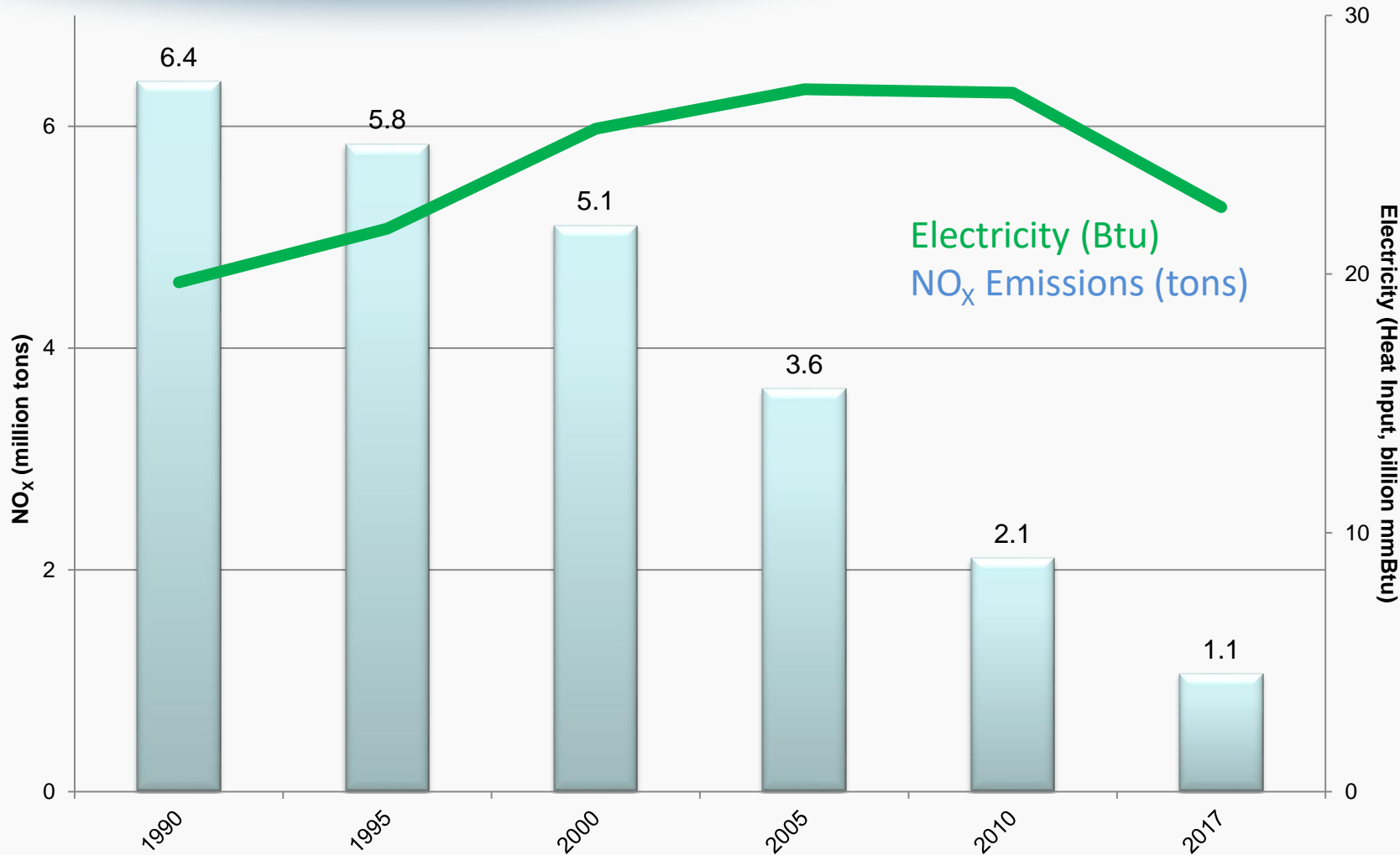
- Develop and implement flexible programs to reduce power plant electric generating unit (EGU) emissions at low cost
 - High level of transparency and accountability
 - 99.9% compliance
- Long history of collaborative program implementation with states
 - Acid Rain Program
 - NOx Budget Trading Program
 - Clean Air Interstate Rule (CAIR)
 - CSAPR
 - CSAPR Update

