

About Transportation Air Quality Conformity Determination

Using as an Example
August 2022 - FY 2023 – 2026
Transportation Improvement Program and
Related Amendments to Update to
Connected2045

Purpose of Air Quality Conformity

- Projects must be analyzed to determine that they meet requirements of (conform to) state air quality ozone plans and do not worsen air quality
- All projects must be included in the analysis
- Projects not included in the analysis cannot progress/move ahead toward implementation

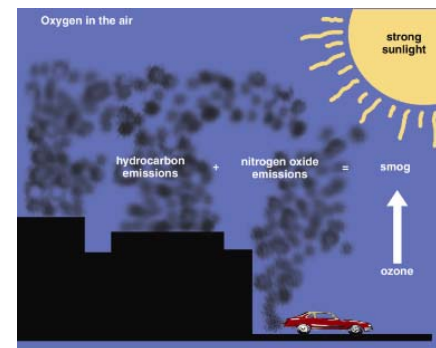


EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

What is Ozone?

- Ground level ozone is formed when hydrocarbons (or volatile organic compounds – VOC) and nitrogen oxides (NO_x) from vehicle exhaust and other industrial processes chemically react with oxygen in the lower atmosphere
- Weather influences ozone formation – strong sunshine, low wind speed and temperatures of 85° and higher
- Ozone affects children and the elderly
- High levels can cause headaches, fatigue and eye, nose and respiratory tract irritation
- Prolonged exposure can aggravate chronic heart disease and chronic respiratory ailments, like asthma

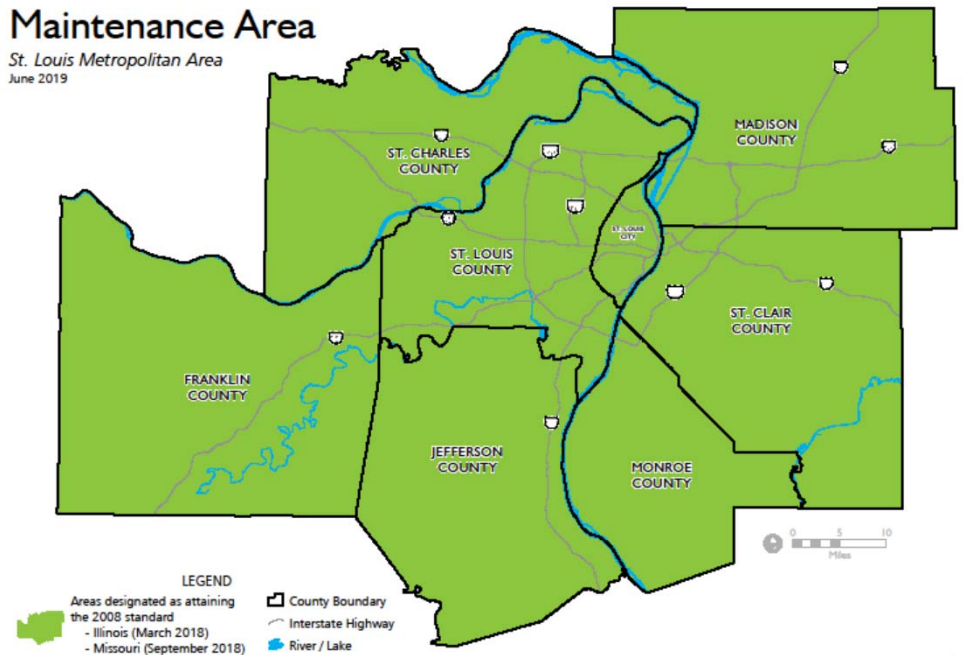


Conformity is to be Conducted for 2008 Ozone Standard Maintenance Areas

- EPA has re-designated the eight-county St. Louis region (MO-IL) from nonattainment to attainment because it is in compliance with this standard
- Considered a maintenance area
- EPA has not revoked the 2008 standard so a Conformity Determination has to be performed for it

2008 Ozone Standard Maintenance Area

St. Louis Metropolitan Area
June 2019



Source: East-West Gateway Council of Governments



EAST-WEST GATEWAY
Council of Governments

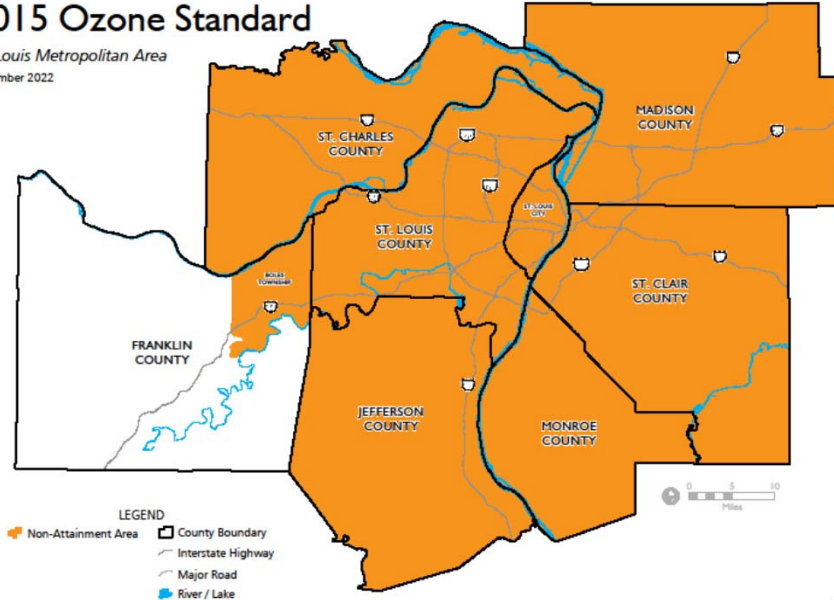
Creating Solutions Across Jurisdictional Boundaries



