MEC 31st Annual Sustainability & EHS Symposium

Session FF - 52nd Anniversary of the Clean Air Act of 1970 and 32nd Anniversary of the Clean Air Act Amendments of 1990 … What's on the Horizon for Business in America's Heartland?

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Workshop Overview

- Format
  - Short introduction to each topic
  - Questions and answers
- Planned Topics
  - Good neighbor provisions for 2015 Ozone NAAQS
  - Post-pandemic capital spending
  - Startup, shutdown, and malfunction (SSM) SIP call

Good Neighbor/Interstate Transport Provisions

- Emissions of SO_2, NO_X, & $PM_{2.5}$ can travel long distances thereby affecting air quality in downwind states
- Clean Air Act (CAA) Section 110(a)(2) “good neighbor” provision requires EPA and states to address interstate transport that affects downwind states’ ability to comply with the NAAQS
  - Federal rules enacted under provision include NO_X Budget Trading Program and CAIR/CSAPR
  - States can file CAA Section 126(b) petition for EPA to enact additional rules to meet good neighbor provision

Good Neighbor Provisions for the 2015 Ozone NAAQS

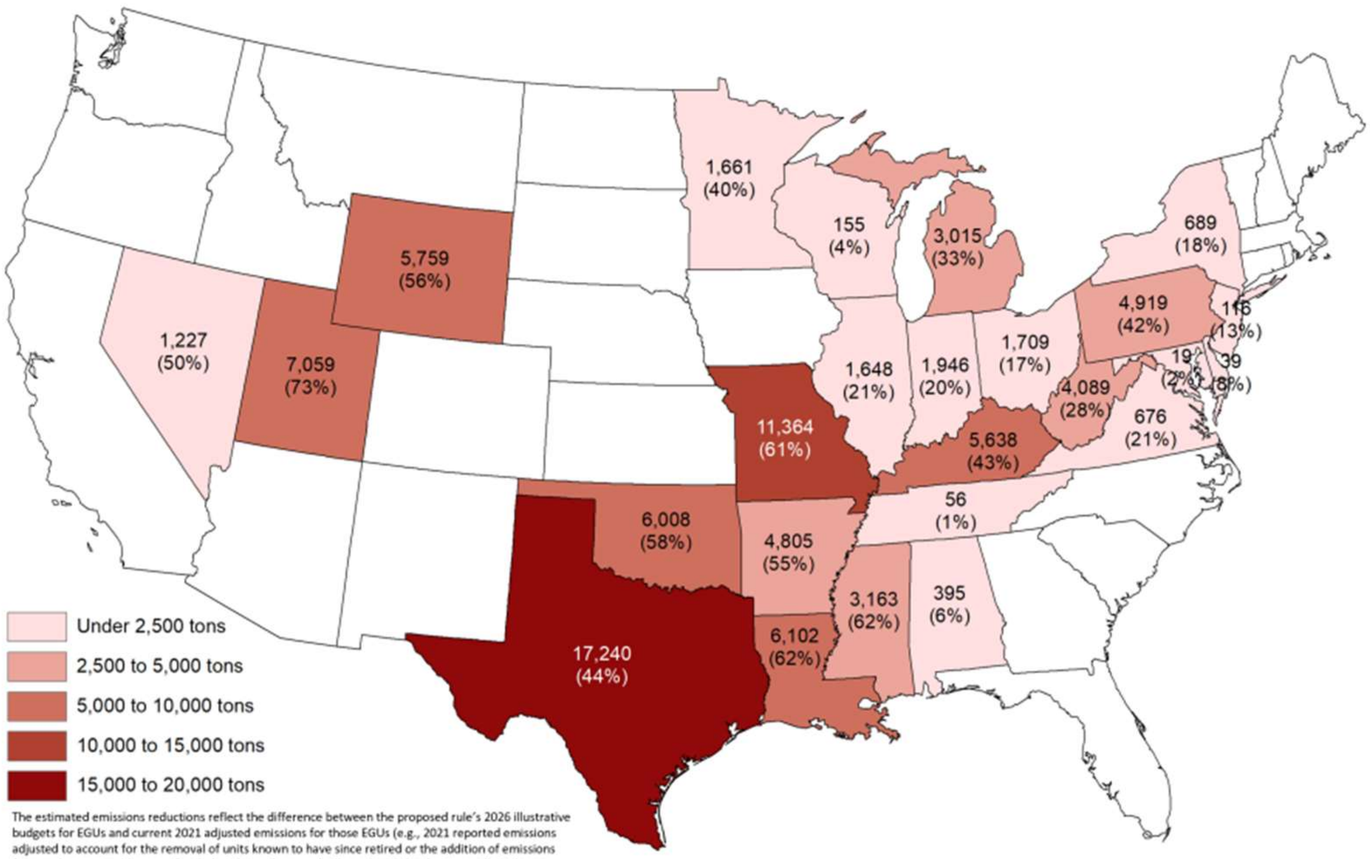
- EPA has found that NO_X emissions from 26 upwind states is significantly contributing to downwind nonattainment or interfering with maintenance of 2015 ozone NAAQS (70 ppb, 8-hr avg.)
  - Includes KY, IN, and OH
- Rule signed by EPA Administrator Regan on 2/28/2022 (not yet published in Federal Register)
- Will amend CSAPR rules in 40 CFR 97
- Federal implementation plan (FIP) includes:
  - Reduced ozone season NO_X budgets for electric generating units (EGUs) beginning in 2023
  - NO_X emission limits for certain non-EGUs beginning in 2026
  - States can submit their own SIPs

What Non-EGUs are Covered & What are Limits?

