




Central Oklahoma **REGIONAL AIR QUALITY PLAN**

A Guide to Safeguarding Public Health and Driving Economic Growth

Released May 2025



A full-page photograph of a woman with long dark hair, wearing a white dress with a red and green floral pattern. She is standing in a park with large green trees in the background, looking up towards the sky with her eyes closed. The lighting is warm and golden, suggesting late afternoon or early morning. The background is a soft-focus green lawn and trees.

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“Clean air is essential to quality of life. Pollution doesn’t abide by city limits or county lines, so regional collaboration and coordination is crucial for a healthy and thriving Central Oklahoma.”

- **MARK W. SWEENEY**, AICP
ACOG Executive Director

EXECUTIVE SUMMARY

Air quality directly impacts the health, economic vitality, and overall livability of Central Oklahoma. The Oklahoma City Metropolitan Area has historically maintained compliance with [National Ambient Air Quality Standards \(NAAQS\)](#), but rising ozone concentrations, growing vehicle miles traveled (VMT), and increasing industrial activity present real and immediate threats to regional air quality.

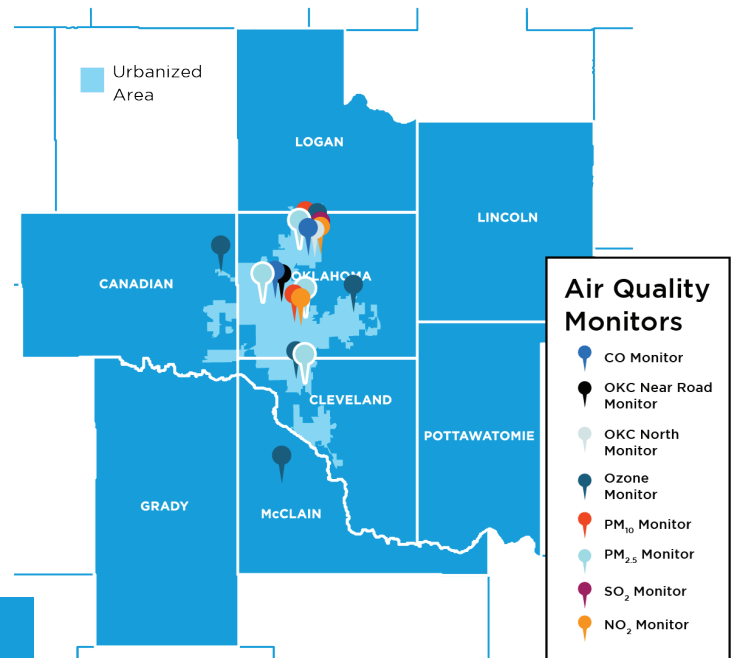
Recent [monitoring data](#) shows the region narrowly avoided an ozone Nonattainment designation, with several monitors approaching the Environmental Protection Agency's (EPA) ozone standard of 70 parts per billion (ppb). This plan is our call to action to avoid the costly and restrictive consequences of Nonattainment status.

This 2025 Regional Air Quality Plan is a proactive, data-informed blueprint developed by the Association of Central Oklahoma Governments (ACOG) to safeguard public health, support sustainable development, and ensure continued compliance with federal air quality regulations. It is a companion to the [ACOG Cost of Nonattainment Study](#) translating risks and data into action. It represents the collective vision and responsibility of regional stakeholders—including local governments, public agencies, businesses, and residents—to improve air quality through targeted strategies, partnerships, and public outreach.

“We are one summer away from Nonattainment—what we do now determines the future of public health and economic growth in Central Oklahoma.”

- MARK W. SWEENEY, AICP
ACOG Executive Director

Figure 1: Oklahoma City Metro Statistical Area (MSA) and Oklahoma City-Shawnee Combined Statistical Area (CSA)



Regional Air Quality Plan (RAQP) Area
Study conducted 2023-2024

OUR VISION

A Central Oklahoma region where clean air supports healthier communities, a resilient economy, and a sustainable environment for current and future generations.



OUR MISSION

To collaboratively improve regional air quality through strategic planning, emission reduction strategies, data-driven decision-making, and public engagement that aligns with state and federal air quality standards.



KEY CHALLENGES



Ground-Level Ozone (O_3) is the region's most pressing concern. Current levels in Central Oklahoma are edging dangerously close to EPA limits



Transportation is the largest source of air pollution, responsible for nearly 58% of Nitrogen Oxide (NO_x) emissions in the OKC Metro Area—key contributors to ozone formation



Industrial and Oil & Gas Activity continues to grow across Central Oklahoma, particularly in developing corridors, increasing emissions



Public Awareness remains low—an ACOG survey found that fewer than 20% of residents could define ozone season or identify an [Ozone Alert Day](#)

PLAN GOALS (2025-2030)

1

Reduce transportation-related NO_x and VOC emissions by 5-15% through cleaner fleets, active transportation, and reduced VMT.

2

Enhance public awareness of ozone season and clean air actions, increasing regional participation in voluntary programs by 50%.

3

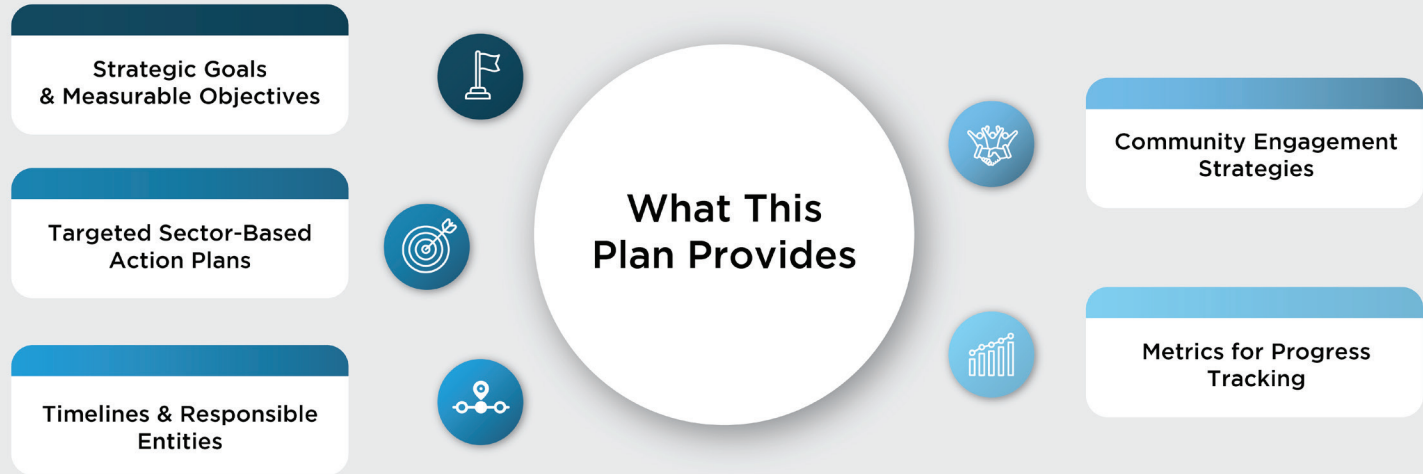
Support clean energy and low-emission technologies across industrial, commercial, and municipal sectors.

4

Promote local ordinances and policies that align land use, transportation, and air quality goals.

5

Build capacity for long-term monitoring, accountability, and adaptive planning through an annual evaluation framework.



ECONOMIC FRAMING

If Central Oklahoma were to fall into Ozone Nonattainment, the financial impact could be profound. Modeling from similar regions suggests that Nonattainment could cost the region up to **\$10 million annually** in lost transportation funding, with broader economic effects—such as delayed development, increased permitting requirements, and diminished business competitiveness—totaling into the **hundreds of millions over time**. Protecting air quality is not only a public health and environmental issue—it is an economic imperative.

THE COST OF DOING NOTHING

According to the ACOG Cost of Nonattainment Study, **failure to act** could result in:




up to **\$10 MILLION** per year in **LOST** federal transportation funding



DELAYED infrastructure & highway projects



Stricter **REGULATORY BURDENS** on business & economic development



Greater **HEALTH COSTS** due to increased asthma & respiratory illness

“No single city can solve this alone. A unified regional strategy is our best chance to stay in attainment and protect the public.”

— **PETER HOFFMAN**
Mayor, City of Nichols Hills
ACOG Board Member

A CALL TO REGIONAL ACTION

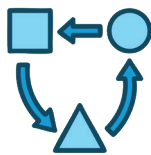
Improving air quality is not the responsibility of one agency—it is a regional challenge that requires unified effort. This plan outlines the steps, but success depends on sustained leadership, informed decision-making, and broad-based participation. Through this plan, ACOG invites all partners—public, private, and nonprofit—to join in building a cleaner, healthier future for Central Oklahoma.



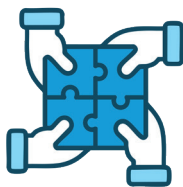
GUIDING PRINCIPLES



Science-Based Action
Grounded in data and air quality modeling



Adaptability
Structured to evolve with conditions and resources



Collaboration
Partnering with local governments, agencies, and the public



Transparency
Clear public reporting and accountability



Access
Strategies will support communities most impacted by pollution and ensure comprehensive outreach

END OF EXECUTIVE SUMMARY



AIR QUALITY OVERVIEW

Clean air is essential to the health, safety, and prosperity of Central Oklahoma's communities. As our region continues to grow in population, and traffic and industrial activity increases, so does the urgency to understand and reduce harmful air pollutants—particularly ground-level ozone (O₃).

Ozone can be both helpful and harmful depending on where it is. In the upper atmosphere, it protects us from harmful ultraviolet rays. But near the ground, ozone forms when sunlight reacts with nitrogen oxides (NO_x) and volatile organic compounds (VOCs). These pollutants originate from vehicles, industrial operations, oil and gas activities, and even everyday sources like lawn equipment. On hot, sunny days with little wind, this chemical reaction accelerates, causing ozone levels to spike.

Ground-level ozone is not emitted directly but is formed in the air we breathe. Its effects are well-documented: it can trigger asthma attacks, reduce lung function, aggravate chronic respiratory diseases, and increase the risk of heart disease. Children, seniors, and people with existing health issues are especially vulnerable, but high ozone days affect all residents—leading to higher healthcare costs, lost productivity, and diminished quality of life.

Currently, Central Oklahoma is in compliance with the [EPA's National Ambient Air Quality Standards \(NAAQS\)](#). However, recent monitoring data shows ozone concentrations are approaching the federal limit of 70 parts per billion (ppb). A single additional year of exceedances could push the region into Nonattainment status, which would trigger costly regulatory measures, delay permits for development, and put millions in federal transportation funding at risk.

This Regional Air Quality Plan is designed to prevent that outcome. It outlines a coordinated, data-driven approach to: reduce NO_x and VOC emissions, protect public health, and support economic resilience. By addressing the root causes of ozone formation and promoting cleaner technologies, smarter transportation choices, and stronger local policies, we aim to maintain EPA attainment status and create a healthier future for Central Oklahoma.

DATA ANALYSIS

Understanding the current state of air quality in Central Oklahoma begins with a clear look at the data. Emissions trends, pollutant concentrations, and geographic hot spots all reveal how our region is performing—and where we are falling short.

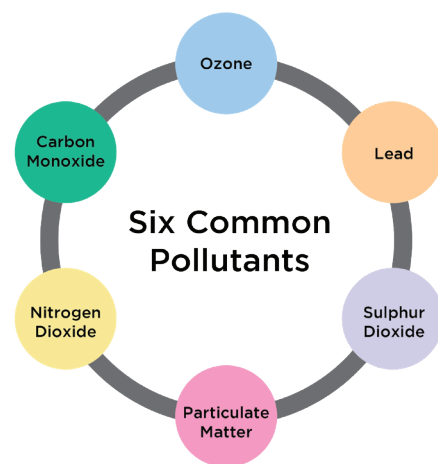
While the Oklahoma City Metro Area has historically remained in compliance with federal air quality standards, recent years show a troubling upward trend in ozone levels and emissions of its key precursors. With population and economic growth, the region is seeing rising concentrations of harmful pollutants that directly impact public health and economic stability.

The following analysis explores the key pollutants tracked under the [EPA's National Ambient Air Quality Standards \(NAAQS\)](#), how they form, where they come from, and how their presence in our atmosphere has changed in recent years. This data underscores the urgency of acting now to prevent a Nonattainment designation—before the region exceeds critical thresholds that would trigger stricter regulations and costly consequences.

Air pollution in Central Oklahoma is shaped by a combination of [six core criteria air pollutants](#) regulated by the EPA:

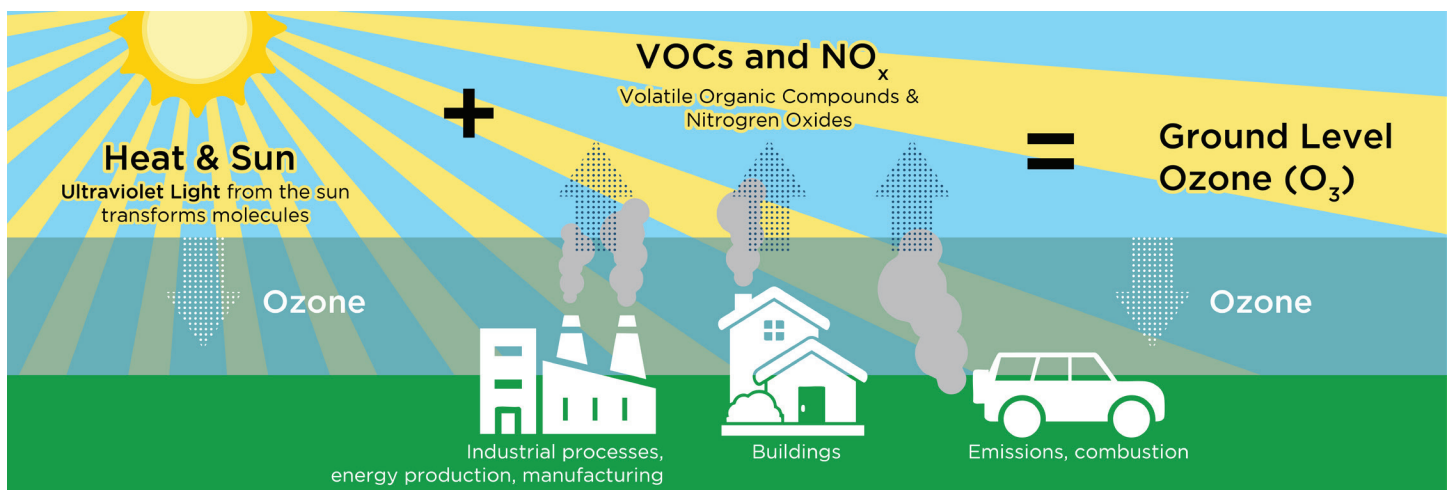
- [Nitrogen Dioxide \(NO₂\)](#)
- [Ground-Level Ozone \(O₃\)](#)
- [Sulfur Dioxide \(SO₂\)](#)
- [Particulate Matter \(PM_{2.5} and PM₁₀\)](#)

- [Carbon Monoxide \(CO\)](#)
- [Lead \(Pb\)](#)



Each of these pollutants can cause significant harm to human health and the environment. While some—like NO₂, SO₂, CO, and Pb—are emitted directly from vehicles, power plants, and industrial sources, others form in the atmosphere.