Conformity is to be Conducted for 2015 Ozone Standard Nonattainment Areas

Non-Attainment Area 2015 Ozone Standard

St. Louis Metropolitan Area
November 2022



Sources: East-West Gateway Council of Governments



- EPA has designated the following as non-attainment for this standard:
 - Jefferson, St. Charles and St. Louis Counties, City of St. Louis and Boles Township in Missouri
 - Madison, Monroe and St. Clair Counties in Illinois
- Work is underway so this area can comply with standard



EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

Air Quality Conformity Determination Process

- Process to follow comes from EPA's Transportation Conformity Regulations
- Conformity evaluates and documents the impact of proposed transportation activities on the region's air quality
 - Conducted for Transportation Improvement Program (TIP) and metropolitan Long Range Transportation Plan (LRTP)
- Projects included in the TIP/LRTP must pass regional emissions analysis tests for VOC and NO_x for selected future analysis years, including the horizon year for the LRTP
- Purpose is to make sure that federal transportation investment is consistent with Missouri and Illinois goals contained in their SIPs to attain/maintain the ozone standard(s)



EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

Components of a Regional Emissions Analysis

- Develop forecasts of future mobile source emissions (VOC and NO_x) for selected future analysis years for projects in TIP/LRTP by:
 - Running travel demand model to develop vehicle miles traveled (VMT) estimates
 - Running latest EPA-approved MOtor Vehicle Emissions Simulation (MOVES) model to generate mobile source emissions factors
 - Running Gateway-developed post-processing program which uses the VMT estimates and the MOVES input and output files to calculate total emissions



Components of a Regional Emissions Analysis - Continued

- Comparing the Gateway-generated mobile source emissions forecasts to the VOC and NO_x motor vehicle emissions budgets set out in Missouri and Illinois State Implementation Plans (SIPs) for air quality
- Demonstrating that for all analysis years each State's motor vehicle emissions budgets will not be exceeded



EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

Results

Regional Emissions Analysis – 2008 Ozone Standard

Performed for Conformity Determination for FY 2023 – 2026 TIP – August 2022

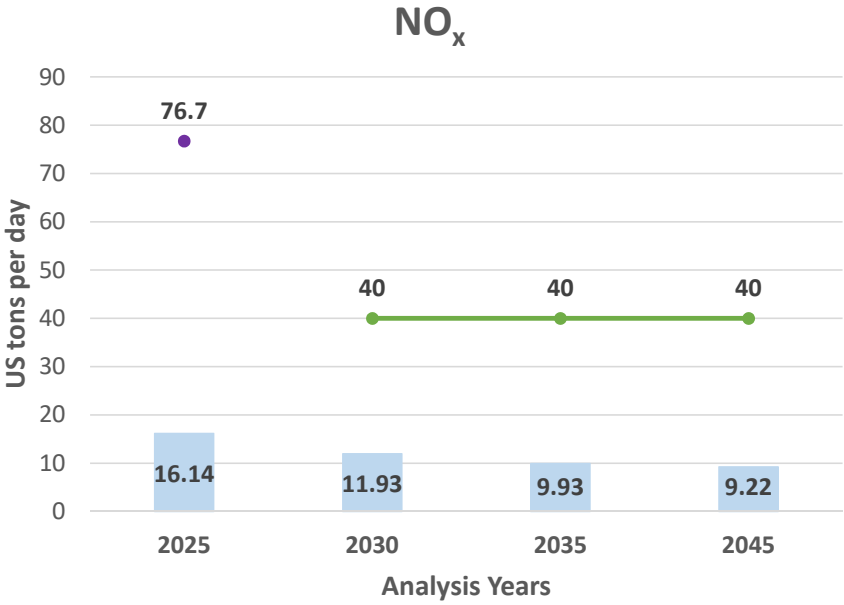
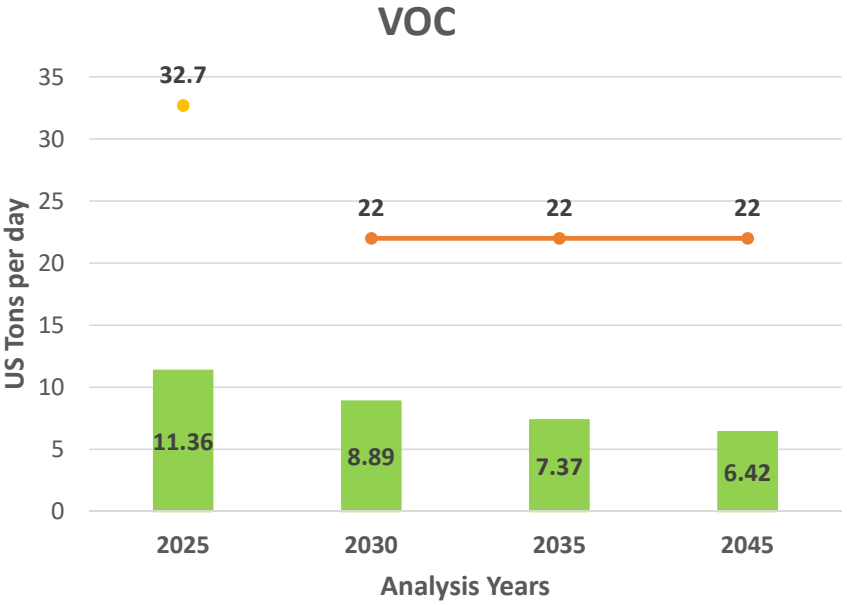
Different options to present results



EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

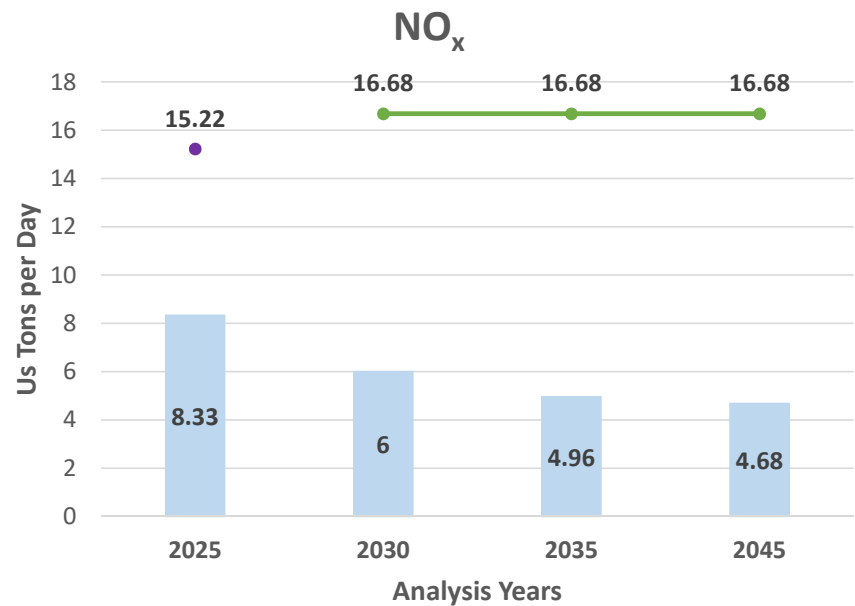
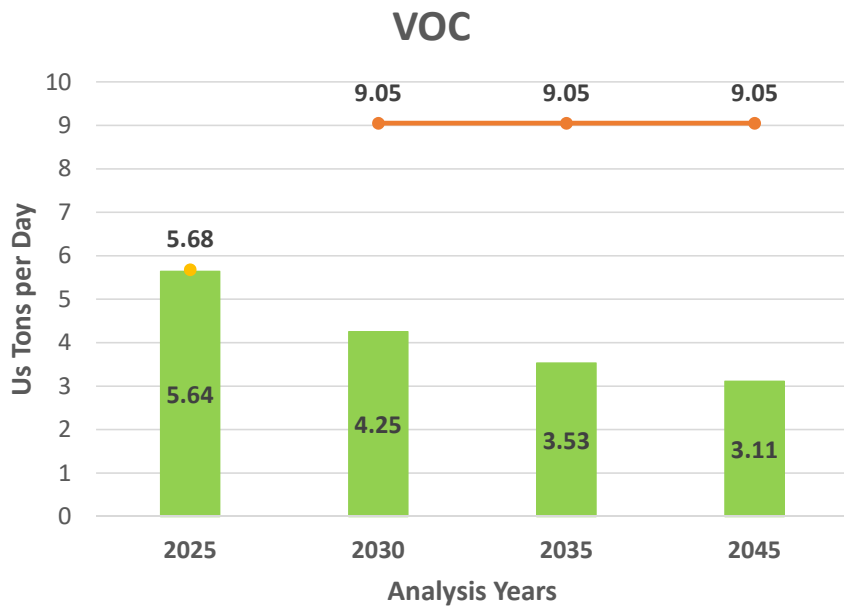
2008 Ozone Standard Missouri - 5 County Maintenance Area Regional Emissions Analysis (US tons/day)



■ Estimated Action Emissions ● 2015 VOC Budget
—●— 2030 VOC Budget ■ Estimated Action Emissions ● 2015 NO_x Budget
—●— 2030 NO_x Budget