Source Type/Applicability	NO_X Limits
Gas-fired IC Engines ≥ 1,000 hp used for pipeline transportation of natural gas	4-stroke rich burn – 1.0 g/hp-hr 4-stroke lean burn – 1.5 g/hp-hr 2-stroke lean burn – 3.0 g/hp-hr
Cement kilns with potential NO_X emissions ≥ 100 tpy	2.3-4.0 lb/ton clinker depending on kiln type along with equation based daily cap for all kilns at single source/plant
Iron/Steel/Ferroalloy units with potential NO_X emissions ≥ 100 tpy and to facilities containing 2 or more such units that collectively have potential NO_X emissions ≥ 100 tpy – includes furnaces, preheaters, degassers, kilns, coke ovens, and boilers	Varies by unit type; examples include: EAF – 0.15 lb/ton steel Annealing furnace – 0.06 lb/MMBtu Coke ovens – 0.15 lb/ton coal charged & 0.015 lb/ton coal pushed Boilers – 0.08-0.20 lb/MMBtu based on fuel type
Glass furnaces with potential NO_X emissions ≥ 100 tpy	Container/pressed/blown glass & fiberglass furnaces – 4.0 lb/ton glass produced Flat glass furnace – 9.2 lb/ton glass produced
Industrial boilers ≥ 100 MMBtu/hr at source within NAICS 3251 (chemical), 3241 (petroleum/coal products), & 3221 (pulp & paper)	0.08-0.20 lb/MMBtu based on fuel type

EGU Reductions in 2026 Relative to 2021

(from https://www.epa.gov/csapr/good-neighbor-plan-2015-ozone-naaqs#maps)



The estimated emissions reductions reflect the difference between the proposed rule's 2026 illustrative budgets for EGUs and current 2021 adjusted emissions for those EGUs (e.g., 2021 reported emissions adjusted to account for the removal of units known to have since retired or the addition of emissions from under-construction new fossil plants). In other words, the estimated reductions reflect changes known to have happened and be happening in the power sector, as well as the impact of the proposed rule. Because these estimated reductions reflect the overall change from current levels of operation, they are higher, on average, than the values reflected in the regulatory impact analysis (emissions reductions relative to projected future levels of operation) and other communications materials for the proposal.

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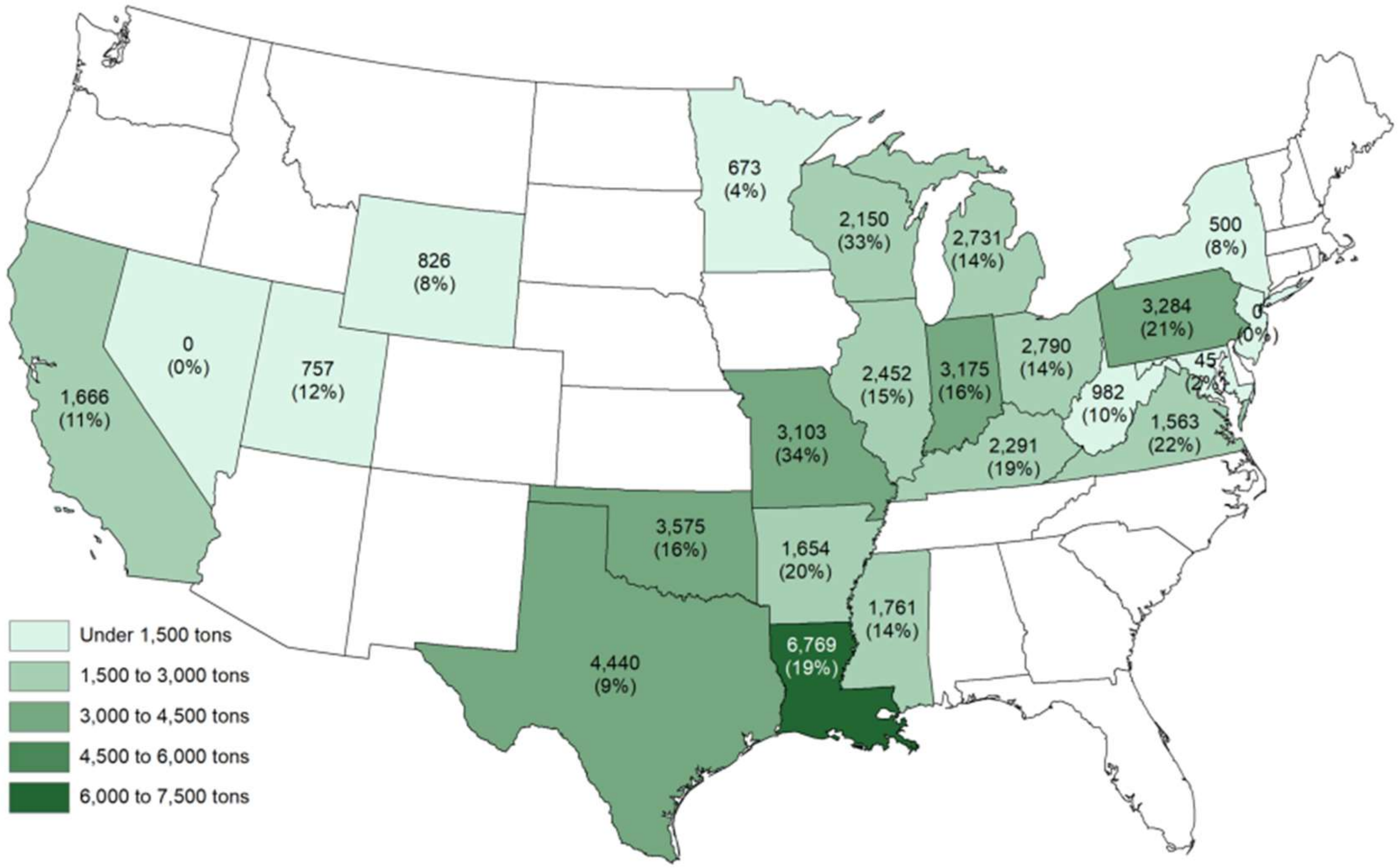
Non-EGU Reductions in 2026 Relative to Pre-Proposal Levels