Figure 2: Emission Based Ozone Formation Infographic



EMISSIONS ARE RISING ACROSS THE REGION

"This is more than an air quality issue—it's a community health issue. Clean air is essential for every child with asthma and every senior with heart disease."

- **ERIC POLLARD**

Air Quality & Clean Cities Manager
ACOG

Data from the National Emissions Inventory (NEI) shows a troubling trend:

- NO_x emissions increased by 26% from 2017 to 2020
- VOC emissions increased by 25% during the same period

These emissions are primarily driven by **transportation, oil and gas activity**, and **industrial operations**. In fact, transportation accounts for nearly 58% of NO_x emissions, while oil and gas operations categorized under "Crude Petroleum and Natural Gas" make up over half of all point source NO_x emissions.

Table 1: Total **NO_x** Emission Comparison - 2017 vs. 2020 (RAQP Study Area)

NO _x Emissions Tons Per Year (TPY)			2017 to 2020 % Change
COUNTY	2017	2020	% CHANGE
Canadian	3,417.25	4,815.32	41%
Cleveland	115.35	157.90	37%
Grady	4,038.50	4,737.96	17%
Lincoln	624.98	514.33	-18%
Logan	1,418.16	1,205.36	-15%
McClain	687.43	1,162.29	69%
Oklahoma	1,614.72	2,585.14	60%
Pottawatomie	349.72	321.44	-8%
Total	12,266.10	15,499.73	26%

Table 2: Total **VOC** Emission Comparison - 2017 vs. 2020 (RAQP Study Area)

VOC Emissions TPY			2017 to 2020 % Change
COUNTY	2017	2020	% CHANGE
Canadian	4,981.55	7,919.25	59%
Cleveland	82.41	100.79	22%
Grady	5,934.64	8,187.04	38%
Lincoln	1,236.81	1,216.51	-2%
Logan	1,170.63	998.48	-15%
McClain	1,831.36	1,594.47	-13%
Oklahoma	1,880.30	1,719.23	-9%
Pottawatomie	433.51	252.77	-42%
Total	17,551.22	21,988.54	25%

Figure 3: 2017 Total NO_x Emission by Industry Type, [Metric Ton][%]

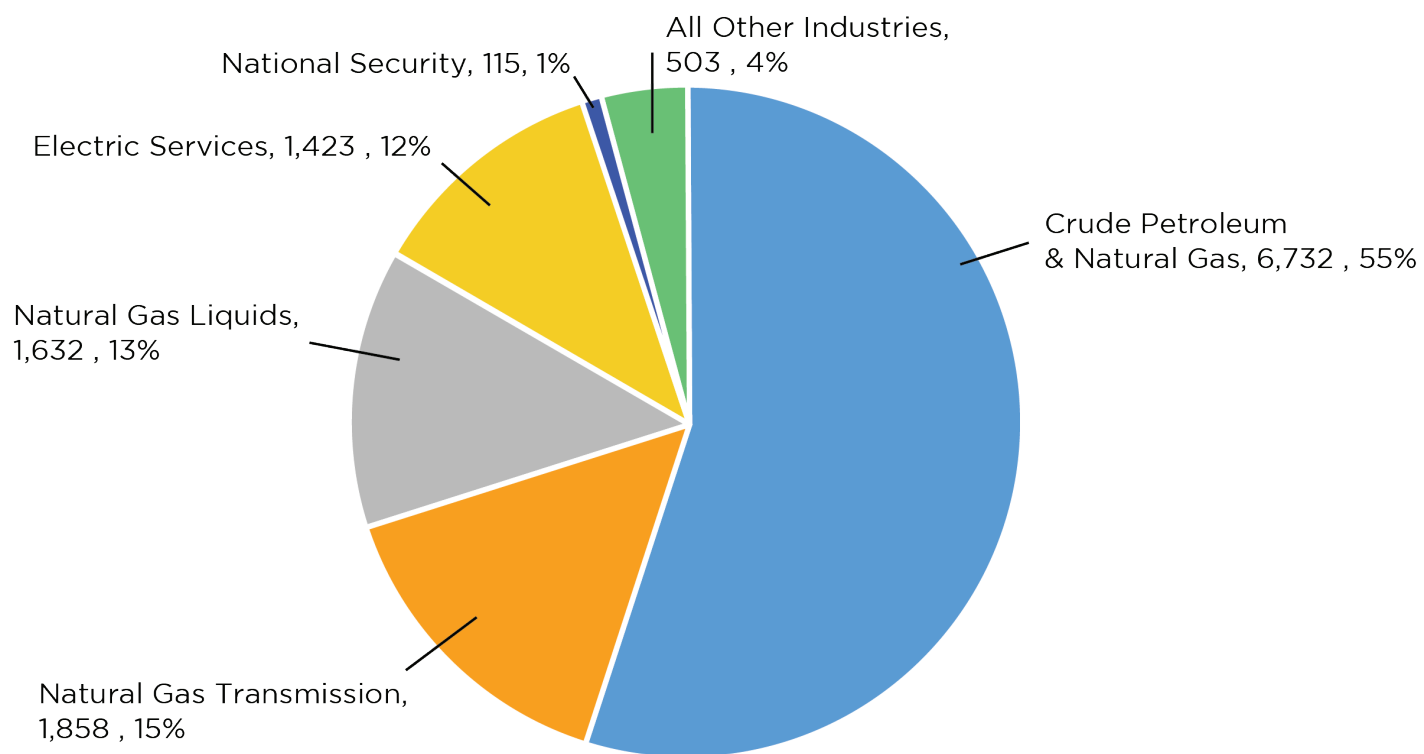


Figure 4: 2020 Total NO_x Emission by Industry Type, [Metric Ton][%]

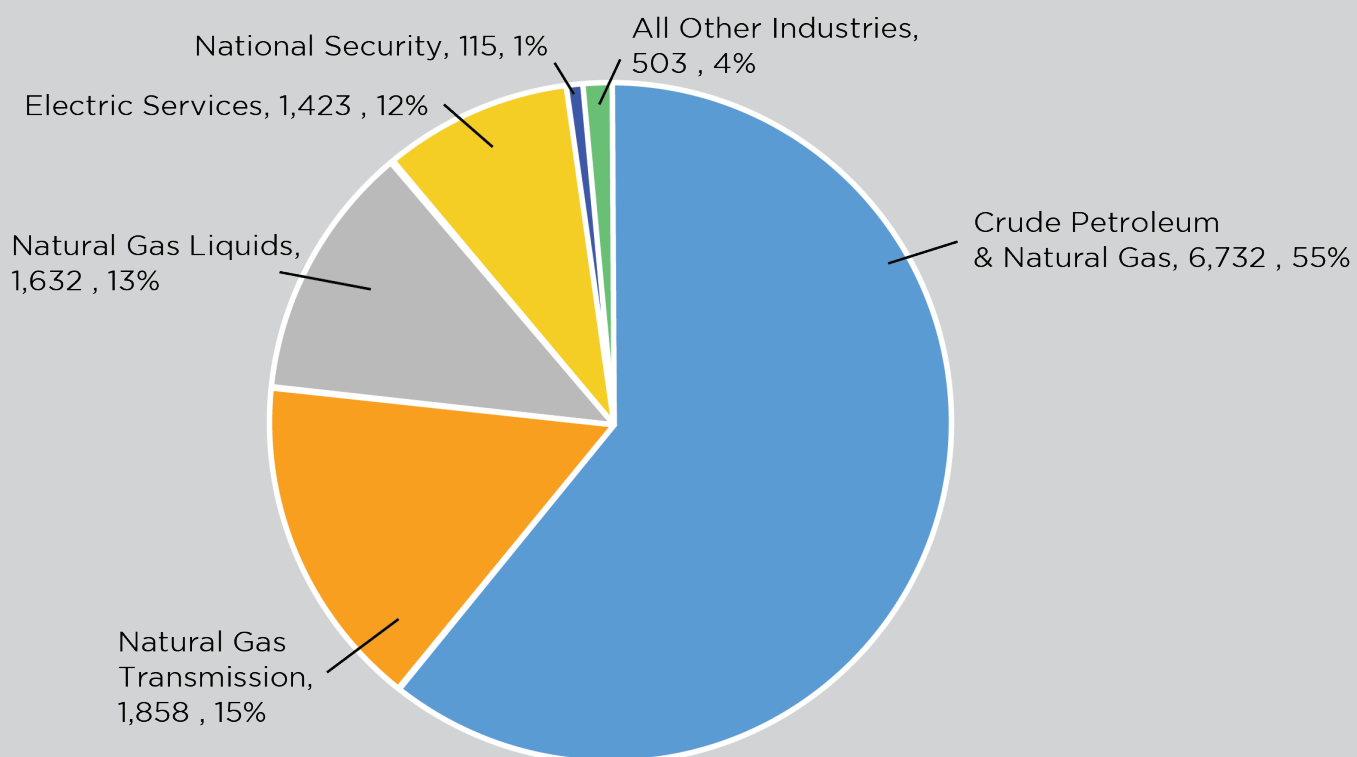


Figure 5: 2017 Total VOC Emission by Industry Type, [MT][%]

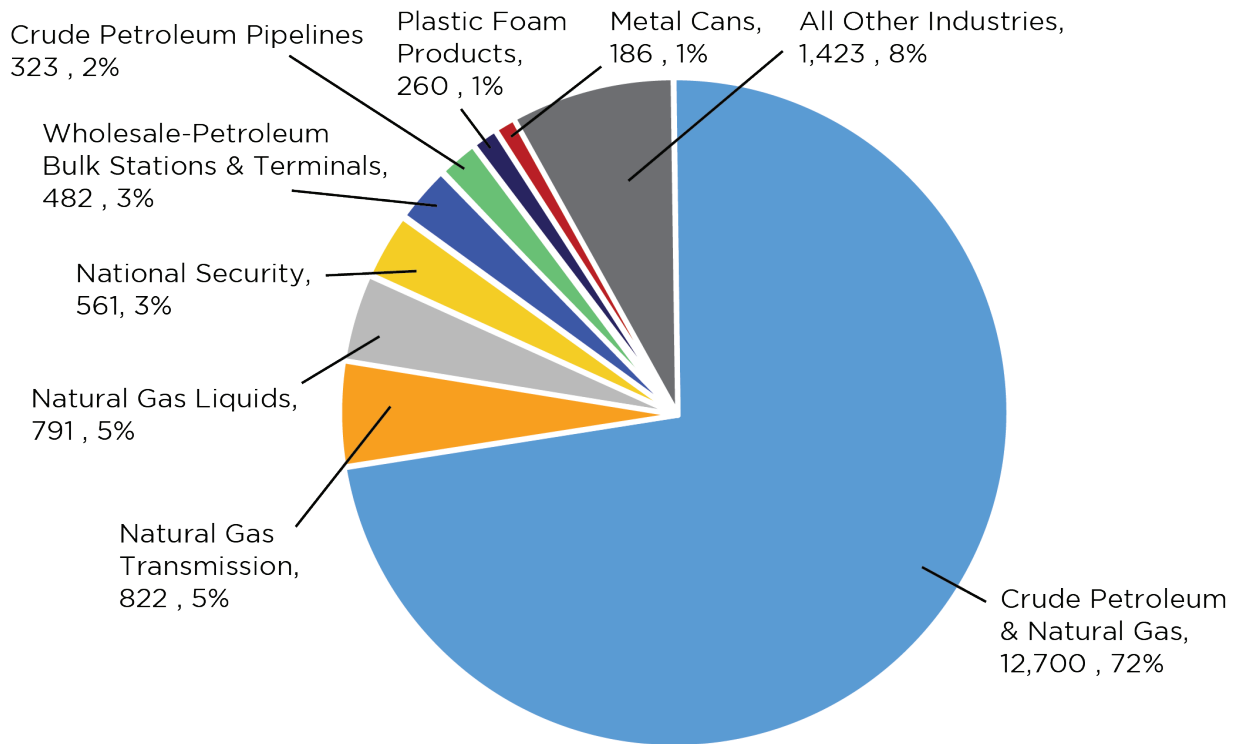
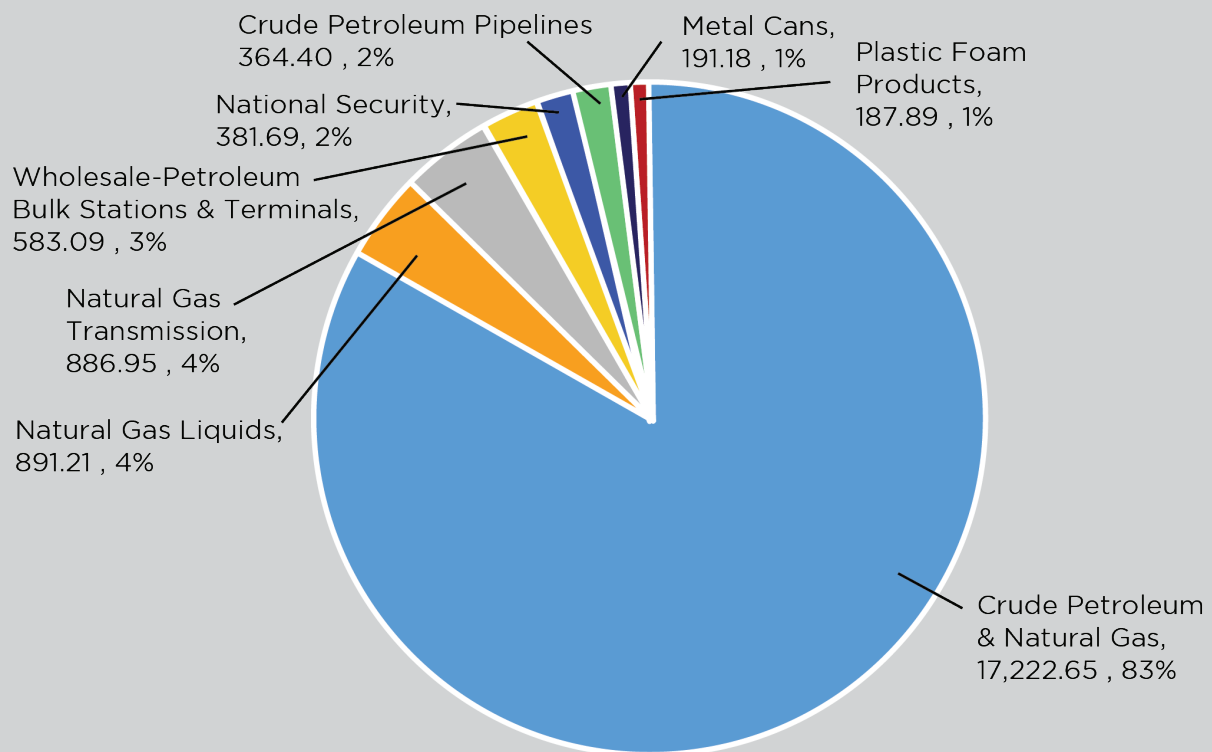


Figure 6: 2020 Total VOC Emission by Industry Type, [MT][%]



To better understand the drivers behind rising ozone levels, it's important to examine the sources of nitrogen oxides (NO_x) and volatile organic compounds (VOCs). The pie charts on the previous pages break down emissions by source type, highlighting the significant roles that on-road transportation, oil and gas operations, and industrial point sources play in contributing to regional air pollution.