August 2022 - All tests have been passed for all years

2008 Ozone Standard Illinois - 3 County Maintenance Area Regional Emissions Analysis (US tons/day)

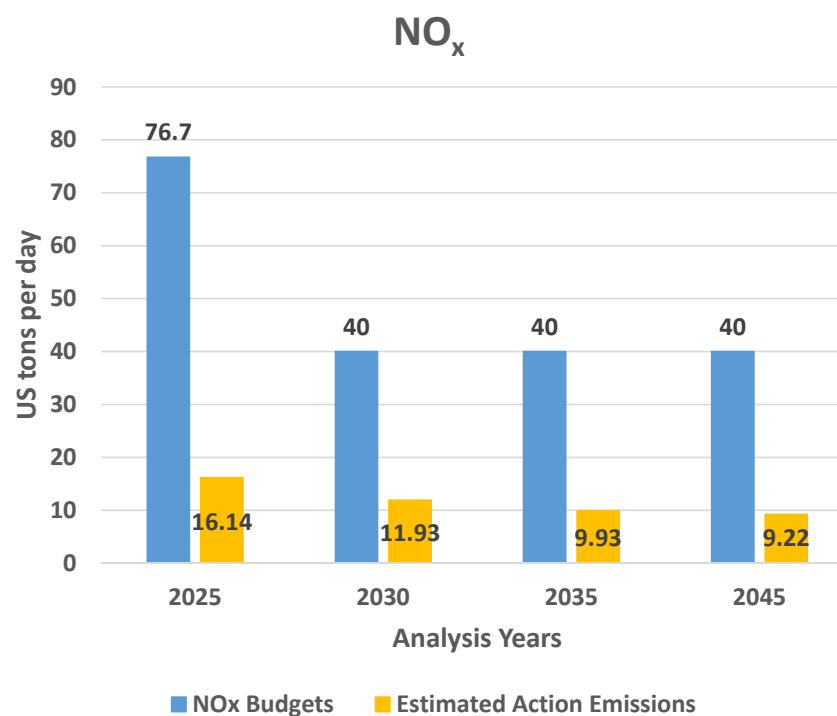
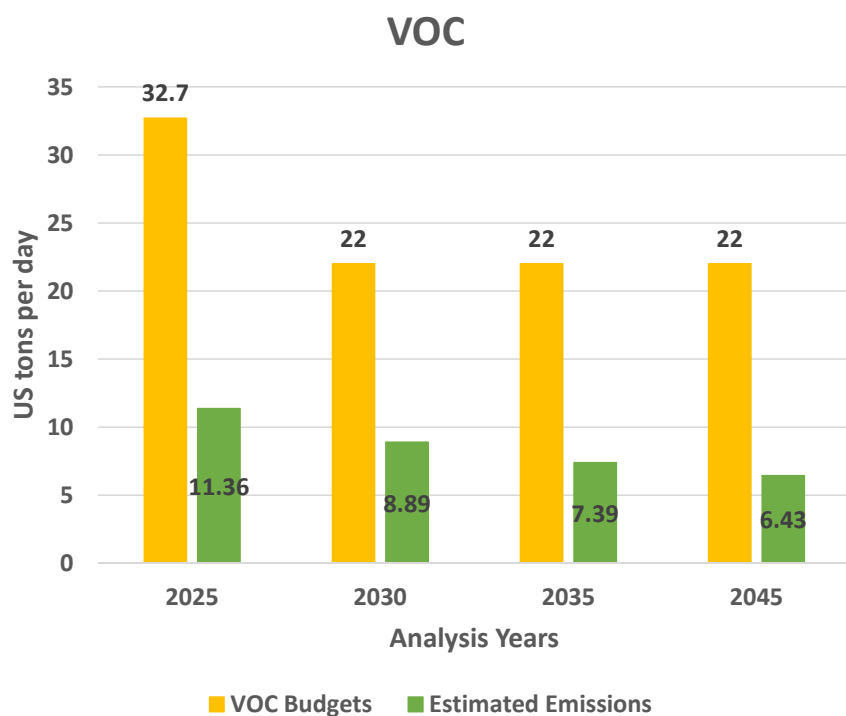