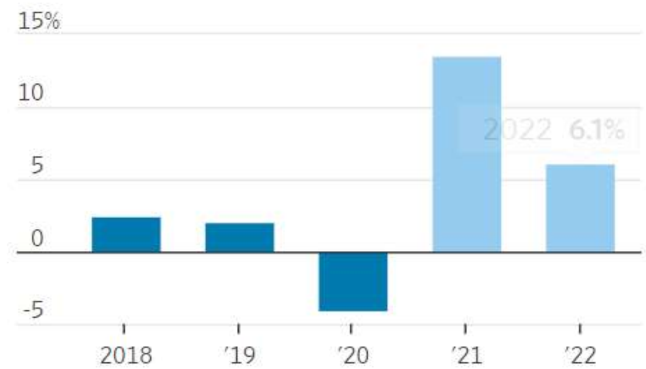
(from https://www.epa.gov/csapr/good-neighbor-plan-2015-ozone-naaqs#maps)



Surge in Post-Pandemic Capital Spending

- COVID pandemic caused many companies to stockpile cash due to economic uncertainties
- Starting in 2021 and continuing in 2022, companies looking to use that cash to fund capital projects
  - Companies in S&P500 allocated $528.4 billion toward capital projects in 2021Q1-Q3; >13% increase over CY2021 (WSJ, 1/10/2022)
  - Another >6% increase expected in CY2022 (WSJ, 1/10/2022)
- What impacts will this have on IDEM, KYDEP, and Ohio EPA?

Year-to-year change in capital expenditures at nonfinancial companies



Note: Data includes 2,000 companies globally with the largest capital expenditures in U.S.-dollar terms. Figures for 2021 and 2022 are forecasts.
Source: S&P Global Ratings

Large Capital Projects in the Midwest

- Intel – 1/2022 announcement to build $20 billion microchip factory in central OH; largest private-sector investment in OH history
- Nucor – 1/2022 announcement to build $2.7 billion steel mill in WV; largest single investment in WV and Nucor history; follows $1.7 billion mill in KY that is scheduled to begin operations in 2022
- Sazerac – 12/2021 announcement to build $409 million bottling plant in southern IN
- Ford – 9/2021 announcement to invest $11.4 billion in electric vehicle/battery projects in KY and TN, single largest manufacturing investment in Ford's 118-year history
- CANPACK – 6/2021 announcement to build $380 million aluminum beverage can production plant in Muncie, IN
- GM – 4/2021 announcement to invest $27 billion by 2025 to support electric vehicle production; includes sites in MI, OH, and TN

SSM SIP Call

- SIP call to address alleged deficiencies in state rules in that they "excuse" excess emissions that occur during SSM events
  - Covered 36 states, included KY, IN, & OH
- Timeline
  - 6/12/2015 – SIP call w/ 11/22/2016 due date for SIP submittal; includes SSM policy
  - 10/9/2020 – EPA revises SSM policy to allow certain SSM exemptions, plan to review 2015 SIP call
  - 9/30/2021 – EPA withdraws 10/2020 policy revision
  - 1/12/2022 – EPA issues notice that 12 states, including OH, failed to submit SIP revision under 2015 SIP call
    - 18 months to revise SIP and avoid mandatory sanctions (i.e., 2:1 offsets & restriction on federal highway funding in nonattainment areas)

Questions & Discussion

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