As shown in the data, on-road vehicles account for nearly 58% of NO_x emissions in the Oklahoma City Metro Area, making transportation the single largest contributor. This includes emissions from personal

vehicles, diesel trucks, and freight traffic—all of which are projected to increase with population growth and economic development. Meanwhile, oil and gas production remains a leading source of both NO_x and VOCs, especially in Canadian, Grady, and McClain Counties, where activity has expanded in recent years. The remaining sources, including area sources (like lawn equipment and construction machinery), contribute smaller but still meaningful amounts of emissions. Understanding the relative impact of each sector allows policymakers and stakeholders to prioritize emissions reduction strategies where they will have the greatest effect.

MONITORING THE THREAT

Central Oklahoma's air quality monitoring network includes stations in:

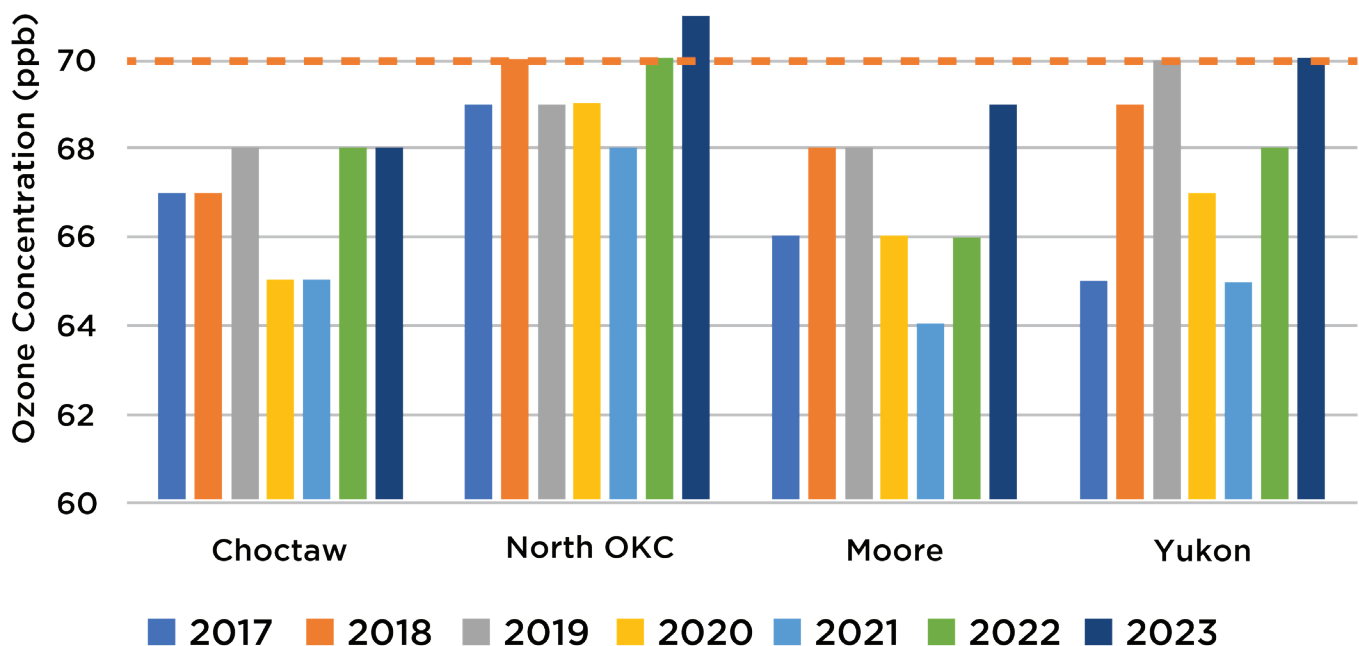
- North OKC
- Yukon
- Moore
- Choctaw

Recent data shows rising ozone levels at all stations—especially during summer months.

The data paints a clear picture: pollutants are increasing, ozone levels are rising, and the region is at risk. These are not just environmental problems—they are health and economic threats. This plan uses that data as a springboard for coordinated strategies that reduce emissions, protect public health, and ensure regulatory compliance.

With continued monitoring and adaptive management, Central Oklahoma has the opportunity to reverse these trends before they trigger long-term consequences.

Figure 7: 4th Highest Average for 3 Year Period



STRATEGIES & ACTION PLANS

Strategy 1

Reduce Transportation Emissions In The Oklahoma City Metro Area

GOAL: Decrease NO_x and VOC emissions from on-road vehicles by 5-15% by 2030.



BACKGROUND: On-road vehicles contribute over 50% of regional NO_x emissions, a key precursor to ozone formation. Reducing vehicle miles traveled (VMT) and promoting clean transportation are essential to improving air quality and maintaining EPA attainment status.

OBJECTIVES:



Increase total miles of bicycle facilities to 1,000
by 2030.



Convert 15% of public fleets to alternative fuels, electric/hybrid vehicles
by 2030.



Increase public transit ridership by 10%
by 2030.

KEY ACTIONS:

ACTION	LEAD	TIMELINE	RESOURCES
Promote public transit through regional campaigns	ACOG + Transit Agency	2025-2027	Congestion Management Air Quality (CMAQ), Surface Transportation Block Grant Urbanized Area (STBG-UZA), Federal Transit Administration (FTA) Funds
Support EV charging infrastructure expansion	ACOG + Local Governments	2025-2027	Federal Funding, Tax Credits, Utility Incentives
Launch "Ozone-Friendly Commuter Challenge" for major employers	ACOG	Summer 2027	State and Federal Agencies
Update regional bike map and distribute online and in print	ACOG	2026	Internal
Work with local jurisdictions to adopt anti-idling ordinances	ACOG + Cities	2025-2026	State and Federal Agencies

METRICS:

1. Year-over-year NO_x and VOC reductions (tons/year)
2. Transit ridership statistics
3. Number of new EV chargers installed
4. VMT per capita trend

COMMUNITY ACCESS PRIORITIZATION:

1. Prioritize transit improvements in historically underserved communities
2. Partner with community organizations to co-design outreach

The Oklahoma City MSA is rapidly growing, and that growth is contributing to increases in transportation related pollutants.



Strategy 2

Support Voluntary Actions in Industrial & Commercial Sectors

GOAL: Reduce region-wide industrial NO_x and VOC emissions by 10% by 2030 through technology upgrades, permitting support, and targeted partnerships.

BACKGROUND:

Industrial facilities, including manufacturing plants, power generation stations, and oil and gas operations, represent a significant portion of the region's total [emissions](#). Many are already regulated under state and federal air quality standards, but regional coordination can accelerate the adoption of cleaner technologies, promote voluntary emissions reductions, and reduce barriers for companies that want to invest in sustainability.

In particular, oil and gas operations near developing areas are contributing to localized ozone formation and particulate matter issues.



OBJECTIVES:



Engage top 50% of emitters in the ACOG voluntary air quality partnership program
by 2027.



Partner with Department of Environmental Quality (DEQ) to provide technical assistance for small and mid-sized businesses on emissions reduction opportunities.



Promote available grant opportunities for energy efficiency and emissions control retrofits.

KEY ACTIONS:

ACTION	LEAD	TIMELINE	RESOURCES
Develop an “Air Quality Partner” recognition program for regional businesses	ACOG	2027	Internal, DEQ support
Host industry roundtables focused on clean technology and permitting flexibility	ACOG	2027-2028	Oklahoma City Metro Area businesses
Promote adoption of cleaner engines and equipment through incentive programs	DEQ + Cities	Ongoing	State and Federal Funding
Coordinate with utilities on energy efficiency programs for commercial users	ACOG	2025	Utility partners
Identify and map emission clusters to target outreach and education	ACOG + DEQ	2028	GIS resources

METRICS:

1. Number of participating businesses
2. Estimated emissions reduced (tons/year)
3. Dollars leveraged through grants or rebates
4. Increased efficiency metrics from industry partners

COMMUNITY ACCESS PRIORITIZATION:

1. Prioritize outreach to facilities located near historically underserved communities
2. Translate materials and host bilingual roundtables where appropriate

“Oklahoma City MSA economic growth can be coupled with improved air quality through actions and policies that reduce emissions.”

— **JOHN M. SHARP**
ACOG Deputy Director



Strategy 3

Expand Public Awareness and Community Engagement

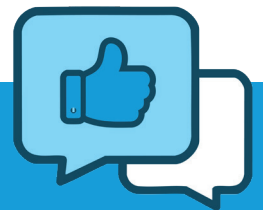
GOAL: Increase public recognition of ozone season, Ozone Alert Days, and clean air behaviors by 50% across the region by 2030.



BACKGROUND:

Public education and behavior change are critical to reducing regional emissions—especially from mobile sources. Despite longstanding efforts, ACOG research and recent survey data show that **fewer than 20% of Central Oklahoma residents** understand when ozone season occurs or what steps they can take to reduce pollution. Increasing public engagement, particularly in high-impact or vulnerable communities, is a cost-effective and scalable way to improve air quality.

ACOG has a unique opportunity to expand outreach using storytelling, digital tools, school partnerships, and employer engagement. A focus on **actionable behavior**, such as **reducing vehicle idling**, using **public transit**, or refueling after 6 p.m., will be key to making this initiative resonate.



Community Outreach Works

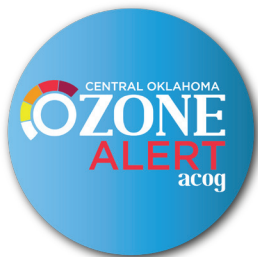
When residents understand ozone season and take small actions like refueling after 6 p.m. or reducing idling, it can significantly cut harmful emissions across the region.

OBJECTIVES:



Reach 250,000 residents annually through digital, in-person, and school-based outreach

by 2030.



Establish regional branding for Clean Air messaging and Ozone Alert Days.



Partner with employers, school districts, or community groups as Clean Air Champions.

KEY ACTIONS:

ACTION	LEAD	TIMELINE	RESOURCES
Launch a Clean Air Awareness Campaign with seasonal themes and tailored messaging	ACOG	May 2026 (Ozone Season)	Federal Funding, internal
Expand use of social media, transit ads, and bilingual materials to increase reach	ACOG	Ongoing	Internal
Partner with nonprofits and DEQ to promote clean air learning opportunities in schools	ACOG + School Districts	Fall 2026	ODEQ, Tobacco Settlement Endowment Trust (TSET), American Lung Association
Create and promote employer Clean Air Toolkits for regional HR teams and facilities	ACOG + Chamber Partners	2027	Corporate sponsorships
Develop an Ozone Alert communications protocol in coordination with DEQ	ACOG + DEQ	Summer 2025	Internal

REGIONAL CAMPAIGN IDENTITY:

To improve campaign recognition and regional buy-in, ACOG will explore developing a consistent outreach brand, such as “Clean Air Central Oklahoma.” This identity will unify seasonal campaigns, school programs, employer toolkits, and social media messaging. It will help make Ozone Alert Days and air-friendly behaviors more visible and trusted in the public eye—mirroring successful models like the Capital Area Council of Governments (CAPCOG in Austin, TX) [“Air Central Texas.”](#)

METRICS:

1. Web/social media engagement numbers
2. Public knowledge levels via follow-up surveys
3. Number of campaign partners or toolkits distributed
4. Media coverage and earned impressions

COMMUNITY ACCESS PRIORITIZATION:

1. Translate all core materials into Spanish and Vietnamese (at minimum)
2. Prioritize in-person outreach in historically underserved zip codes
3. Partner with health departments and clinics for outreach to high-risk populations



Community engagement builds public trust, encourages behavior change, and fosters a shared sense of responsibility. When residents are actively involved, programs are more effective, sustainable, and better tailored to the needs of the region.

Strategy 4

Empower Local Governments with Tools, Policies, and Model Practices

GOAL: Support 50-75% of ACOG member communities in adopting local policies and practices that align with air quality improvement goals by 2030.

BACKGROUND:

Local governments in Central Oklahoma are on the front lines of land use, transportation, and permitting decisions that influence air quality. While state and federal agencies regulate major emitters, **cities and towns shape the built environment**, control fleet operations, and can enact ordinances that directly affect emissions.

ACOG plays a critical role in equipping member communities with the tools, data, and model policies needed to take action. From **anti-idling ordinances to zoning for electric vehicle infrastructure**, regional consistency and local leadership are essential to long-term air quality gains.



OBJECTIVES:



Continue to provide air quality technical assistance to RAQP area communities.



Facilitate adoption of at least five local clean air ordinances or resolutions
by 2027.



Develop and distribute model policies, zoning language, and best practices guides.

KEY ACTIONS:

ACTION	LEAD	TIMELINE	RESOURCES
Develop a Local Government Clean Air Toolkit (ordinances, zoning templates, outreach materials)	ACOG	Q3 2025	Internal
Host a Clean Air Policy Forum for elected officials and planning staff	ACOG + DEQ	2027	Internal, partner funds
Offer free emissions reduction consultations for city fleets and facilities	ACOG + Tech Partners	2025-2026	DEQ grants, CMAQ
Promote planning and zoning changes that support EV charging, transit oriented development (TOD), and bike/ped connectivity	ACOG + Cities	2027-Ongoing	STBG-UZA, internal
Recognize communities adopting clean air ordinances at the ACOG Clean Cities Awards Luncheon	ACOG	2026 and annually	Internal

METRICS:

1. Number of local ordinances adopted
2. Municipal fleet transitions (e.g., EV/hybrid vehicles)
3. Toolkit downloads/distributions
4. Participation in forums, trainings, and consultations

COMMUNITY ACCESS PRIORITIZATION:

1. Assist smaller communities with limited staff capacity
2. Include checklists in toolkit materials
3. Encourage public input in local decision-making processes

IMPLEMENTATION TIMELINE

Implementation of the strategies in this plan will occur in phases over the next five years, with responsibilities shared among ACOG, local governments, public agencies, and regional partners. Each strategy includes defined actions, lead entities, and timelines.