■ Estimated Action Emissions
 —●— 2025 VOC Budget
—●— 2030 VOC Budget

■ Estimated Action Emissions
 —●— 2025 NOx Budget
—●— 2030 NOx Budget

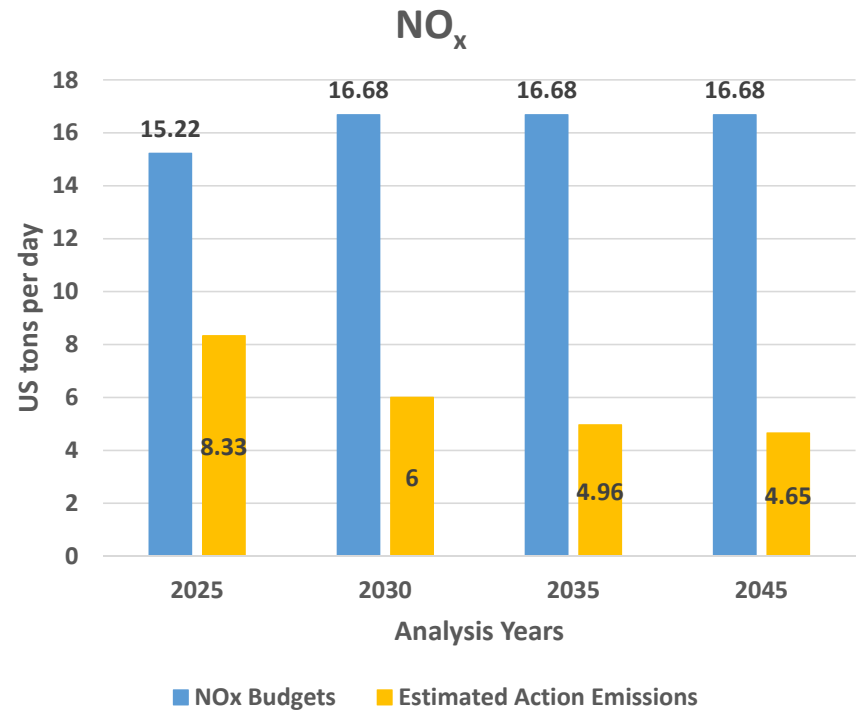
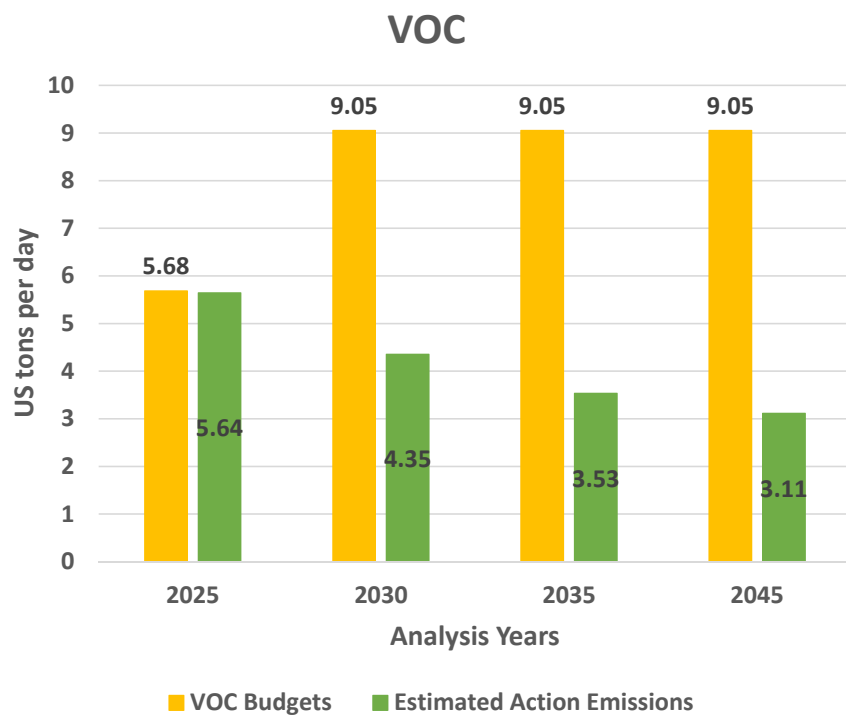
August 2022 - All tests have been passed for all years

2008 Ozone Standard Missouri - 5 County Maintenance Area Regional Emissions Analysis (US tons/day)



August 2022 - All tests have been passed for all years

2008 Ozone Standard Illinois - 3 County Maintenance Area Regional Emissions Analysis (US tons/day)



August 2022 - All tests have been passed for all years

Results

Regional Emissions Analysis – 2015 Ozone Standard

Performed for Conformity Determination for FY 2023 – 2026 TIP – August 2022

Different options to present results



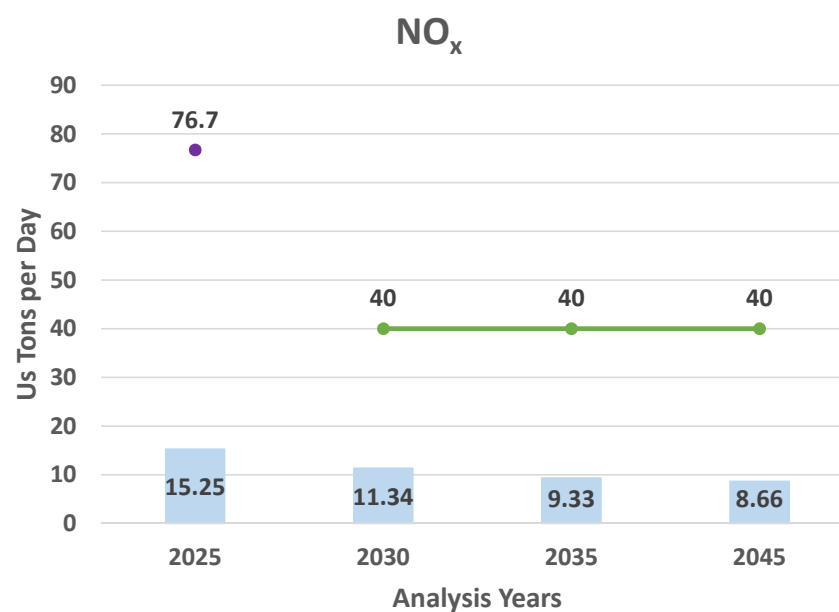
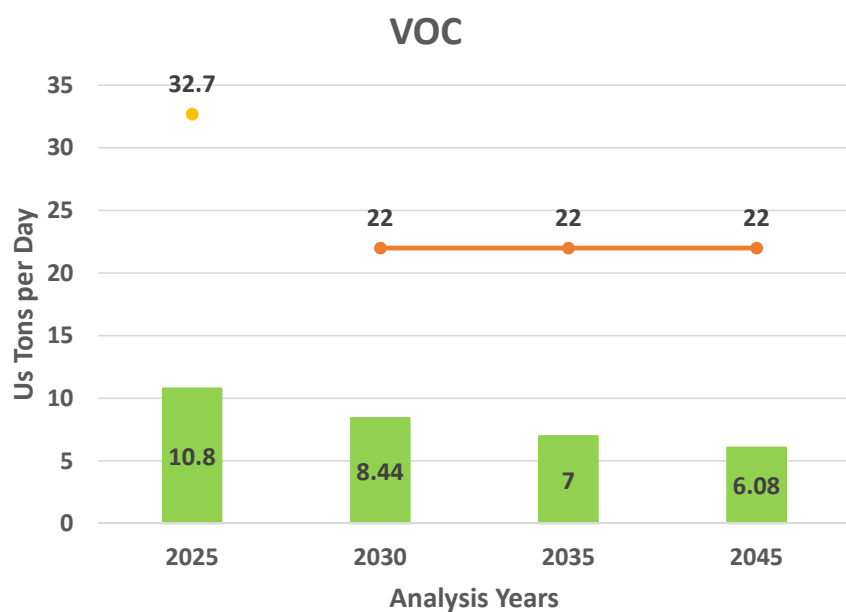
EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

