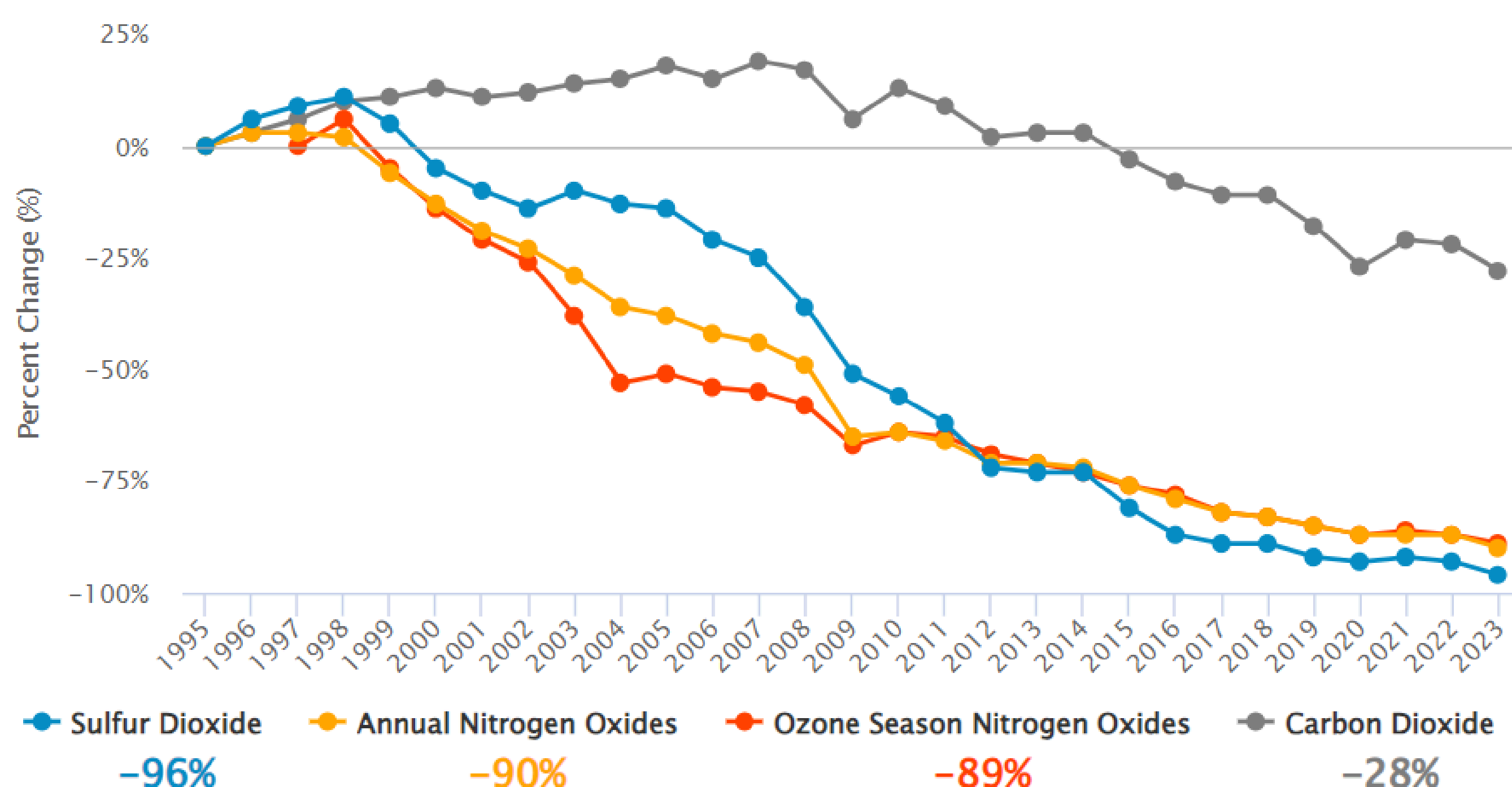# Power Sector Programs Progress Report
2023