Key milestones include:

- 2025** | Launch of campaign branding, anti-idling policy development, and toolkit distribution
- 2026** | Clean Air Schools relaunch, business engagement programs, and regional policy forum
- 2027-2030** | Expanded infrastructure projects, emissions reporting, and adaptive plan revisions

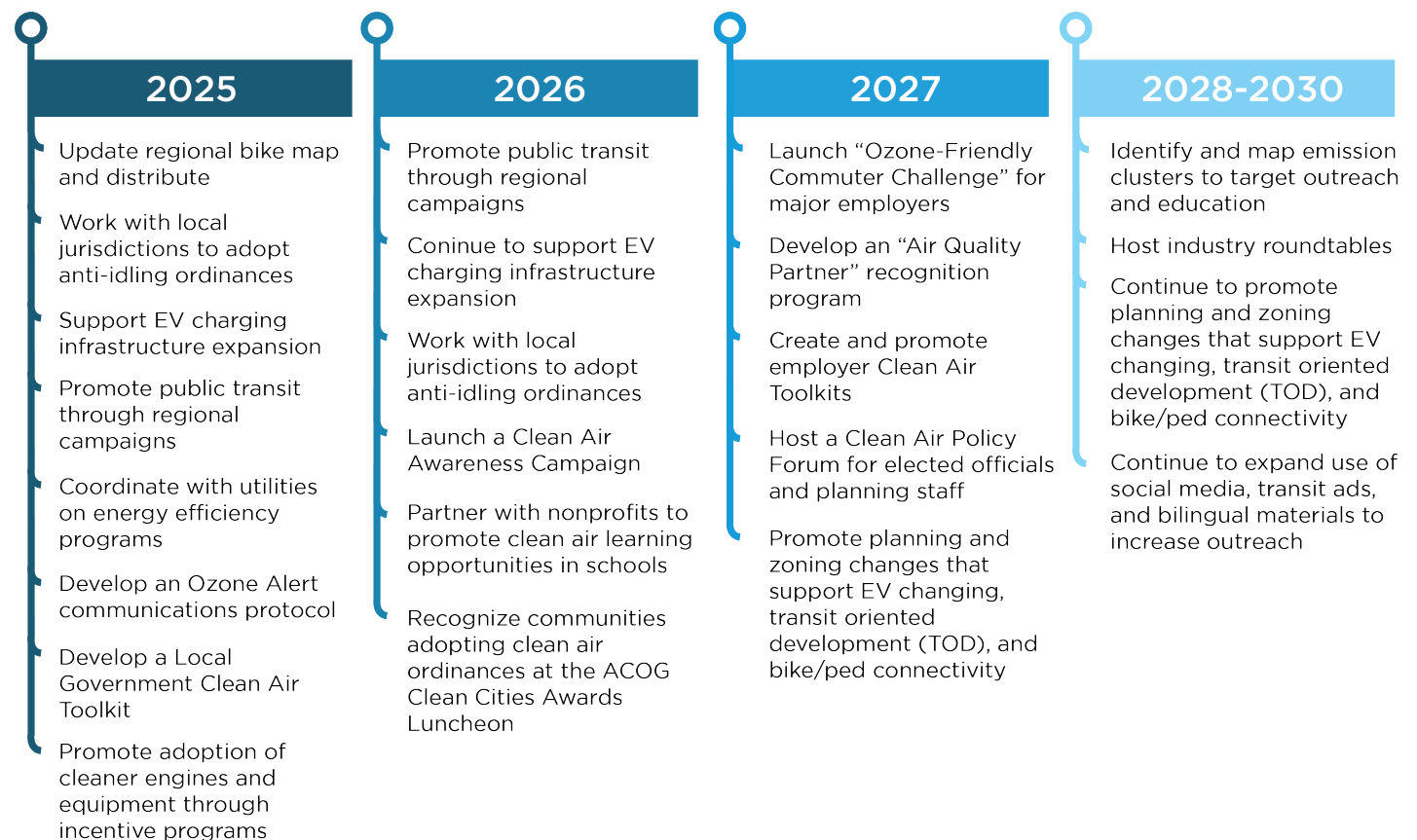




Figure 1: Implementation Responsible Entities

Project	Lead Entity
Clean Air Awareness Campaign	ACOG
Promote EV Infrastructure & Transit Usage	ACOG + Public Transit
Host Industry Roundtables	ACOG + DEQ
Continue to Deploy Employer Clean Energy Air Toolkits	ACOG + Chambers
Develop Air Quality Partner Program	ACOG + Industry
Revive Clean Air Schools Program	ACOG + School Districts
Create Local Government Clean Air Toolkit	ACOG + Cities
Coordinate with Cities on Anti-Idling Ordinances	ACOG + DEQ
Host Clean Air Policy Forum	ACOG

ACOG will maintain a central project coordination role, provide technical support to communities, and track implementation progress through annual performance updates.

MONITORING, EVALUATION & ADAPTIVE MANAGEMENT

GOAL: Update systems for tracking progress on air quality strategies, reporting outcomes annually, and adjusting approaches as needed through 2030.



BACKGROUND:

A strong Monitoring & Evaluation (M&E) framework ensures that the Regional Air Quality Plan remains a living, adaptive document. It allows ACOG and its partners to measure progress, identify gaps early, and demonstrate effectiveness to stakeholders, funders, and the public. The M&E strategy will balance rigor with practicality—leveraging existing data sources while enhancing regional visibility into the impact of clean air actions.

OBJECTIVES:

- Publish an [Annual Air Quality Progress Report](#), beginning in 2026.
- Convene an annual [Clean Air Review Session](#) with member governments and partners to review progress and realign priorities.
- Provide biannual updates to the ACOG Board and applicable policy and technical committees.



CORE PERFORMANCE METRICS:

- Regional ozone concentrations (ppb)
- Total NO_x & VOC emissions (tons/year)
- Transit ridership numbers
- Campaign outreach (impressions, toolkits, social media)
- Local ordinance adoptions and fleet transitions
- Surveyed changes in public knowledge and behaviors

Table 3: Core Performance Metrics

METRIC	FREQUENCY	SOURCE	ALIGNED STRATEGY
Regional ozone concentrations (ppb)	Annually	DEQ Monitors	All
Total mobile NO _x emissions (tons/year)	Biennially	DEQ / ACOG Travel Demand Model	Transportation
Transit ridership numbers	Quarterly	Public Transit	Transportation
Number of Clean Air campaign impressions	Monthly	ACOG Public Information Department	Public Awareness
Number of participating businesses & schools	Annually	ACOG	Industry, Awareness
Local ordinances adopted	Annually	ACOG + Cities	Local Policy
Public awareness survey results	Biennially	ACOG Surveys	Awareness
Number of fleet vehicle transitions	Annually	Cities / ACOG	Transportation, Policy
Clean Air Partner commitments submitted	Annually	ACOG Tracker	All
Progress on voluntary goals (e.g., idling reduction)	Annually	ACOG Partners	All

ACOG will also track qualitative outcomes (e.g., partner engagement, community feedback) and note external factors such as weather or policy changes that may influence air quality trends.



ADAPTIVE MANAGEMENT:

To ensure that the plan evolves with regional needs, ACOG will:



Review and update strategy elements every **five** years



Identify underperforming areas and recommend corrective actions



Integrate emerging technologies and guidance from DEQ/ EPA



Use commitment tracking and partner updates to **document progress**

ACOG will continue to maintain a Regional Clean Air Commitment Tracker to document annual contributions from local governments, school districts, employers, and partner organizations. These commitments may include actions such as adopting no-idling ordinances, fleet conversions, hosting outreach events, or engaging in public education. ACOG will publish an annual summary in each Progress Report to celebrate achievements and encourage greater regional participation.

Table 4: Entity Roles and Responsibilities

ACOG	DEQ/EPA	Local Communities	Partners
Lead tracking, data collection, reporting	Provide monitoring data and regulatory updates	Report on local implementation metrics	Contribute voluntary commitments and engagement

CONCLUSION

This Regional Air Quality Plan serves as a comprehensive framework to guide Central Oklahoma’s coordinated response to evolving air quality challenges.

It reflects a transition from passive monitoring to proactive mitigation—anchored in data, informed by regional planning principles, and aligned with state and federal regulatory expectations.

The strategies outlined within this document represent actionable steps to reduce emissions from mobile, stationary, and area sources, enhance public engagement and education, and support local policy alignment with broader air quality objectives. The inclusion of performance metrics, timelines, and responsible entities ensures that implementation is trackable and accountable.

With the region remaining at risk of ozone Nonattainment, the urgency of coordinated action is both practical and regulatory. Nonattainment designation would introduce substantial economic, administrative, and operational burdens across

communities. As such, this plan should be viewed not only as a public health roadmap, but as a tool for risk management and compliance assurance.

ACOG, in coordination with its member governments, will oversee implementation, monitor progress through annual reporting, and adapt strategies as conditions evolve. The plan is intended to be flexible yet firm in its direction—providing local stakeholders with the tools necessary to contribute meaningfully to regional air quality improvement efforts.

Through implementation of this plan, Central Oklahoma positions itself as a forward-thinking, data-driven region that is committed to protecting public health and maintaining regulatory compliance across the region.

APPENDIX A

GLOSSARY OF TERMS

Ozone (O ₃)	A gas formed when NO _x and VOCs react in sunlight; harmful at ground level, causing respiratory issues.
PM _{2.5}	Fine particulate matter less than 2.5 microns in diameter that can penetrate deep into the lungs.
NO _x (Nitrogen Oxides)	A group of highly reactive gases emitted from vehicles, power plants, and industrial activity.
VOCs (Volatile Organic Compounds)	Organic chemicals that evaporate into the air and contribute to ozone formation.
Nonattainment	A designation given by the EPA when a region does not meet federal air quality standards.
CMAQ	Congestion Mitigation and Air Quality Improvement Program – a federal funding source for emissions-reducing projects.
DERA	Diesel Emissions Reduction Act – a federal program funding retrofits and cleaner engines.
Ozone Alert Day	A day when forecasted ozone levels may exceed health standards, prompting voluntary reduction actions.
Environmental Justice (EJ)	The fair treatment and meaningful involvement of all people in environmental laws and policies.

APPENDIX B

ACRONYM GLOSSARY

ACOG	Association of Central Oklahoma Governments
C-PACE	Commercial Property Assessed Clean Energy
CO	Carbon Monoxide
CSA	Combined Statistical Area
DEEP	Demand & Energy Efficiency Program
EPA	Environmental Protection Agency
EV	Electric Vehicles
FTA	Federal Transit Administration
ITC	Investment Tax Credit
M&E	Monitoring & Evaluation
MSA	Metro Statistical Area
MT	Metric Tons
NAAQS	National Ambient Air Quality Standards
NEI	National Emissions Inventory
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
NEVI	National Electric Vehicle Infrastructure
NTIA	National Telecommunications and Information Administration
O ₃	Ground Level Ozone
ODEQ	Oklahoma Department of Environmental Quality
OEC	Oklahoma Energy Cooperative
OG+E	Oklahoma Gas + Electric
Pb	Lead
PM	Particulate Matter
ppb	Parts Per Billion
ppm	Parts Per Million
qm	Quantitative Microscopy - Particulate Matter unit
RAQP	Regional Air Quality Plan
REAP	Rural Economic Action Plan
SIC	Standard Industrial Certification
SO ₂	Sulfur Dioxide
SO _x	Sulfur Oxides
STBG-UZA	Surface Transportation Block Grant - Urbanized Area
TMD	Travel Demand Management
TOD	Transit-Oriented Development
TPY	Tons Per Year
TRI	Toxic Release Inventory
VMT	Vehicle Miles Traveled
VOCs	Volatile Organic Compounds

APPENDIX C

DAMAGE CAUSED BY POLLUTANTS

Exposure to these pollutants in combination with others produce more severe effects than exposure to pollutants separately. Pollutants pose a greater threat to individuals with chronic lung diseases,

asthma, and cardiovascular diseases. Each pollutant poses a different threat to high-risk individuals as well as even healthy individuals.



CARBON MONOXIDE (CO)

CO affects the central nervous system by depriving the body of oxygen. Once inhaled, CO enters the blood stream and binds chemically to hemoglobin, the component of blood that carries oxygen through the body. Hemoglobin binds more readily with CO than with oxygen; thus, in the presence of CO, hemoglobin cannot adequately distribute oxygen to all tissues of the body. CO also weakens contractions of the heart, decreasing the volume of blood being pumped to the muscles and organs. The health threat is most serious for people suffering from cardiovascular disease who are

unable to compensate for the decrease in oxygen. Individuals with anemia or lung diseases, unborn children, and pregnant women, and also healthy children are likely to be more susceptible to the health effects of CO. Healthy adults are affected as well, but only at higher levels of exposure. Visual impairment, reduced work capacity, reduced manual dexterity, poor learning ability, and difficulty performing complex tasks are often associated with exposure to high CO levels, as well as affecting mental function, vision, and alertness.

GROUND LEVEL OZONE (O₃)

Ground level ozone can cause health problems because it may damage lung tissue, reduce lung function, and sensitize the lungs to other irritants. It also severely irritates the mucous membranes of the nose and throat, causing coughing and increased infection of the lungs. The ODEQ has estimated that **90% of inhaled ozone is never exhaled**. Its effects are more severe in individuals with chronic lung disease, asthma or diseases of the heart and circulatory system, and can affect these individuals at lower concentrations. Exposure to O₃ for several hours at relatively low concentrations has also been found to significantly

reduce lung function in normal, healthy people, particularly during exercise.

Ground level ozone not only affects humans, but it can be even more damaging to plants. It interferes with the production and storage of starches in plants, resulting in leaf injury or reductions in growth and yield of plants. Some plants are especially sensitive to O₃ and show damage at low concentrations. These plants include soybeans, corn, beans, alfalfa, oats, clover, shrubs, and deciduous trees.