2015 Ozone Standard

Missouri - 4 County & 1 Township Nonattainment Area

Regional Emissions Analysis (US tons/day)

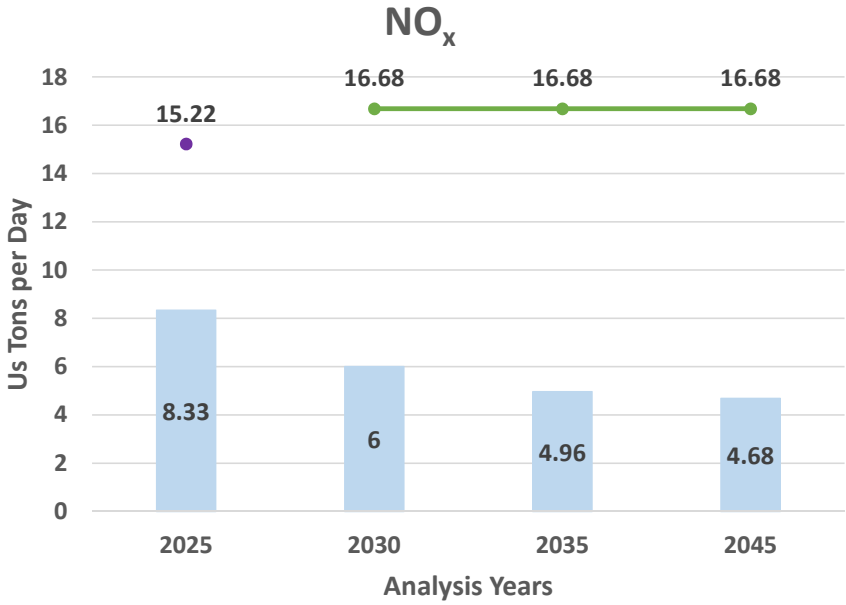
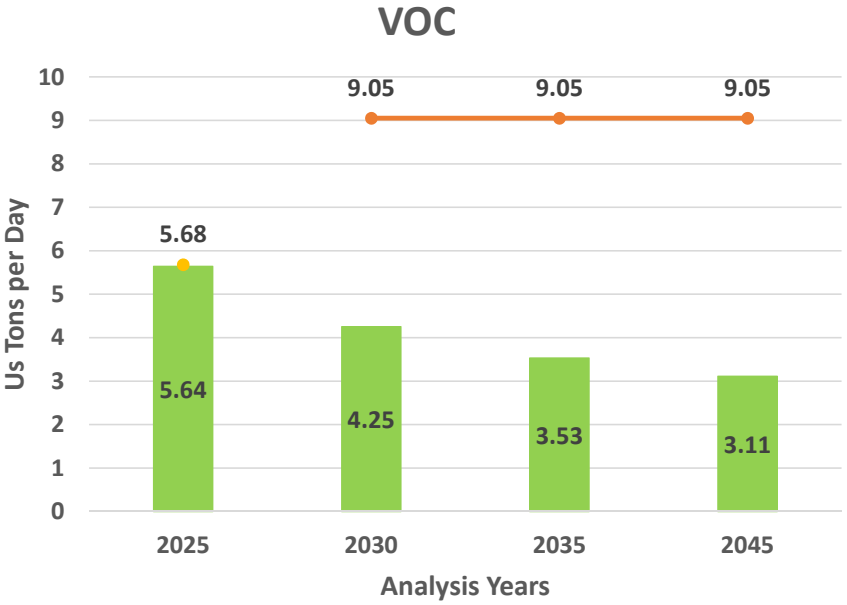