Under the Clean Air Act, EPA implements regulations to reduce emissions from power plants, including the Acid Rain Program (ARP), the Cross-State Air Pollution Rule (CSAPR), the CSAPR Update, the Revised CSAPR Update, the Good Neighbor Plan, and the Mercury and Air Toxics Standards (MATS). The Power Sector Programs Progress Report provides annual updates on these regulatory programs to reduce emissions in the power sector.
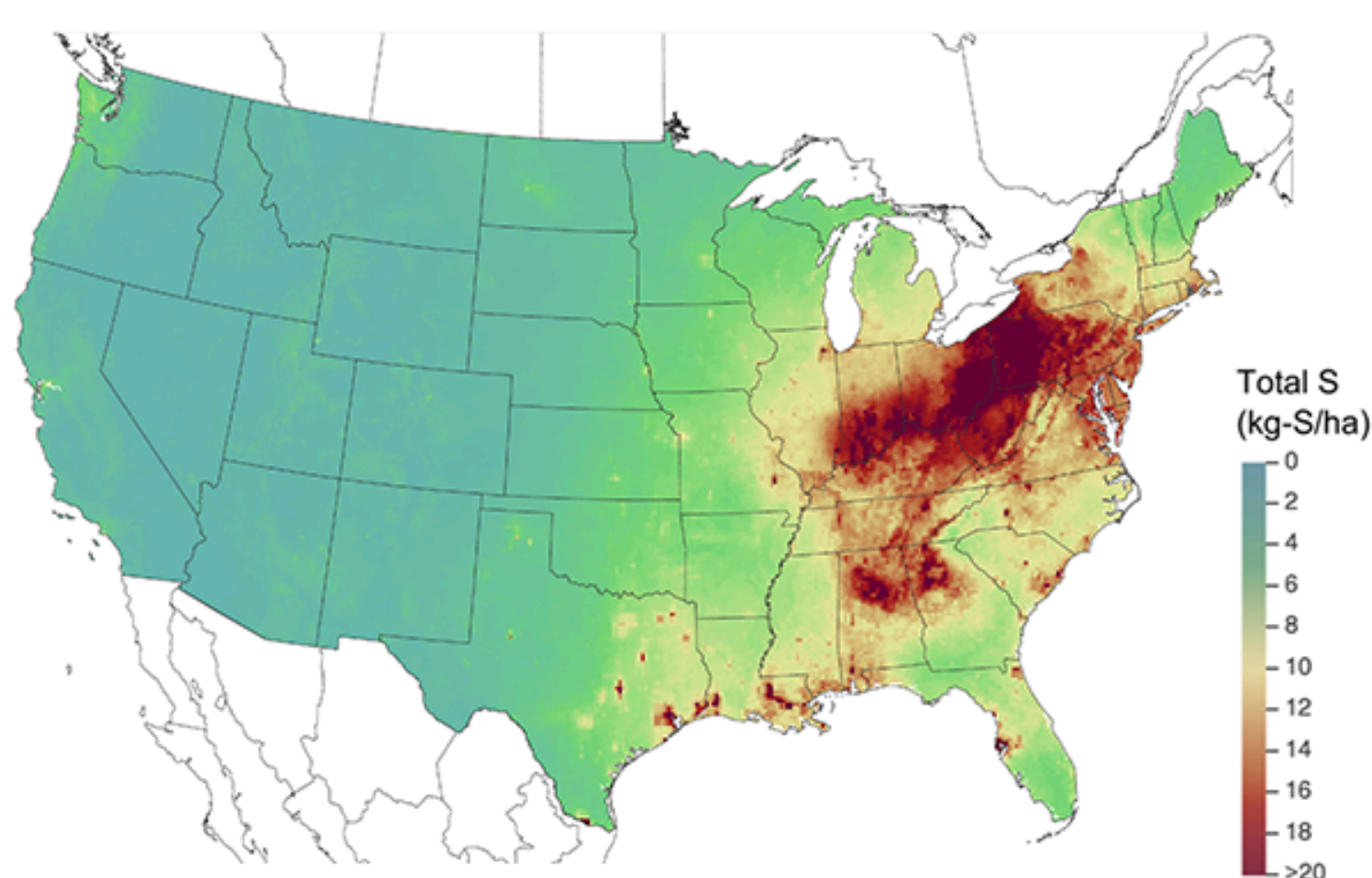
2023 Progress Report At A Glance

- **2023 Annual SO_2 emissions:** 650,000 tons. 96% below 1995 | 24% below 2022.

- **2023 Annual NO_x emissions:** 643,000 tons. 90% below 1995 | 15% below 2022.

- **2023 ozone season NO_x emissions:** 300,000 tons. 89% below 1997 | 8% below 2022.

- **2023 CO_2 emissions:** 1,563,000 tons. 28% below 1995 | 1% below 2022.

- **Compliance:** 100% compliance for power plants in the market-based ARP and CSAPR allowance trading programs.

