2024

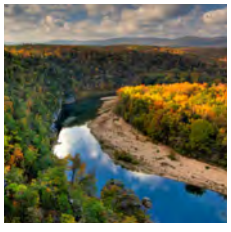
NWA Regional Planning Commission

Northwest Arkansas

Energy & Environment Innovation Priority Action Plan

May 2024





Prepared For :

Northwest Arkansas Regional Planning Commission
Springdale, Arkansas

Prepared By :

olsson

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Acronyms

ADEE	Arkansas Department of Energy and Environment
ARDOT	Arkansas Department of Transportation
ANSI	American National Standards Institute
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
BRIC	Building Resilient Infrastructure Communities
CEJST	Climate & Economic Justice Screening Tool
CO_2	Carbon Dioxide
CPRG	Climate Pollution Reduction Grants
CSAP	Comprehensive Safety Action Plan
DOE	Department of Energy
DOT	Department of Transportation
EECBGP	Energy Efficiency and Conservation Block Grant Program
EEI	Energy and Environment Innovation
EIE	Environmental Insights Explorer
EPA	Environmental Protection Agency
EV	Electric Vehicle
GHG	Greenhouse Gas
HVAC	Heating, Ventilation, and Air Conditioning
IECC	International Energy Conservation Code
IEA	International Energy Agency
IES	Illuminating Engineering Society
IIJA	Infrastructure Investment and Jobs Act
IRA	Inflation Reduction Act
ITS	Intelligent Transportation Systems
LIDAC	Low-Income and Disadvantaged Community
MMBtu	Metric Million British Thermal Units
MOA	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MRF	Materials Recovery Facility
NAE	Neighborhood Access and Equity
NEI	National Emissions Inventory
NOFO	Notice of Funding Opportunity
NWA	Northwest Arkansas
NWARPC	Northwest Arkansas Regional Planning Commission
RNG	Renewable Natural Gas
SRTS	Safe Routes to School
tCO_2e	Tons of Carbon Dioxide Equivalent
TDP	Transit Development Plan
TSMO	Transportation Systems Management and Operations
VMT	Vehicle Miles Traveled
WAP	Weatherization Assistance Program
WM	Waste Management

Executive Summary

The goal of the Northwest Arkansas (NWA) Energy and Environment Innovation (EEI) - Priority Action Plan (PAP) is to promote a sustainable and resilient future for the region, support investment in measures and solutions that reduce greenhouse gas (GHG) emissions, create high-quality jobs, spur economic growth, and enable access to and enhance NWA competitiveness for federal funding opportunities.

The Northwest Arkansas Regional Planning Commission (NWARPC) strives to improve environmental quality in the region to ensure a bright future for its residents, understanding that collaboration with our stakeholders to mitigate GHG emissions and adapting to extreme weather events brought about by a changing climate is crucial.

The NWA PAP advances one or more of the investment priorities identified by Governor Sanders (*shown below*) and includes a regional priority assessment of five action measures to aid in GHG emission reduction efforts, a focus on low-income and disadvantaged communities (LIDACs), and meaningful engagement processes for both stakeholders and the public. The PAP identifies the top priorities of the region, as required by the EPA's Climate Pollution Reduction Grant (CPRG) planning grant, and will be incorporated into the forthcoming Comprehensive Action Plan (CAP).

Arkansas Investment Priorities

Facilitating Statewide Economic Growth and Competitiveness

Growing and expanding the economy with Arkansas by increasing access to economic opportunities for communities, advancing **transportation** and **commerce**, and maintaining a **resilient supply chain**.

Keeping Communities Safe

Improving public and **transportation safety** provisions through promoting road and highway **safety education** and training programs, strengthening **cybersecurity** infrastructure, and making safety improvements to roads and bridges.

Preparing the Infrastructure Workforce

Scaling up the workforce needed for project delivery, promoting access to **quality jobs**, and developing a **pipeline of talent** across the state.

Preservation and Promotion of The Natural State

Celebrating the State's natural resources to develop, create, and sustain **outdoor recreation, business, and employment** opportunities through ecology initiatives, environmental **resiliency** projects, and **proper water management practices.**

Creating a Portfolio of Reliable, Efficient, and Secure Energy Options

Expanding affordable and **efficient energy** options available to Arkansans through resources development while maintaining a strong **energy workforce** and **secure** electric power grid that can withstand emergencies and severe weather.