Results from an Effective Partnership: SO₂



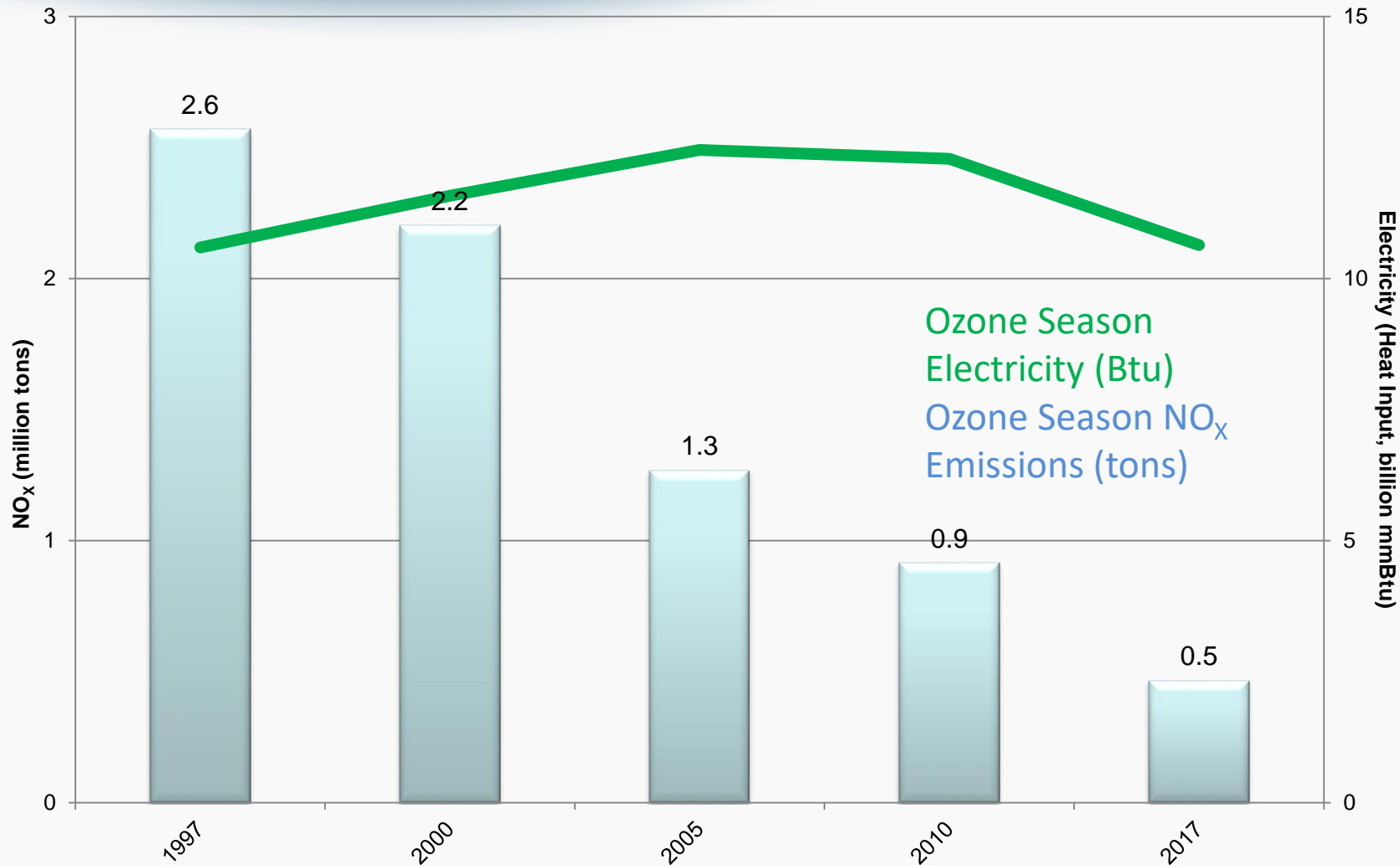
Annual SO₂ emissions from power generation have decreased dramatically

Results from an Effective Partnership: Annual NO_x



Annual NO_x emissions from power generation have also decreased significantly in more recent years

Results from an Effective Partnership: Seasonal NO_x



Ozone season NO_x emissions from power generation have also decreased considerably

CSAPR and CSAPR Update



- CSAPR and the CSAPR Update address Clean Air Act “good neighbor” provisions to reduce interstate transport
 - CSAPR (finalized in 2011) addresses interstate pollution transport for the **1997 ozone NAAQS** and the **1997 and 2006 PM_{2.5} NAAQS**
 - CSAPR Update (finalized in 2016) addresses summertime transport of ozone for the **2008 ozone NAAQS** by updating the CSAPR ozone season program
 - Covers 22 eastern states
 - First implementation period: May 1 – September 30, 2017
- CSAPR Update preliminary results:
 - 2017 ozone season emissions 21% (78,000 tons) below 2016 levels
 - Average weighted NO_x emission rate dropped 9% for all units; 20% for coal units with SCRs
 - Regional emissions 7% (23,000 tons) below CSAPR Update budgets