■ Estimated Action Emissions
 ● 2015 VOC Budget
—●— 2030 VOC Budget

■ Estimated Action Emissions
 ● 2015 NO_x Budget
—●— 2030 NO_x Budget

August 2022 - All tests have been passed for all years

2015 Ozone Standard Illinois - 3 County Nonattainment Area Regional Emissions Analysis (US tons/day)



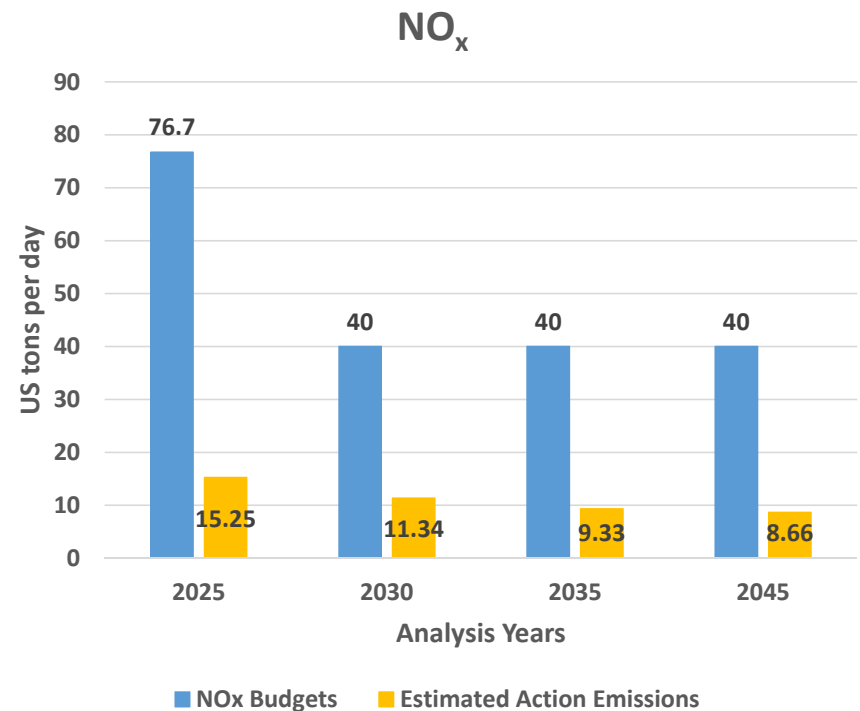
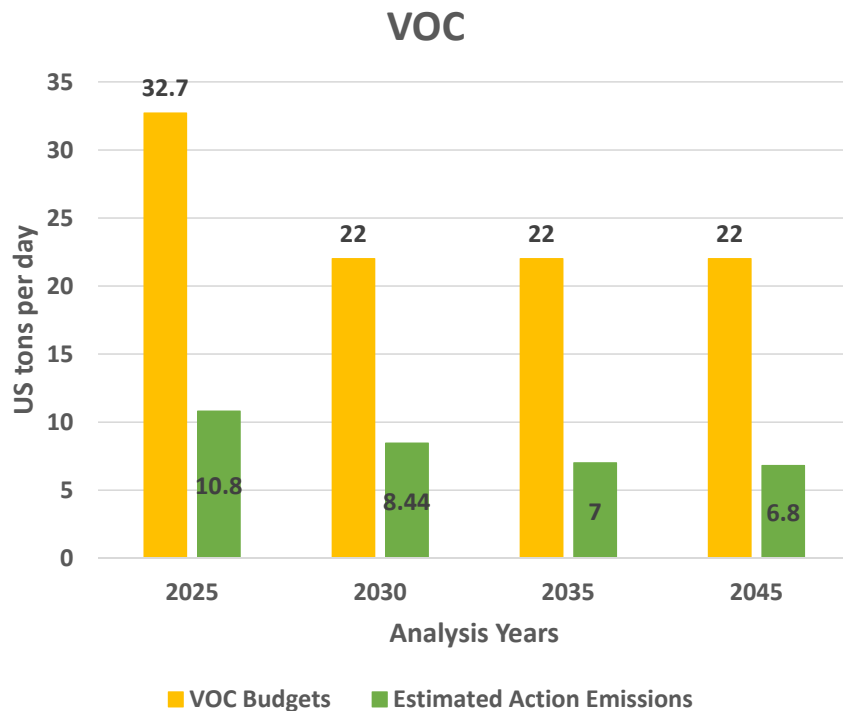
■ Estimated Action Emissions
 —● 2025 VOC Budget
—● 2030 VOC Budget