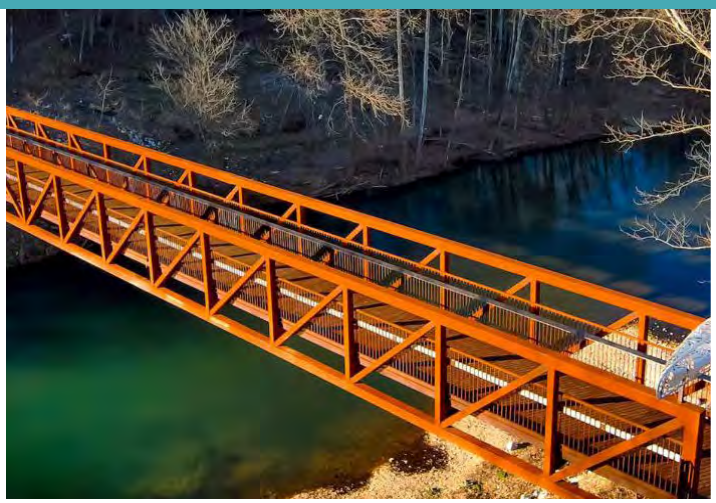
The GHG Emissions Approximation Summary serves as a comprehensive overview detailing the results derived from an in-depth analysis grounded in city-, county-, and state-level data. This GHG emissions approximation for NWA not only establishes a foundational baseline, but also lays the groundwork for assessing post-implementation outcomes and conducting future quantitative data analyses. By synthesizing information from multiple administrative levels, the summary provides a holistic perspective on GHG trends, emissions, and associated factors. Supporting information is in Section 2 and also Appendix A of this document.

The LIDAC Summary presents the outcomes of an analysis conducted on the EPA's Climate and Economic Justice Screening Tool (CEJST) data. The primary objective of this analysis is to pinpoint and characterize communities classified as LIDAC in the NWA. This summary serves as a critical resource in illuminating the socio-economic and environmental landscape of LIDACs in the region. The CEJST data not only identifies these communities, but also delves into the specific factors that contribute to their designation as low-income and disadvantaged. Supporting information is located in **Section 3** and also **Appendix B** of this document.

The Document and Plan Review considers initiatives from previous plans and is detailed in **Section 4** of this document. This review examines regional and statewide documents and plans associated with GHG emission reduction efforts. It delves into the intricacies of existing policies, strategies, and initiatives aimed at reducing GHG emissions within specific geographic areas. The evaluation encompasses a thorough analysis of the effectiveness, alignment, and potential impact of these documents and plans on the overarching goal of reducing GHG emissions. This review aims to contribute valuable insights into the ongoing efforts to address and mitigate the impacts of GHG emissions on NWA.

Stakeholder & Public Engagement. Active stakeholder and public engagement was a crucial component in the development of the NWA PAP. As mandated by the CPRG program, prioritizing engagement with LIDACs was a key aspect of this public participation process. According to the EPA, recipients of planning grants are obligated to conduct meaningful engagement with the affected LIDACs in the development of planning grant deliverables. The NWARPC actively interacted with Madison, Washington, and Benton County residents, adopting a focused strategy for engaging with LIDACs within these counties once LIDAC identification and analysis was completed. Supporting information is located in **Section 5** and also **Appendix C** of this document.

01
Background & Introduction



Ozark Regional Transit

Impacts from greenhouse gases (GHG) on Northwest Arkansas's air quality can adversely affect the region's residents and economic growth. GHGs and warmer temperatures increase concentrations of ground-level ozone; also, particulate matter in the form of windblown dust from droughts and smoke from wildfires is also expected to increase as the concentration of GHGs in the atmosphere increases. These outdoor pollutants can lead to higher indoor exposures by entering buildings through open doors, windows, and ventilation systems. Exposure to these pollutants can adversely affect the health of the region's residents through respiratory and heart diseases (EPA 2024b).

Furthermore, climate change from GHG emissions is expected to cause unusual and harsh weather conditions, altering historically predictable rainfall patterns and temperatures in Northwest Arkansas. In the coming decades, the region will become warmer and experience more severe floods and droughts (EPA 2016). Warmer temperatures will also exacerbate the effects of drought on the region's water supply (Kunkel et. al. 2013, Carter et. al. 2014). These anticipated changes to the region's climate are also expected to negatively affect the region's economy and the quality of life of many its residents. If left unaddressed, these future weather patterns are expected to have detrimental impacts on the region and its residents (Boyett & Lee 2022, Early 2021).