NITROGEN DIOXIDE (NO₂) & SULPHUR DIOXIDE (SO₂)

NO₂ and SO₂ are pulmonary irritants affecting primarily the upper respiratory system and contributing to respiratory illnesses, alterations in pulmonary defenses and aggravation of existing cardiovascular disease. Individuals with asthma, respiratory disorders and lung diseases are more sensitive to their effects. An exposure to 1.5 ppm of SO₂ for only a few minutes can produce a temporary inability to breathe normally due to increased airway resistance. **Healthy individuals exposed to concentrations of NO₂ from 0.7 to 5.0 ppm for 10 to 15 minutes have developed abnormalities in pulmonary airway resistance.**

NO₂ and SO₂ in the air are significant contributors to a number of environmental effects such as acid rain, which is formed when these pollutants rise high into the atmosphere and react with water and oxygen. Acid rainfall can increase the susceptibility of aquatic and terrestrial ecosystems to various forms of environmental stress. Changes in the acidity of water bodies can produce physiological changes in various types of aquatic life.

NO₂ also contributes to eutrophication, the process in which nutrient overload reduces the amount of oxygen in water, resulting in an environment destructive to fish and other animal life. Other effects of NO₂ include degradation of vegetation, materials and visibility. NO₂ and NO react with water vapor to form aerosol droplets that limit visibility. NO₂ affects metals by forming salts that increase corrosion. It also fades fabric, degrades rubber and harms vegetation. Plant damage includes bleaching or death of plant tissue, loss of leaves and decreased growth rate.

SO₂ can also damage plants and non-living materials. High levels of SO₂ may injure the leaves of some plants, including trees and agricultural crops. Sulfur oxides can accelerate the corrosion of metals by first forming sulfuric acid, either in the atmosphere or on the metal's surface. Sulfuric acid can also attack a wide variety of building materials including limestone, marble, roofing slate, and mortar.

PARTICULATE MATTER (PM)

PM may lead to major human health effects, including effects on breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, alterations in the body's defense system against foreign materials, damage to lung tissue, carcinogenesis or premature death. Individuals with chronic obstructive pulmonary or cardiovascular disease, influenza, asthmatics, the elderly and children are highly susceptible to the effects of PM.

The extent of the effects depends on the concentration, size, and chemical composition of the PM, as well as the concentration and composition of any pollutant gases reacting in combination with the PM. Particles less than 6 Qm in diameter can penetrate the bronchial passages. Particles smaller than 1 Qm can be deposited in the lungs, which become damaged, and may cause changes to occur in the immune system.

LEAD (Pb)

Exposure to lead mainly occurs through inhalation and ingestion. Today there are three major sources of lead poisoning: lead-based paint, drinking water, and urban soil and dust. Airborne lead particles are easily deposited into the lungs, where it enters the bloodstream and is distributed throughout the body. It accumulates in blood, bone, and soft tissue, and if ingested, **ten to fifteen percent is absorbed into the body.** Children and pregnant women have a higher absorption rate. Low-level

lead poisoning may have nonspecific symptoms like headaches, abdominal pain, and irritability. Even at low doses, children may suffer central nervous system damage or slowed growth. High blood-lead levels in children are associated with permanent deficiencies in growth and intelligence. Excessive exposure to lead may cause anemia, kidney disease, reproductive disorders, and neurological impairments.

APPENDIX D

REGIONAL PRIVATE SECTOR COMPANY EMISSIONS REDUCTION PLANS

Similar to ACOG members, universities and many entities establish their own sustainability efforts, goals, and timeframes to do their part in maintaining attainment in the Oklahoma City MSA and Oklahoma City-Shawnee CSA.

Permission was granted from the local university and entities to highlight their plans within this Regional Air Quality Plan. The goal in highlighting their efforts within this plan is to provide an example of how other companies and educational services can implement strategies to better protect their community as well as the air quality within their regions. The study team also got together with a few top emitting companies in our study area to discuss their emissions reduction efforts.



SURVEYS & ONE-ON-ONE INTERVIEWS WITH TOP EMITTERS

Based on the 2020 emission inventory data reviewed above in this report, companies within the top 50% of total emissions for facilities in the study area were contacted to respond to several questions regarding emission reduction projects and company action on sustainable practices. There were twelve (12) companies contacted that were in the top 50% for NO_x and/or VOC emissions. The study team agreed with respondents to blind the company names within this report. The tables on the next pages show the entity emissions as a percentage of all the point source emissions for each pollutant in the study area.

Of the twelve (12) companies contacted through emails and phone calls, the study team discussed the survey and received detailed responses from four (4) companies. There were four (4) additional companies that provided limited email responses and directed us to their public website and related sustainability efforts. The remaining four (4) companies did not respond to emailed inquiries and an effort was made to pull information from websites if it was available. The table on the next page provides a summary of the positive responses to the survey questions for each company along with the source of the information or meeting type.

Notice: To protect the privacy and security of each organization, company names have been anonymized. This measure ensures confidentiality for businesses that have participated in the survey.

NO_x 2020 EI Data for Oklahoma City Metro Area

TOP EMITTER % BRACKET	COMPANY BLINDED NAME	INDUSTRY	EMISSION % OF TOTAL	FACILITY COUNT % OF TOTAL
5%	Company A	ELECTRIC SERVICES	15%	Less than 1%
10%	Company A	ELECTRIC SERVICES	15%	Less than 1%
25%	Company A	ELECTRIC SERVICES	15%	Less than 1%
	Company B	CRUDE PETROLEUM & NATURAL GAS	8%	4%
	Company C	NATURAL GAS TRANSMISSION	6%	1%
50%	Company A	ELECTRIC SERVICES	15%	Less than 1%
	Company B	CRUDE PETROLEUM & NATURAL GAS	8%	4%
	Company C	NATURAL GAS TRANSMISSION	6%	1%
	Company D	CRUDE PETROLEUM & NATURAL GAS	6%	2%
	Company E	CRUDE PETROLEUM & NATURAL GAS	5%	5%
	Company F	CRUDE PETROLEUM & NATURAL GAS	4%	6%
	Company G	NATURAL GAS LIQUIDS	4%	Less than 1%
	Company H	CRUDE PETROLEUM & NATURAL GAS	4%	6%

VOC 2020 EI Data for Oklahoma City Metro Area

TOP EMITTER % BRACKET	COMPANY BLINDED NAME	INDUSTRY	EMISSION % OF TOTAL	FACILITY COUNT % OF TOTAL
5%	Company I	CRUDE PETROLEUM & NATURAL GAS	10%	11%
10%	Company I	CRUDE PETROLEUM & NATURAL GAS	10%	11%
25%	Company I	CRUDE PETROLEUM & NATURAL GAS	10%	11%
	Company E	CRUDE PETROLEUM & NATURAL GAS	8%	5%
	Company F	CRUDE PETROLEUM & NATURAL GAS	8%	6%
50%	Company I	CRUDE PETROLEUM & NATURAL GAS	10%	11%
	Company E	CRUDE PETROLEUM & NATURAL GAS	8%	5%
	Company F	CRUDE PETROLEUM & NATURAL GAS	8%	6%
	Company J	CRUDE PETROLEUM & NATURAL GAS	6%	4%
	Company K	CRUDE PETROLEUM & NATURAL GAS	5%	4%
	Company H	CRUDE PETROLEUM & NATURAL GAS	5%	6%
	Company D	CRUDE PETROLEUM & NATURAL GAS	4%	2%
	Company L	CRUDE PETROLEUM & NATURAL GAS	3%	1%
	Company M	CRUDE PETROLEUM & NATURAL GAS	3%	3%

Top Emitter Survey Response Summary

COMPANY BLINDED NAME	A	B	C	D ^a	E	F	H	I	J	K	L	M	
BUSINESS SECTOR ^b	U	OG	OG	OG	OG	OG	OG	OG	OG	OG	OG	OG	
DATA SOURCE ^c	IP	W	IP	W	W	W	IP	W	W	W	W	IP	
Does your company have a sustainability report? How often is it published?													9 of 12
Does your company have any sustainability projects planned that would result in significant decreases of NO _x or VOC emissions at the facilities in the OKC metro area?													8 of 12
Are you aware of which emission source types could benefit the most from operational changes or added controls? Would you be willing to share which source types are your biggest emitters?													7 of 12
Have there been any projects since 2020 that reduced the emission profile of the facility (facilities) in the OKC area? If so, what were the projects and what were the results of the project?													4 of 12
Does your company have any Scope 3 emissions considered in your sustainability report?													3 of 12
Are there any actions your facility (facilities) or employees could take during ozone alert days that would reduce emissions?													3 of 12
Are there any benefits you could offer employees to incentivize carpooling?													1 of 12
Would you be willing (or planning) to convert or acquire new fleet vehicles that either combust natural gas or are electric?													2 of 12
Are there any upcoming local, state or federal regulations that are expected to reduce NO _x and VOC emissions at your facility or facilities?													6 of 12

^a Company G was under the same parent as Company D and was combined for this table.

^b U = utility power or electrical services sector; OG = oil and gas sector

^c IP = In-person meeting; W = Website

The study team found the majority of the top emitters did report having a sustainability program that was focused on emission reductions. Most of the emission targets were related to GHG; however, these projects have co-pollutant benefits that reduce NO_x and VOC emissions. There are four (4) of the questions above that will be expanded on in this section to provide further details on emission reduction projects by these top emitters.

1. Upcoming Sustainability Projects - planned projects that would result in significant decreases of NO_x or VOC emissions at the facilities in the Oklahoma City Metro area

2. Identified Source Types - sources identified with significant NO_x and VOC emissions in the Oklahoma City Metro area
3. Emission Reduction Projects Since 2020 - projects that reduced the emission profile of the facilities in the Oklahoma City Metro area
4. Upcoming Regulations Expected to Reduce Emissions - local, state or federal regulations that are expected to reduce NO_x and VOC emissions at the facilities in the Oklahoma City Metro area

UPCOMING SUSTAINABILITY PROJECTS

As a result of voluntary efforts, or the implementation of new federal requirements, there are several emission reduction projects for NO_x and VOC that will be completed within the next few years for point sources in the Oklahoma City metro. Two companies surveyed in person are planning upgrades to existing large combustion sources that are expected to lower NO_x emissions. Company A plans to replace two older boilers with new combustion units that will be subject to updated state and federal regulations which will significantly reduce NO_x emissions. Company C expects to switch several large horsepower gas-fired reciprocating engines from lean-burn models to rich-burn models to reduce methane slip (uncombusted methane from fuel) and the overall GHG profile for the engines. As a result of this change, the VOC emissions would likely be reduced since it is related to combustion efficiency. Additionally, the engines would also be controlled with a stringent 3-way catalyst which would further reduce VOC emissions and at minimum keep existing NO_x emissions at current levels. Company H has a robust methane and VOC emission reduction

plan for its oil and gas production facilities in the Oklahoma City metro. The company is in the process of eliminating all natural-gas driven pneumatics, using flyover surveys to identify and repair fugitive equipment leaks, implementing tankless design for all new well pads, utilize electric motors on drilling rigs and completion activities, and reduce the overall horsepower on its engine fleet by switching to a low pressure gas gathering system. Company M plans to install electric air compressors at several facilities to eliminate gas-driven pneumatics and the associated methane and VOC emissions. Additionally, several other oil and gas companies (Company F, Company I, Company K and Company L) operating in the Oklahoma City area that were not interviewed in person, have methane and VOC reduction projects listed on public-facing websites and sustainability plans. As mentioned below in the regulatory review, it is expected oil and gas sources will be required to implement significant methane and VOC reductions through 2032 to comply with the newly finalized federal rules, the new EPA methane rule.

IDENTIFIED SOURCE TYPES

Of the companies with significant NO_x and VOC emissions listed in this section of the report, there are eleven (11) involved in the oil and gas industry segment and one (1) electric utility. For these companies and associated facilities, the major source of NO_x emissions will be combustion units. For the utility company (Company A), the combustion units will be large gas-fired boilers and gas-fired turbines of various sizes that are utilized to generate electricity for the power grid. For oil and gas facilities, the combustion units will be gas-fired reciprocating engines and turbines utilized to increase the pressure of natural gas stream for emission capture or pipeline delivery. In general, for all these combustion sources, NO_x emissions are lowered by controlling the air-to-fuel ratio of the combustion or by adding post combustion controls such as catalytic converters. These combustion units are currently subject to both new and existing source regulations that require maintenance practices to reduce emissions and/or emission standards.

The major sources of VOC emissions will be located at the oil and gas sector facilities. By the nature of the business, the facilities handle product streams that contain VOCs and they are emitted to the

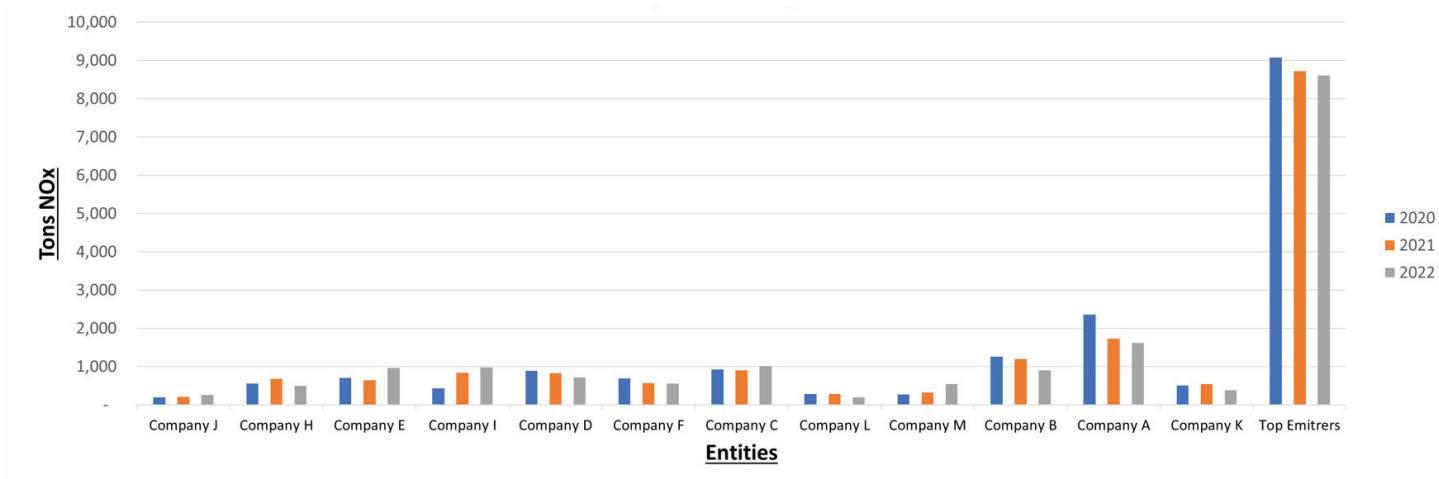
atmosphere through various processes and pieces of equipment. As natural gas and liquid hydrocarbons are extracted from geological formations under various physical conditions, changes in pressure and temperature along with various processing steps will cause the potential for VOCs to be sent to the atmosphere. There are several facility design and control devices that can greatly reduce or eliminate these emissions and keep the hydrocarbon in the products that exit the facilities along the value chain. For the facilities identified in this section, the main sources of emissions are those identified in oil and gas rules developed by EPA; including, pneumatic devices, equipment leaks, well completions, storage vessels, well liquid unloading, compressor leaks, associated gas venting/flaring, amine units (CO₂ and H₂S removal), and dehydration units (water removal). With the recent publication of the new EPA methane rule, all of the listed sources of VOC are now subject to new and existing source rules that require VOC emissions to be reduced or eliminated.