■ Estimated Action Emissions
 —● 2025 NO_x Budget
—● 2030 NO_x Budget

August 2022 - All tests have been passed for all years

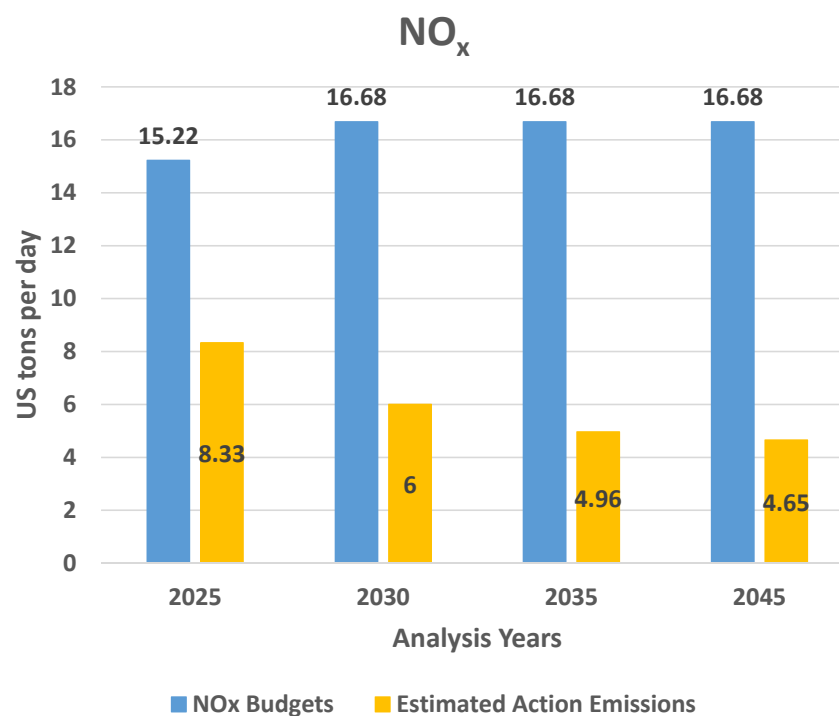
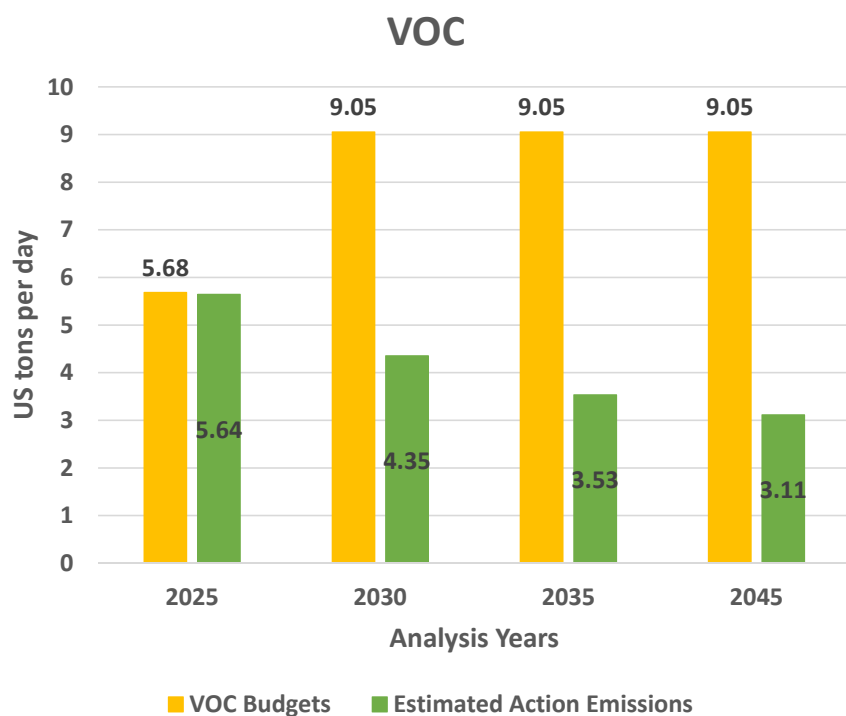
2015 Ozone Standard

Missouri - 4 County & 1 Township Nonattainment Area Regional Emissions Analysis (US tons/day)



August 2022 - All tests have been passed for all years

2015 Ozone Standard Illinois - 3 County Nonattainment Area Regional Emissions Analysis (US tons/day)



August 2022 - All tests have been passed for all years

Air Quality Conformity for 1997 Eight-Hour Ozone Standard – Jersey County IL

- As part of a 2018 U.S. District Court ruling, a number of areas in US, including eight-county St. Louis region and Jersey County IL, were identified as “orphan” nonattainment areas for the 1997 ozone standard
- Jersey County is considered the orphan
 - It and St. Louis region were redesignated to attainment for the 1997 ozone standard
 - Jersey was then found to be in attainment for both the 2008 and 2015 ozone standards, while St. Louis region was not
- Conformity only to be performed if there is a project(s) in Jersey County meeting definition of regionally significant
 - Four analysis criteria to examine
- As of August 2022 no analysis had to be performed because no new regionally significant project had been proposed for Jersey County



Public Comment Period

- Minimum 30 day public comment period – Comment period for Draft Conformity Determination and Draft FY 2023-2026 TIP and related Amendments to *Connected2045* Update ran from July 1, 2022 – August 4, 2022
- Information about the drafts and the public open-house style meetings are available at www.ewgateway.org
- Comments can be mailed, emailed or made at open-house meetings. Deadline to receive comments is 5 pm on the last day of the comment period. Email address can be found on EWG web site.



EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

Questions