The 2022 Inflation Reduction Act (IRA) created the Climate Pollution Reduction Grants (CPRG) program to provide $5 billion in grants to states, local governments, tribes, and territories to develop and implement plans for reducing GHG emissions and other harmful air pollution (EPA 2024a).

In 2023, following NWARPC Board authorization (Resolution #2023-15), Arkansas Department of Energy & Environment (E&E) Division of Environmental Quality (ADEQ) suballocated funding from this program and entered into a Memorandum of Agreement (MOA) with the Northwest Arkansas Regional Planning Commission (NWARPC) to provide regional-specific planning and act as additional support to ADEQ in the development of the deliverables required under the CPRG: Priority Action Plan (PAP), Comprehensive Action Plan (CAP), and a status report on PAP and CAP (collectively "the plans") at the end of the four (4) year grant project period.

Following stakeholder and public engagement summarized below, the NWARPC submitted the regional PAP Supplement to ADEQ on December 1, 2023. Along with other metropolitan planning partners (Metroplan and City of Ft. Smith), the NWA PAP Supplement was included in *Arkansas's Energy and Environment Innovation Priority Action Plan* submitted to the EPA by ADEQ on March 1, 2024. Submission of the state priority action plan is a prerequisite for any Arkansas state or local government agency submitting applications for implementation grants. The present document is based on the NWA PAP Supplement submitted to ADEQ in December 2023 and will be incorporated into the forthcoming Comprehensive Action Plan (CAP).

02

Greenhouse Gas Emissions Approximation

GHG emissions encompass carbon dioxide (CO_2), nitrous oxide, and methane. Data on GHG emissions is commonly gathered and reported at various administrative levels, including national, regional, and at times, state or local levels. The NWA region comprises Benton, Madison, and Washington counties. Establishing transparent communication is crucial for instilling trust in the precision of NWA's regional GHG emission estimates. Though the estimation process has inherent uncertainties, these approximations for NWA have been strengthened and cross-referenced with data from multiple credible sources.

The GHG Emissions Approximation Summary in **Appendix A** outlines the outcomes of an analysis based on the EPA's National Emissions Inventory (NEI) transportation data for the NWA region consisting of Benton, Madison, and Washington counties (EPA 2020b). Assumptions were then made to approximate for the remaining sectors based on state-level emissions data from the EPA's Greenhouse Gas Inventory database (EPA 2020a) and city-level emissions data from Google's Environmental Insights Explorer (EIE) (Google 2020) and the City of Fayetteville (City of Fayetteville staff 2023). Overall, approximately 9,731,972 tons of GHG emissions were estimated for the NWA region, as seen in **Figure 1**. In EIE and the City of Fayetteville, approximately 81,247,949 tons of GHG emissions were estimated for Arkansas as a whole, as seen in **Figure 2**. These approximated amounts were broken up into sectors including electric power, transportation, agriculture, industry, commercial, and residential.

Furthermore, this approximation acts as a pivotal reference point for gauging the efficacy of implemented measures and policies geared toward reducing GHG footprints. The approximation sets the stage for ongoing monitoring and evaluation, enabling stakeholders to track the trajectory of GHG emissions-related changes and adjust strategies as needed. The emphasis on city, county, and state levels assures a nuanced understanding of regional variations and allows for tailored interventions that align with specific geographical contexts. In essence, the GHG emission approximation not only captures the current state of emissions, but also lays the groundwork for a dynamic and informed approach to future GHG emission reduction initiatives.

Figure 1. Northwest Arkansas Regional GHG Emissions Approximation in Tons

(City of Fayetteville staff 2023; EPA 2020a; EPA 2020b; Google 2020).