EMISSION REDUCTION PROJECTS SINCE 2020

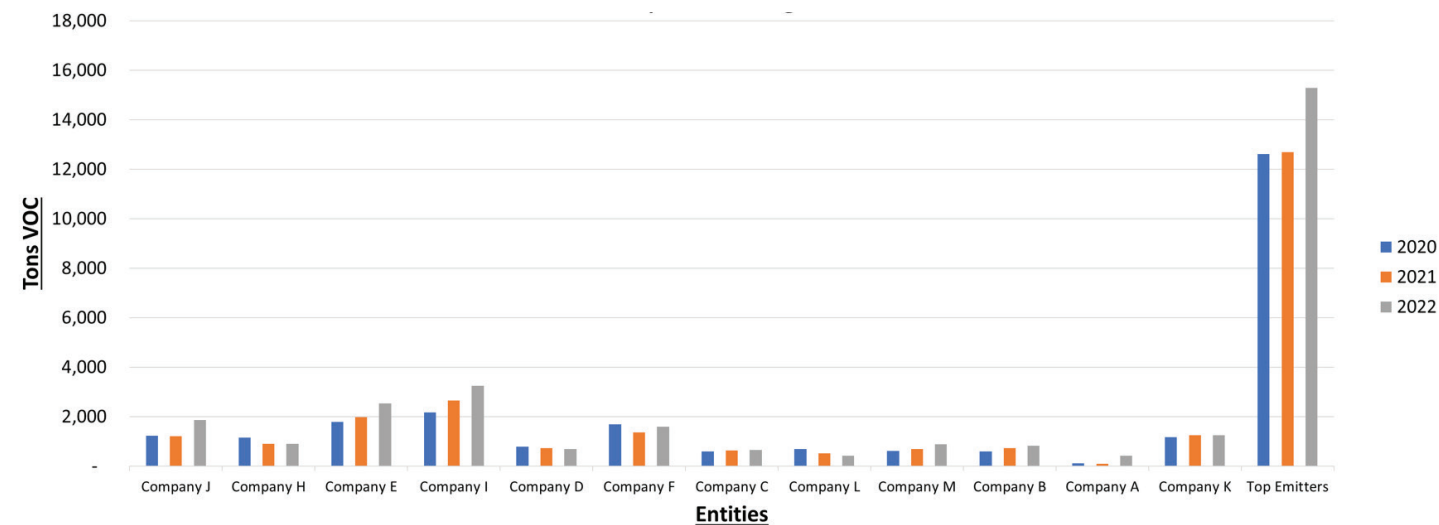
Company A has ongoing efficiency projects that have improved combustion emissions on existing units since 2020. Adjustments to air-fuel ratio can be a significant way to reduce NO_x emissions. Company C mentioned that emissions have been reduced from 2020 based mainly on a reduction in natural gas volumes in its pipeline systems. Lower volumes of gas allow for a reduction in the engine horsepower required to move it which results in less fuel combusted. Company F’s website details a reduction

in NO_x emissions through the use of electric motors to drive compressors rather than gas-fired engines. It is unclear whether these projects were implemented in the Oklahoma City Metro area. The graphs below show the emission trends of these companies in emission inventory years from 2020 to 2022. As of the date of this report, 2023 data is not yet available. Overall, NO_x emissions from these top emitters have decreased and VOC emissions have increased.

NO_x Emissions from Top 50% Emitting Entities from 2020 to 2022



VOC Emissions from Top 50% Emitting Entities from 2020 to 2022

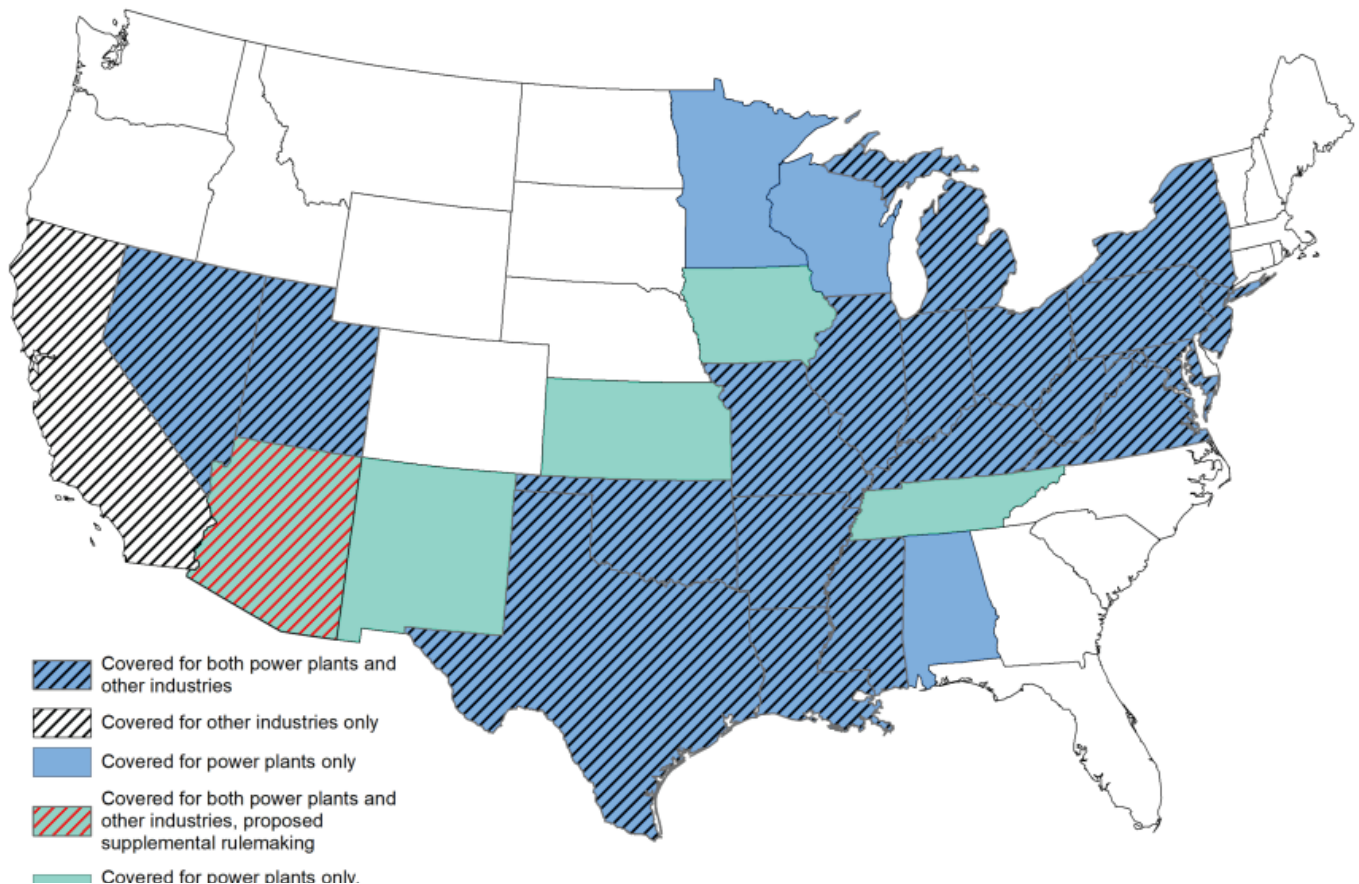


UPCOMING REGULATIONS EXPECTED TO REDUCE EMISSIONS

Two regulations were identified by the companies we spoke with that are expected to reduce ozone precursor pollutants, the new “Good Neighbor Plan” which focuses on NO_x cross state pollution and the new oil and gas rules under the EPA methane rule which focus on VOC (and methane) emissions. When implemented, the Good Neighbor Plan will require large combustion units to reduce NO_x emissions. The large combustion units that will require control were identified using detailed air dispersion models showing impacts of downwind emissions on other

states air quality. The EPA methane rule for new sources is now active and is expected to reduce VOC emissions significantly. They are emission guidelines that will be implemented through an ODEQ rulemaking for existing oil and gas sources. These existing source standards are expected to begin to apply in 2028 or 2029.

States Covered Under the Final Good Neighbor Plan and the Proposed Supplemental Rulemaking



Source: www.epa.gov

APPENDIX E

ACOG MEMBER SUSTAINABILITY PLANS

OKLAHOMA CITY SUSTAINABILITY PLAN

The Office of Sustainability is responsible for the enhancement of Oklahoma City's sustainability efforts throughout the organization and the community by providing technical recommendations, sustainability planning, and outreach services to the City Departments and the public. The City's first sustainability plan, [adaptokc](#), was unanimously adopted as an amendment to the comprehensive plan, [planokc](#). The Planning Commission and City Council adopted [adaptokc](#) in the summer of 2020. The purpose of the plan, is to "strengthen our community in the face of economic, environmental, and social challenges." The plan is not a regulatory document or ordinance.

This sustainability report frames the need to adapt as the need to mitigate risks. Oklahoma City's residents will continue to experience the effects of an increase in average annual temperatures and flash flooding events. This will increase energy consumption, specifically in electricity and the cost of city operations.

To adapt to extremities, the plan outlines objectives for Oklahoma City which include:

- Reducing the cost of electricity with increased efficiency and renewable energy use
- Mitigating heat through development requirements and more natural urban environments
- Reducing emissions threatening our health and economy
- Strengthening the infrastructure against extreme weather and declining revenue
- Enhancing the approach to disaster recovery and response
- Protect and conserve water resources
- Reduce economic vulnerability through strong wages and job growth

Within the Air Quality goals, the [adaptokc](#) plan outlines the initiatives to reduce transportation emissions and increase funding for transportation infrastructure. Oklahoma City is ranked fifth in the



nation for daily vehicle miles traveled (VMT) per capita with residents estimated to drive about 36.7 miles daily. The primary source of CO₂ emissions are personal vehicles, and these emissions are not only increasing in quantity but also accelerating in growth. Since the year 2000, Oklahoma City has seen nine of the ten years with the highest average CO₂ emissions. Implementing steps to reduce CO₂ emissions now could help Oklahoma City avoid the brunt of a future regulatory update to the NAAQS and help reduce its contribution to climate change. The accumulation of CO₂ increases conditions for more frequent and intense wildfires as spring and summers grow drier and hotter.

Within the [adaptokc](#) plan, it is stated that the latest Energy Information Administration (EIA) data for Oklahoma indicates the largest source of CO₂ emissions is transportation, mirroring national numbers. It is crucial to continue to implement policies and design and build infrastructure to diversify Oklahoma City's mode of transportation, as greater use of so-called alternate modes of transportation is a key tactic to reduce emissions. A significant growth is projected for the region between 2010 and 2040, the Oklahoma City Metro area is expected to increase 40% in population and 54% in VMT. Air quality initiatives within the plan include the reduction of transportation emissions and increasing funding for transportation infrastructure. Transportation conformity requires any federally supported transportation project, whether supported through federal funds or through federal approval, to demonstrate it would not negatively impact the area's air quality or exceed the area's motor vehicle emissions budget.

NOTICE ACOG previously referenced the EPA's Environmental Justice Screening Tool (EJScreen) as a resource for identifying areas of potential air quality concern and understanding the intersection of environmental and demographic factors across the region. However, as of early 2025, access to EJScreen has been removed from federal websites following policy changes under the current presidential administration. This removal is part of a broader rollback of diversity, equity, and inclusion (DEI) initiatives across federal agencies.

While this tool is no longer available online, ACOG remains committed to equitable planning and continues to incorporate available demographic, health, and air quality data into our regional strategies. We will provide updated references or tools as they become available and ensure that our planning process remains inclusive, data-informed, and transparent.

Oklahoma's most prominent alternative fuel is CNG, hardly surprising as Oklahoma was the nation's sixth-largest producer of marketed natural gas and producer of crude oil in 2023, according to [U.S. Energy Information Administration](#). CNG fuel consumption in Oklahoma continues to trend upward as consumption reached an all-time high in 2016. The DOE Alternative Fuel Data Center identifies 103 public CNG stations statewide with 16 of those within Oklahoma City's corporate limits. As mentioned by the adaptokc plan, Oklahoma leads the nation in CNG fueling stations per capita thanks in part to a statewide corridor with public CNG station every 100 miles.

Locally, the EPA tool EJSCREEN, places Oklahoma City in the 91st percentile nationally for ground level ozone meaning the average person in an Oklahoma

City Census block group has a chance of exposure greater than equal to 91% of the U.S. The Oklahoma City-County Health Department reports chronic lower respiratory diseases (CLRD) were the third leading cause of death in 2011-2015 for residents of all ages in Oklahoma County, and disproportionately for residents ages 55 or over. The built environment can directly influence exposure to traffic-related pollutants like NO_x based on land uses near highways as well as busy streets and roads. Research indicates that populations living close to roads are most likely to experience adverse health outcomes including breathing problems, heart diseases, cancer, and premature death. Ultimately, supporting an expansion of transportation modes through service and infrastructure is the primary way to reduce ozone forming emissions.

TINKER AIR FORCE BASE (TAFB) – GREEN INFRASTRUCTURE PLAN

The Green Infrastructure Plan was first published in 2007 as a comprehensive vision for interconnecting and managing natural environmental systems on and adjacent to TAFB to ensure the sustainability of the environment and the military mission. TAFB created this plan to guide development and support current and future military mission needs while not degrading sensitive environments. Sensitive environmental resources such as floodplains, wetlands, creek systems, etc. have been identified across the base. The intention is to sustain a green infrastructure network, provide optimal military operational sustainability, and promote societal, economic, and ecological benefits for Tinker and neighboring communities in cooperation with the desired development pattern of the Installation Development Plan (IDP). While in the past TAFB has had difficulties meeting regulatory standards, the GI Plan moves the Tinker AFB in the direction of lessening the chances of environmental violations such as exceedances of permit limits. Tinker is committed to performing its emissions responsibly to protect human health and the environment. The GI states Tinker's environmental policy (in part) as:

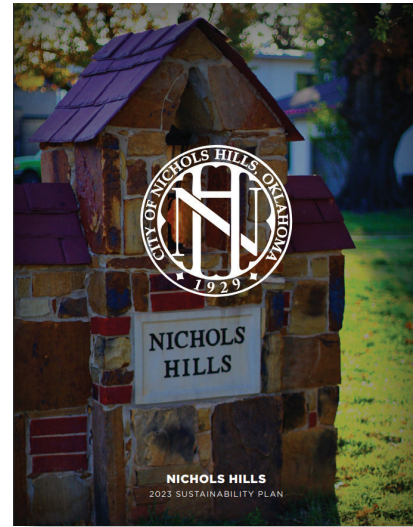
"Balance development of built and natural land areas to ensure quality environmental environment which fully supports and sustains military readiness while meeting environmental conservation mandates." Execution of the GI plan drives continuing improvements by focusing on the gray facilities (i.e., buildings, roads, et.) and green facilities (i.e., adjoining natural areas that buffer against natural disasters and provide high-quality recreational space). Hybridizing the two infrastructures is innovative resource stewardship which provides infrastructure readiness.