Resources for States: Overview



- Provide data and tools to save you time and money and help achieve clean air goals
 - Work closely with multi-jurisdictional organizations, energy offices, environmental agencies, public utility commissions
- Scope of efforts include
 - Power sector modeling
 - EE/RE tools
 - Risk analysis
 - Power sector data

Power Sector Models to Assess Costs and Emissions



- Active technical engagement with states on tools for understanding the future of the power sector and analyzing regulatory actions
 - Eastern Regional Technical Advisory Committee (ERTAC) EGU Emission Projection Tool
 - Collaborating on emission inventory (i.e., fleet) characteristics
 - Performing model projection comparisons
- Integrated Planning Model (IPM) updates
 - Forthcoming Version 6
 - IPM Viewer Tool

Energy Efficiency and Renewable Energy Tools



- AVOIDed Emissions and geneRation Tool (AVERT)
 - Helps state and local agencies quantify emissions benefits of EE/RE to support their air and energy planning goals
 - Simple interface, free of charge
- CO-Benefits Risk Assessment (COBRA) Health Screening & Mapping Tool
 - Helps analysts explore how changes in air pollution can affect human health at the county, state, regional, or national levels
- EE/RE in SIPs Roadmap
 - Provides pathways for incorporating EE/RE in SIPs so states can account for emission reductions from EE/RE in air quality plans

Recent and Upcoming Developments



- eGRID Update:
 - New version with 2016 data released in February
 - Contains data for electricity generation, emissions, and emission rate information for several air pollutants and greenhouse gases
- AVERT-COBRA linkages:
 - Next month, EPA is enhancing AVERT and COBRA to streamline the ability to take AVERT outputs and input them into COBRA.
 - Upcoming trainings and webinars on how to use resources like these to quantify the emissions and health benefits/impacts of EE/RE in their energy decisions.

OAR: Selected Resources



- **OAR Overview:** <https://www.epa.gov/aboutepa/about-office-air-and-radiation-oar>
- **State and Local Energy and Environment Program:** www.epa.gov/statelocalenergy
- **Power Sector Emissions and Allowance Tracking:**
<https://www3.epa.gov/airmarkets/progress/datatrends/index.html>,
<https://ampd.epa.gov/ampd/>, <https://www.epa.gov/eGRID>
- **Power Generation Analysis and Assessment**
<https://www.epa.gov/airmarkets/clean-air-markets-power-sector-modeling>
- **Stratospheric Ozone Layer Protection:** <https://www.epa.gov/ozone-layer-protection>
- **Inventory of U.S. Greenhouse Gas Emissions and Sinks:**
<https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>
- **Greenhouse Gas Reporting Program:** <https://www.epa.gov/ghgreporting>
- **Environmental Monitoring, Assessment, and Reporting**
 - Clean Air Status and Trends Network (CASTNET) <https://www.epa.gov/castnet>
 - Long-Term Monitoring (LTM) programs <https://www.epa.gov/airmarkets/clean-air-markets-monitoring-surface-water-chemistry>

Office of Air and Radiation Organization



Office of Program Management Operations

Office of Air and Radiation (OAR) Assistant Administrator and Deputy Assistant Administrator

Office of Air Policy and Program Support

Office of Radiation and Indoor Air (ORIA)

- Program Management Office
- Indoor Environments Division
- Radiation Protection Division
- Radiation and Indoor Environments National Laboratory
- National Analytical Radiation Environmental Laboratory

Office of Atmospheric Programs (OAP)

- Clean Air Markets Division
- Climate Protection Partnership Division
- Stratospheric Protection Division
- Climate Change Division

Office of Transportation and Air Quality (OTAQ)

- Assessment and Standards Division
- Compliance Division
- Transportation and Climate Division
- Testing and Advanced Technology Division

Office of Air Quality Planning and Standards (OAQPS)

- Policy Analysis and Communications Staff
- Central Operations and Resources
- Air Quality Assessment Division
- Air Quality Policy Division
- Health and Environmental Impacts Division
- Outreach and Information Division
- Sector Policies and Programs Division
- Washington Operations Staff