Annual Percent Change of Emissions, 1995–2023

Sulfur Dioxide −96% | Annual Nitrogen Oxides −90% | Ozone Season Nitrogen Oxides −89% | Carbon Dioxide −28%
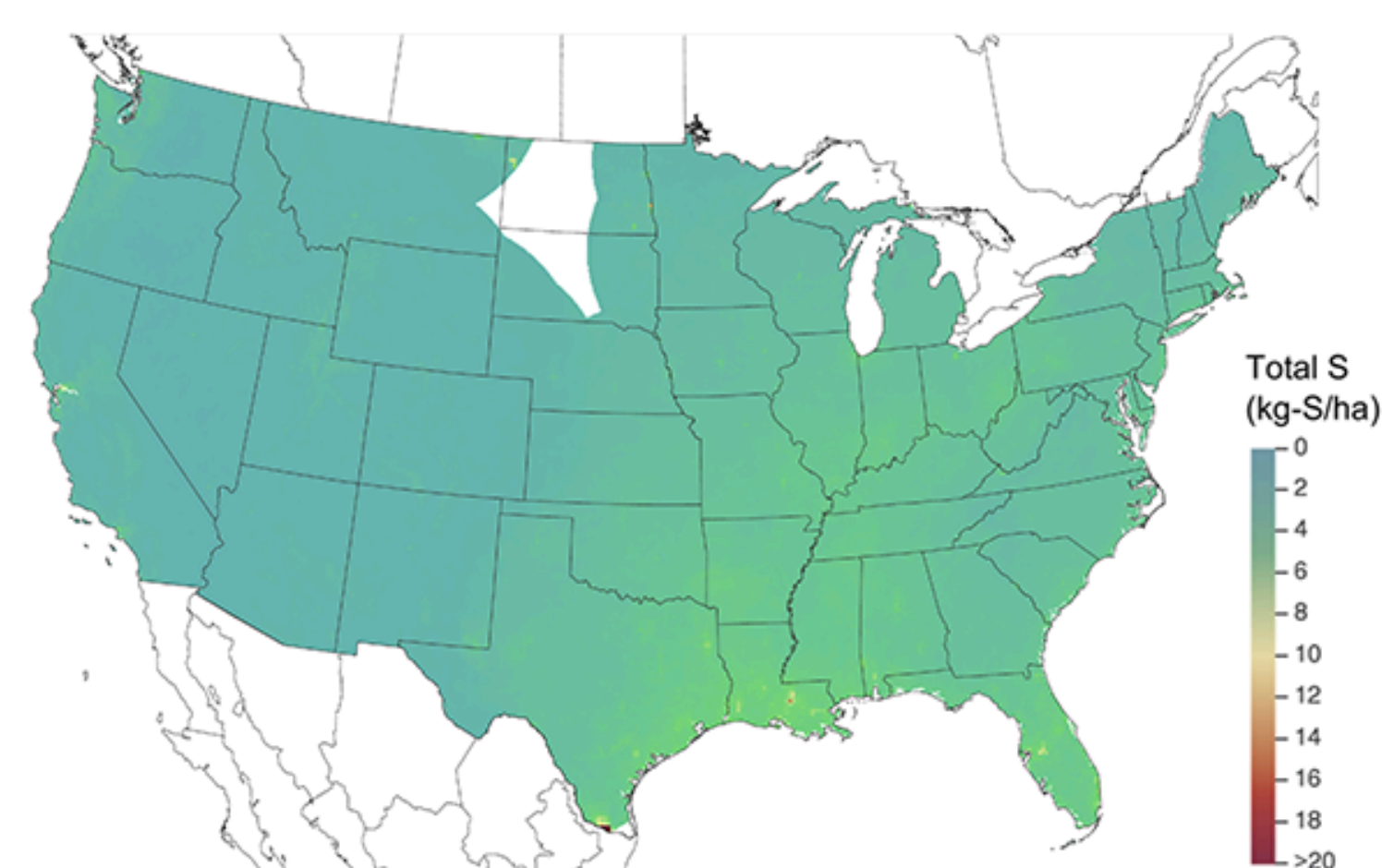

Three-Year Average of Total Sulfur Deposition

2000–2002

2020–2022

Source: CASTNET/CMAQ/NADP
USEPA, 2024

- **Ambient particulate sulfate concentrations:** The eastern United States has shown substantial improvement, decreasing 51 to 84 percent in observed regions from 1989–1991 to 2020–2022.

- **Ozone NAAQS attainment:** Based on 2020–2022 data, 82 percent of the eastern ozone nonattainment areas now show concentrations below the level of the 2008 standard, three areas have shown progress, and one area has incomplete data.

- **$PM_{2.5}$ NAAQS attainment:** Based on 2020–2022 data, 35 of these eastern areas originally designated nonattainment have concentrations below the level of the 1997 $PM_{2.5}$ standard

- **Wet sulfate deposition:** All areas of the eastern U.S. have shown significant improvement with an overall 73 percent reduction in wet sulfate deposition from 2000-2002 to 2020–2022.

- **Levels of acid neutralizing capacity (ANC):** This indicator of aquatic ecosystem recovery improved (i.e., increased) significantly from 1990 levels at lake and stream monitoring sites in the Adirondack region, New England, and the Catskill Mountains.

epa.gov/power-sector/progress-report