Tinker AFB aims to continue to restore and maintain the green infrastructure to improve habitat structure and health for species at risk, reduce mowing requirements, increase and sustain free ecological services provided by the network, promote wildland fire safety, and enhance aesthetics. Their hope is to continue to promote on- and off-base awareness of the GI plan benefits and requirements and institutionalize conservation planning principles and philosophies applicable to base projects through 2030.

2023 NICHOLS HILLS SUSTAINABILITY PLAN

[The Nichols Hills Sustainability Plan](#) is the result of two years of time investment, collaboration, and discussion among volunteer residents, community stakeholders, city staff, and local elected officials. The Environment, Health, and Sustainability Commission along with the 35+ member Nichols Hills Sustainability Plan Subcommittee, established performance metrics in the form of actions and goals. The City Council revised the plan and added their own insights and visions before finalizing it for adoption. The plan establishes goals and strategies to enhance safety and security. It is set to minimize noise pollution and adverse effects to air quality, reduce energy consumption to lessen demand on the electric grid, and build out resiliencies in the electric system to minimize power outages throughout the city. This plan also helps develop a program to encourage more energy efficient residential construction, reduce waste, conserve and enhance the city water supplies, improve the conditions and lifespan of the roads, and promote the quality of life for all residents. Nichols Hills, as their commitment to preserving and improving air quality, worked with ACOG to create their plan. The City plans to help engage its residents with ACOG Ozone Alert Days via a marketing campaign that includes the Nichols Hills website, app, and local access channel. The Nichols Hills sustainability plan suggests residents to get involved by joining ACOG Ozone Alerts, reviewing the Tree Canopy Assessment when considering new plantings, reducing light pollution, and to lower the concentration of indoor pollutions by operating fans and opening windows. Other ways to improve indoor air quality include changing AC filters, checking air ducts, and using indoor plants as natural air filters.

Nichols Hills aims to eliminate city-owned gasoline and diesel back-up generators with long-term strategies. The focus is to purchase natural gas generators going forward. However, some diesel will be needed for the time being out of concern for a major weather disaster that could result in gas service interruptions and potentially hinder emergency services. The City's plan is to ultimately purchase back-up natural gas tanks on trailers to address this concern, for the meantime though, both will be on reserve. Beginning in 2023, the City planned to replace each of its three diesel sanitation trucks with Compressed Natural Gas (CNG), which will be cleaner in emission than diesel and can be partially funded by fleet transition grants. The City currently owns two



hybrid cars and two electric police cars with another electric vehicle (EV) Public Works truck on order. Many EVs are eligible for fleet transition grants for which Nichols Hills can qualify for. Nichols Hills' Mayor E. Peter Hoffman, Jr. secured funding from ACOG for 80% of the electric charging stations for fleet.

The City plans to explore adding motion sensors on streetlights to further conserve electricity and reduce light pollution. Light pollution can be reduced by installing monitor sensors or light timers and by using LED lights with dimming functions. As of 2022, 331 of Nichols Hills' 395 streetlights have been converted to LED. The City is now evaluating model ordinance requirements promoted by the International Dark-Sky Association (IDA), which include the possibility of installing motion sensors on our streetlights.

Technological advances now present new, more sustainable concrete pavement options and the City of Nichols Hills has researched the carbon footprint, costs, and lifespan of different street paving materials. They are exploring how a thin concrete paving system can be integrated into future paving projects. Such a system could reduce construction and maintenance costs while maximizing performance and service life. In 2024, the City has a goal to test a pilot program using thin concrete paving system versus the standard paving system. Along with aiming to improve air quality and using clean energy, the City plans to take actions to improve infrastructure, quality of life, safety and security, emergency preparedness, and acquire a sanitary sewer system. This plan outlines that it aims to provide more outreach and communications to engage all residents in this journey.

CITY OF EDMOND SUSTAINABILITY PLAN

The City of Edmond has identified sustainable development as meeting the needs of the present without jeopardizing the needs of future generations. This applies to municipal operations, land use decisions, transportation choices, and natural resources. The City of Edmond mentions, within their [sustainability page](#), that the city values healthy ecosystems, the wise use of resources, and it actively seeks to retain and enhance a locally based economy. This is reflected as a Strategic Operating Plan for the City of Edmond, where all departments are encouraged to include sustainability as a regular part of their processes. The City of Edmond states that they use a combination of short- and long-range activities designed to reduce energy consumption, reduce greenhouse gases, and ultimately save the city and residents money while providing a cleaner, healthier living environment. Previous sustainability efforts accomplished by the City, according to their [2018 Energy Sustainability Report](#) include renewable energy such as geothermal energy and wind energy.

Geothermal energy is heat energy from the earth. Geothermal wells have been used for several decades as an adjunct to existing heating and cooling systems. The systems are designed to use the Earth's relatively constant subsurface temperature along with a heat exchanger to either add or remove heat from a dwelling. From 2006 to 2018, the City of Edmond has installed over 400 wells in places like the Public Safety Center, the Edmond Recreation and Aquatic Center (ERAC), and the Water Resources Recovery Facility (WRRF).

Wind Energy has also been a successful program for alternative and clean energy for the residents of Edmond, Oklahoma as outlined in their 2018 Energy Sustainability Report. Edmond Electric provided the opportunity to reduce indirect emissions – emissions resulting from electricity purchased from an electricity service provider. The City of Edmond has utilized wind power through the Oklahoma Municipal Power Authority (OMPA) wind power program, also known as Pure and Simple.

In 2011, Edmond's Water Resources converted its remaining facilities to the Pure and Simple program. This granted the City to become an EPA Green Power Partner, a voluntary program that encourages the use of renewable energy sources, such as solar, wind, geothermal, biomass, and low-impact hydro. This later allowed the City to become a member of the EPA Green Leadership Club. By

2013, Edmond became Oklahoma's first EPA Green Power Community – meaning Edmond had exceeded the EPA guidelines for buying renewable energy. Edmond became the first city in Oklahoma to use 100% renewable energy for its City facilities by 2018.

The City of Edmond has also implemented transportation alternatives to their residents to continue being a leading community. In 2011, a new ordinance was passed providing better regulation, and rules for allowing bicycles on sidewalks. The Edmond Bicycle Master Plan described a planned network of not just trails but also on-street wayfinding routes. The City of Edmond also offers its residents free Citylink buses with wheelchair accessibility. Between 2009 and 2018, the ridership of the Citylink increased by 208% (68,159 riders/year to 209,941 riders/year). The Edmond Public Transportation Committee is also considering a plan to partner with businesses along I-35 to provide a route for hospitals and shopping corridors in that area.

This City provides other programs that aid in improving the air quality such as:

- The network of public EV stations being placed throughout the City which also uses the Pure and Simple wind tags
- A policy by which the City enforces less idling in vehicles through GPS enable software
- Urban Forestry programs including tree-giveaway and planning events

The City of Edmond is currently under contract to create a new sustainability plan. With their new plan, their hope is to establish some timeframes as well as provide additional information for the residents of Edmond. More information on these programs can be found on their [website](#).



APPENDIX F

EMISSIONS REDUCTION PLANS

CRIMSON & GREEN, THE UNIVERSITY OF OKLAHOMA

The University of Oklahoma (OU) is committed to the sound management of their resources and the impact of their operations. The University acknowledges on their [Crimson & Green page](#) that resources are finite, and the decisions and actions made today affect our future generations. The University has been able to reduce energy consumption per square foot by 20% (compared to Fiscal Year 2012 baseline levels) and emissions by approximately 60% (compared to Fiscal Year 2008 baseline levels) due to energy conservation efforts and the procurement of electricity from renewable sources. The University meters electricity, natural gas, steam, chilled water, and domestic water. In 2012, OU initiated metering improvement plans to improve the metering infrastructure on campus and provide building-level utility data across campus. OU initiated a central smart meter platform to upgrade to all electric, non-potable water, domestic water, and natural gas metering with a current target completion of 2023. Metering data is collected, recorded, and analyzed to form the basis of energy efficient improvements and other capital expenditures to reduce utility usage. OU reports that from 2008 to 2022, the Norman campus has reduced greenhouses gas emissions by more than 60%. When considering the growth in campus square footage over that same time frame, emissions have been reduced by more than 70% per square foot. OU has set a goal to achieve climate neutrality by the year 2050.

On September 10, 2008, the University signed an agreement with OG&E to acquire 100% of their purchased electricity from renewable energy sources. This project was instrumental in enabling OG&E to build the OU Spirit Wind Farm in northwestern Oklahoma. The 101 megawatt “OU Spirit” wind farm features 44 2.3 MW turbines. OU currently ranks first in the Southeastern Conference and twelfth in the nation among higher educated institutions in the Environmental Protection Agency’s Green Power Partnership. OU was honored by the EPA as the 2012 Green Power Partner of the Year. OU has also created opportunities for alternative transportation for its students, faculty, and staff. The



Campus Area Rapid Transit (CART) is available to OU students, faculty, and staff to ride in Norman fare free. The CART operates five campus routes Monday through Friday. The VeoRide program offers members of the campus community another form of transportation through shared bicycles and scooter access. The VeoRide program has an app that allows community access. To encourage the use of bicycles on campus, OU offers many bike racks around campus and bike repair stations to help keep bikes well-tuned. Bike lockers are also available for rent to help keep bikes locked up for the semester or for the year. The campus also provides parking permit holders with free electric vehicle charging stations.

OU promotes environmental sustainability awareness annually on campus during “Green Week” which takes place annually during April and creates a fun and informative event where students can learn how they can lessen their impact on their environment as well as help develop their community. To learn more about the OU’s efforts, visit their [website](#).



DEVON ENERGY SUSTAINABILITY REPORT 2023

Devon Energy is a leading company in the energy industry, producing oil and natural gas that are essential to lives and livelihoods around the world. Devon produces valuable commodities that are fundamental to society, and according to their sustainability report, they do so in a safe and environmentally responsible and ethical manner while striving to deliver strong returns to shareholders. Devon states in its [2023 Energy Sustainability Report](#) that to reduce their impact on the air and climate, they collaborate within and outside the company to implement technology, best practices, and tools to generate new ideas and innovate. Devon focuses on reducing operational emissions of greenhouse gases such as carbon dioxide (CO₂) and methane, as well as volatile organic compounds (VOC), nitrogen oxide (NO_x) and other gases, and reporting their results. They are taking actions to lower their regulatory, market, and reputational risks and to become more sustainable. Devon invests in the latest equipment and deploys well-trained employees and contractors to carry out their emissions reduction programs. Devon Energy also has an Environmental, Social, and Governance (ESG) Steering Committee that monitors its air emissions performance in the context of evolving regulatory, legal and stakeholder landscape. This committee was established in early 2022 along with a new role of ESG manager, to provide advisory support across Devon to help achieve their ESG and sustainability-related objectives and goals. The ESG Team also advises its senior leaders on issues for consideration in enterprise risk management, stakeholder engagement, and regulatory and legal compliance.

Devon reports GHG emissions from fuel combustion, flaring, fugitive emissions, venting and storage tank losses (Scope 1) and electricity consumption (location-based Scope 2) for assets under their operational control. They collect data on GHGs

(CO₂, methane and NO_x) and submit annual GHG emissions according to the requirements of the U.S. EPA Greenhouse Gas Reporting Program. Indirect emissions from the use of sold products (Scope 3) on an equity basis from sources not owned or controlled by Devon are also reported. Scope 3 GHG emissions include indirect emissions from the consumption and use of Devon's crude oil and natural gas production. It is important to note that Scope 3 emissions estimates are subject to uncertainty, inconsistency, and duplication due to the reporting of assets outside the control of the reporting company and various reporting methodologies. As an exploration and production company, Devon has no direct control over how the raw materials they produce, and sell are ultimately consumed. They are, however, committed to and focused on Scope 1 and Scope 2 location-based emissions for assets under their control, where they can most directly and meaningfully effect emission reductions.

Devon's commitment to reduce Scope 1 and Scope 2 location based GHG emissions intensity by 50% and methane emissions intensity by 65% by 2030 will be calculated from a 2019 baseline. This baseline serves as a hypothetical reference point for what the emissions intensity would have been in the absence of emissions reduction efforts over time. To comparably track progress toward the targets, adjustments to the emissions baseline may be necessary to reflect structural, organizational or reporting changes that may occur over times. The baseline recalculation methodology was established upon guidance from the Greenhouse Gas Protocol and IPIECA. The baseline will be adjusted if impacted by one or more trigger events that result in a change to the emissions baseline of 5% or higher on an absolute or intensity basis. Trigger events include structural changes; source ownership or control changes; changes to reporting boundaries, quantification methodologies or data improvements; or discovery of errors. The

2019 baseline has been recalculated to reflect the acquisition of Felix Energy in 2020, divestiture of the Barnett Shale in 2020, divestiture of the Wind River Basin in 2021, acquisition of RimRock Oil in 2022 and acquisition of Validus Energy in 2022.

Some initiatives taken by Devon Energy include:

- Reducing flaring across their entire portfolio of producing assets
- Expanding and enhancing leak detection and repair program to find and fix equipment leaks
- Transitioning to air-driven pneumatic controllers
- Cutting combustion from drilling, completions and production by increasing the use of engines powered by electricity and alternative fuels
- Minimizing venting and flaring from storage tanks

Devon Energy has made significant progress in reducing air emissions and improving its environmental performance. According to the 2023 Sustainability Report, they have issued an updated Climate Change Assessment Report aligned with the Task Force on Climate-related Financial Disclosures recommendations. Devon states that they are committed to achieving net zero GHG emissions for Scope 1 and Scope 2 by 2050. They are implementing various strategies and tactics including reducing flaring, addressing equipment leaks, minimizing combustion emissions, minimizing venting from storage tanks, water management, and land conservation and biodiversity efforts. Devon will continue to look at a broad spectrum of opportunities to reduce flaring and related emissions to not only meet their own targets but continue improving performance across the industry.

SUSTAINABILITY

DOLESE SUSTAINABILITY

Dolese has long been committed to preserving the environment as is stated on its [sustainability page](#). At Dolese sand plants, each dredge runs on clean and quiet electricity instead of diesel. That means noise is kept to a minimum and fuel spills are minimal. Dolese is dedicated to the reclamation of their former mine sites to a beneficial use while avoiding the unnecessary disturbance to vegetation, habitat, and landscape features. Several former mining locations have been reclaimed, or are committed to being reclaimed, as recreational facilities and donated to communities. Dolese Youth Park in Oklahoma City is just one example of a mine site that has been recreated into a beautifully landscaped lake that is now enjoyed by the public. Dolese strives to recycle many by-products resulting from operations. Paper and cardboard are regularly recycled. Electronics, such as outdated computers, are also recycled. All scrap metals, petroleum products, batteries, and oil filters are processed by recycling firms. Remanufactured pallets are purchased at their Block Plant when possible, and sometimes are repaired by the Dolese team if possible. Pallets that are not repairable are ground-

up for mulch. All construction materials companies are regulated by numerous local, state, and federal agencies. According to their sustainability page, some regulatory agencies have used Dolese facilities as training grounds for inspectors. Dolese highlights the importance of creating a reclamation plan during the permitting phase. This is an environmentally friendly plan for the future of the site once mining is completed. Most sand plants are only active for a few decades before being returned to a landowner or community as a water supply lake, fishing pond, recreational area, or park. An example of this is Oklahoma City's Dolese Youth Park which was once a sand plant. Today, the site of Dolese's first quarry, Big Canyon is undergoing its own reclamation. Reclamation for this area has included repairing streams, creating a pond, over 1,500 planted trees, restored the channel area of Sycamore Hollow, and J-Hooks have been added to the creeks. All this work has been done to create a comfortable new home for birds, fish, and other wildlife in this part of Oklahoma. After the Army Corps of Engineers is satisfied, the Dolese team will continue to check in each year as it's reclaimed by nature.

COTERRA SUSTAINABILITY REPORT 2023

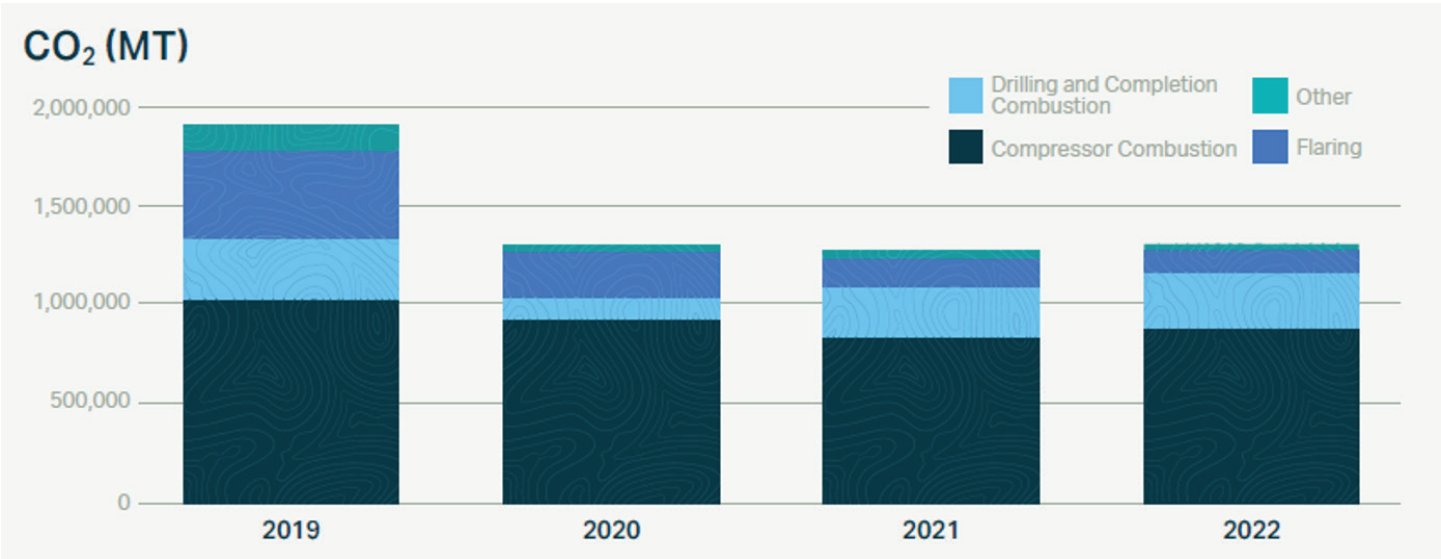
Coterra produces hydrocarbons across three major U.S. basins: the Anadarko Basin, Marcellus Shale, and Permian Basin. Coterra's Anadarko assets are primarily located in Central Oklahoma. Coterra's 2023 Sustainability Report addresses the environmental, social, and governance (ESG) topics that are relevant to their business. Coterra's Environment, Health, & Safety Committee oversees the company's environmental, health, and safety (EHS) and sustainability policies, programs, data, and the reporting and public disclosure. They also monitor environmental matters and trends that affect the company's activities and performances and review the company's compliance with environmental, health, and safety laws and regulations. Their air quality programs are designed to meet or exceed federal and state regulations that establish emissions limits, emissions control requirements, monitoring, testing, record-keeping, and reporting requirements to protect and maintain air quality. Coterra has focused on emissions reduction initiatives by actively pursuing strategic actions to manage climate risks and to capture opportunities by investing in projects and technologies to reduce their greenhouse gas emissions.

Their team has identified climate change-related risks and opportunities that may impact their business over the short-, medium-, and long-term.

Some short-term risks might impact near-term financial results, including those that may materialize within the current annual reporting cycle. Medium-term risks are some that might materially impact financial results due to longer-term manifestation of climate-related impacts that might require significant strategy adjustment, including those that may materialize over a 2-5-year timeframe. Long-term risks may fundamentally impact the viability of long-term strategies and business models, including those that may materialize over a 5- to 10-year timeframe. The nature of these risks depends on the physical aspects of climate change, market regulations, investor pressure to reduce their carbon footprint, and the ability to understand and respond to rapidly evolving developments. Coterra is actively pursuing strategic actions to manage climate risks and to capture opportunities by investing in projects and technologies to reduce greenhouse gas emissions.

Coterra's two main emitted Scope 1 greenhouse gases are carbon dioxide (CO₂) and methane (CH₄). Carbon dioxide emissions from their operations are primarily produced through combustion. Approximately 90% of their Scope 1 CO₂ emissions are related to combustion in engines used in compression, drilling, and completion operations, while approximately 9% of their CO₂ emissions are related to flaring.

Major Components of Scope 1 CO₂ Emissions *Table from Coterra's 2023 Sustainability Report



From 2019 to 2022, Coterra reduced its absolute Scope 1 CO₂ emissions by approximately 32%. To achieve this, Coterra is utilizing electrification, fuel optionality, and flare mitigation throughout their operations. Some of their initiatives include electrification of drilling, completion, compression, and production equipment; centralized flaring; tankless facilities; non-emitting pneumatic controllers; and a leak detection and repair (LDAR) program, including flyovers. Coterra also has a clear plan for site reclamation once a well-pad site is no longer needed. These wells are properly plugged and abandoned, associated equipment is removed, and the location is reclaimed.

ENERGY TRANSFER 2022 SUSTAINABILITY REPORT

Energy Transfer is one of the largest and most diversified midstream energy companies in North America with more than 125,00 miles of pipelines and associated energy infrastructure in 44 states transporting the oil and gas productions according to their website. [Energy Transfer's 2022 Corporate Responsibility Report](#) was created to highlight their successes achieved through continual efforts to manage the business safely and responsibly at all levels of the company.

Energy Transfer has environmental professionals that focus on ensuring that the company is responsibly and efficiently reducing emissions, protecting and preserving the land, water, and air around us. They also ensure that Energy Transfer remains in compliance with all applicable regulations such as the Clean Air Act.

In 2022, an Emission Reduction Taskforce was established that works in conjunction with third-party consultants to enhance emission data collection and reporting and explore new technologies to reduce emissions. The task force initially focused on enhancing and improving equipment count accuracy and field measurement, utilizing task software platforms to expand field data collection, and utilize dataPARC for real-time data capture of operational GHG information. Some going efforts though related to continue emission reductions include:

- Expand leak detection programs with additional resources to monitor and repair leaks

Coterra is committed to minimizing air pollutants emitted. Their air quality programs are designed so that operations meet or exceed federal and state regulations that establish emissions limits, emissions control requirements, monitoring, testing, record-keeping, and reporting requirements to protect and maintain air quality. Coterra is focused on improving our environmental, health, and safety (EHS) performance. They provide monthly EHS training for their employees and encourage contractors' involvement. EHS training topics are generated through analysis of lessons learned, historical trends, and regulatory changes. In addition, Coterra also provides EHS leadership training to operational supervisors.



- Retrofit existing gas operated pneumatics with compressed air where feasible
- Reduce and/or prevent pipeline blowdowns when possible

Energy Transfer was able to sequester approximately 94,500 metric tons of carbon dioxide in 2022. This was possible with the implementation of carbon capture and sequestration technologies at several of their existing treatment and processing facilities. Currently, three of their natural gas processing facilities capture and recover hydrogen sulfide and carbon dioxide from various process streams and inject the gas into permanent geologic storage formations.

Additionally in 2022, a one-of-a-kind compression technology known as Dual Drive Technologies, allowed Energy Transfer to operate using electric power on their own units over 80% of the time. This helped reduce emissions by 752,062 tons of carbon dioxide annually as it is described in the 2022 Corporate Responsibility Report. Dual Drive Technologies offers the ability to switch compression drivers between an electric motor and a natural gas

engine. The aids in reducing emissions of nitrogen oxide, carbon monoxide, carbon dioxide, and volatile organic compounds. Although this technology is not in effect in Oklahoma at the time of this report, the first Dual Drive was installed in East Texas in 2000. Since then, the fleet has grown to include nearly 100 units with approximately 425,000 total horsepower and 316 megawatts in multiple services from field gathering, transmission, and cryogenic plant installations. The following is the amount in tons Energy Transfer saved in emission in 2022 using Dual Drive Technologies (82 Dual Drive Units):

- NO_x – 859 tons
- CO – 899 tons
- VOC – 570 tons
- CO₂ – 752, 062 tons

Energy Transfer also sells Dual Drive compressors to third parties under a licensing agreement, which helps further advance the industry's carbon footprint. This is in addition to the energy management agreements that have been available to third parties since the inception of Dual Drive compressors. In 2022, there were 11 units operated by third parties across the West Texas region, saving an additional 110,000 tons of carbon dioxide annually according to Energy Transfer's 2022 Corporate Responsibility Report. In total 862,062 tons of CO₂ were reduced in 2022.

The following is the amount in tons third parties saved in emissions in 2022 using Dual Drive Technologies (11 Dual Drive Units):

- NO_x – 160tons
- CO – 170 tons
- VOC – 106 tons
- CO₂ – 110,000 tons

Energy Transfer also implements carbon capture and sequestration technologies at several of their existing treating and process facilities, which allowed them to sequester approximately 94,00 metric tons of carbon dioxide in 2022.

Energy Transfer implements a variety of techniques to optimize its operations, reduce power consumption, and reduce indirect emissions across its network of oil pipelines. These techniques include:

- Allocating larger volumes of crude oil to more energy efficient pipelines and ensuring a balance across both heavy and light crude lines.
- Operating pipelines at consistent flow rates,

which leads to more energy efficient operations and less overall power consumption, similar to an automobile having greater fuel efficiency on the highway versus the city.

- Adding a Drag Reducing Agent to the crude oil to reduce pipeline fluid friction, which causes the oil to flow more efficiently, thereby decreasing the amount of energy needed to move the crude oil through the pipeline and allowing some pump stations to be bypassed.
- Introducing power limits on some stations to avoid unnecessary spikes in the flow rate.

During the planning, construction and operation of new and existing infrastructure projects, Energy Transfer strives to be good stewards of the lands through which their projects cross. Energy Transfer uses Environmental reviews, in-house subject matter experts and third-party specialists, as key components for all their projects.



APPENDIX G: ENERGY EFFICIENCY & RENEWABLE ENERGY INCENTIVES

Central Oklahomans can take advantage of a variety of programs aimed at promoting energy efficiency and renewable energy adoption for both residential and commercial property.

In Canadian, Cleveland, Lincoln, Oklahoma, and Pottawatomie Counties, Commercial Property Assessed Clean Energy (C-PACE) programs provide commercial property owners with low-cost, long-term financing for energy efficiency, renewable energy, water conservation, and building resiliency projects.

Utilities that serve Central Oklahoma communities provide customers energy efficiency and renewable energy programs. Some examples include:

- **Edmond Electric's Demand & Energy Efficiency Program (DEEP):** Offers up to \$100,000 annually for commercial energy-saving projects, including rebates for air-source and ground-source heat pumps and dual-fuel systems.
- **Oklahoma Electric Cooperative (OEC) Energy Efficiency Rebate Program:** Provides financial incentives for various energy-saving upgrades.
- **Oklahoma Gas & Electric (OG&E) Programs:**
 - Home Energy Efficiency Program: Incentives for residential energy-efficient home improvements, such as HVAC upgrades.
 - Wind and Solar Power Programs: Customers can use wind and solar energy from OG&E's wind and solar farms

- **Oklahoma Natural Gas Energy Efficiency Program:** Rebates for residential and commercial customers purchasing energy-efficient appliances or equipment.

Moreover, Oklahoma mandates that investor-owned utilities and electric cooperatives provide **net metering** to customers with systems up to 100 kilowatts. Through net metering, any excess energy generated by a homeowner's solar panels is credited to their account at the avoided cost rate, typically around 2 to 3 cents per kilowatt-hour.

While Oklahoma does not offer state-level rebates for solar installations, residents can benefit from the **Federal Solar Investment Tax Credit (ITC)**. This program allows homeowners to claim a tax credit for 30% of the total purchase price of their solar system, applicable to projects that begin construction through 2032.

The **USDA Rural Energy for America Program (REAP)** provides financial assistance to rural small businesses and agricultural producers looking to invest in renewable energy systems or energy efficiency improvements. Through grants and guaranteed loan financing, REAP helps fund projects such as solar panel installations, wind turbines, energy-efficient lighting, HVAC upgrades, and irrigation improvements.

These programs collectively provide Central Oklahoma residents and businesses with valuable opportunities to enhance energy efficiency, adopt renewable energy solutions, and achieve long-term cost savings.

APPENDIX H:

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