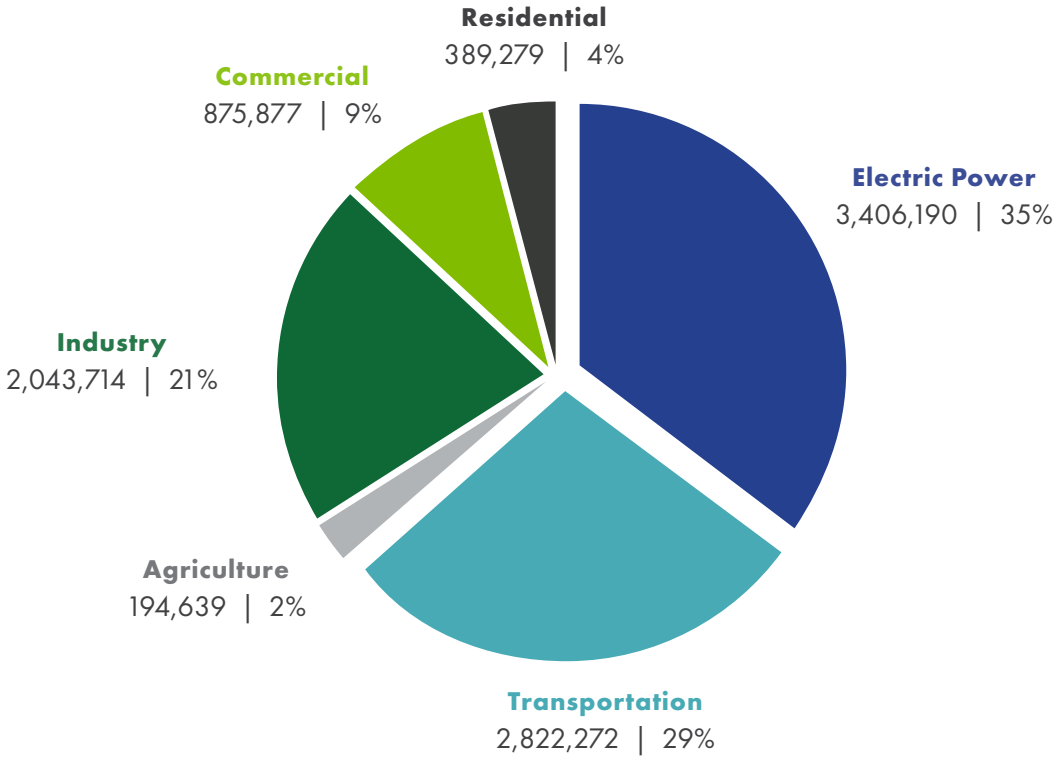
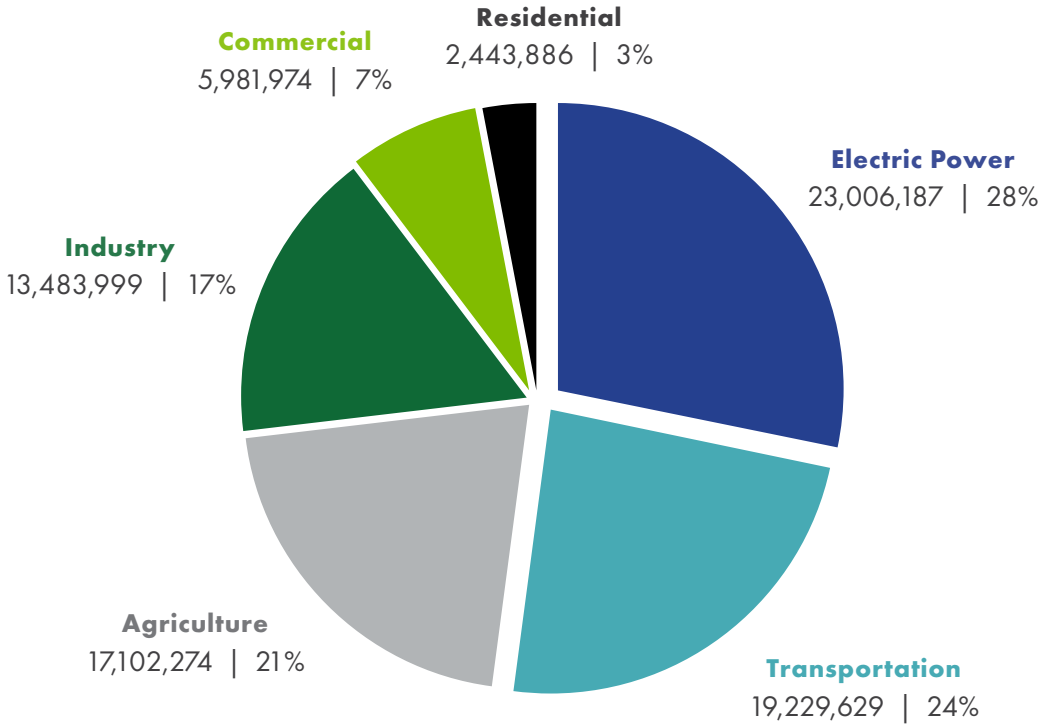
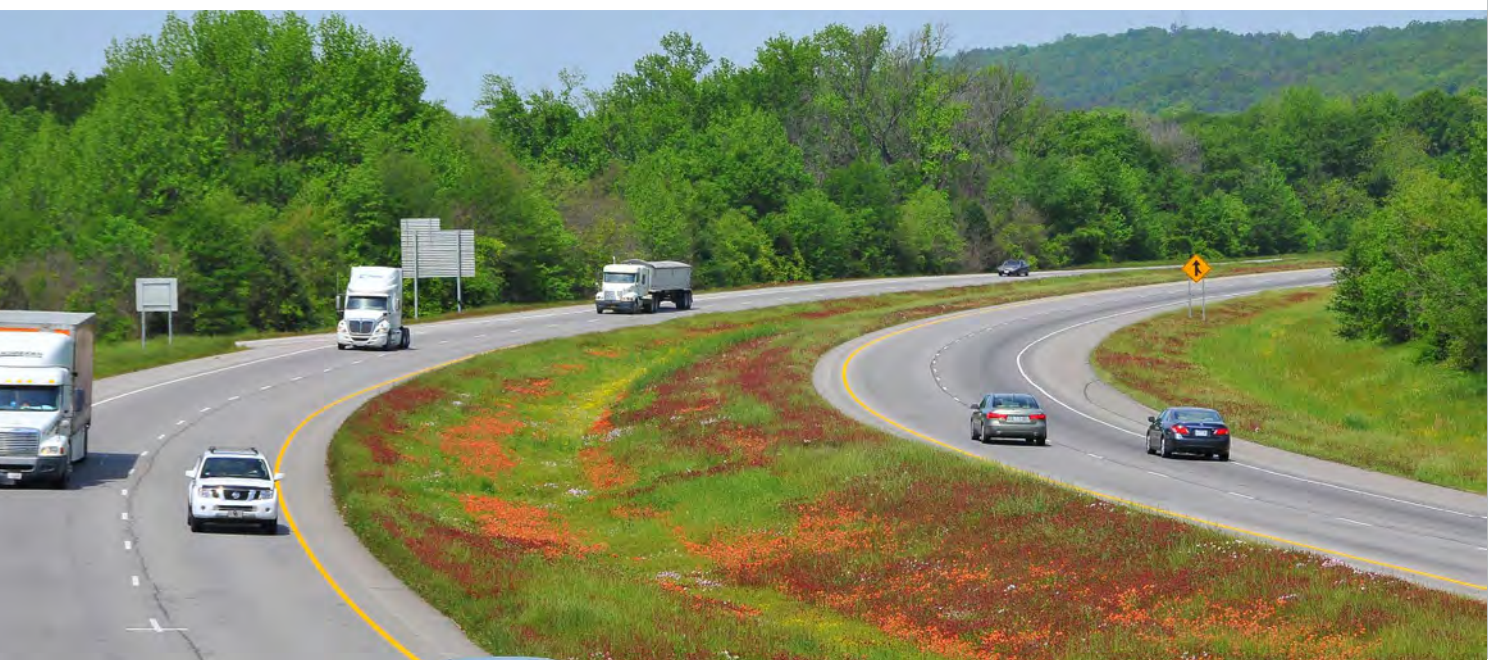


Figure 2. Arkansas GHG Emissions Approximation in Tons

(City of Fayetteville staff 2023; EPA 2020a; EPA 2020b; Google 2020).




Becoming
TACO NACO KC
OPEN



03
Low-Income & Disadvantaged Communities

The NWA region comprises diverse communities with varying socioeconomic backgrounds in urban, suburban, and rural areas. Within this region, LIDACs have been pinpointed at the census tract and block group levels using the EPA's Climate and Economic Justice Screening Tool (CEQ 2010) and the EJ Screen Tool. The LIDAC Summary in **Appendix B** presents the outcomes of an analysis conducted on the CEJST and EJ Screen data. The purpose of this analysis was to identify communities categorized as LIDAC as part of the planning initiative for the EPA's CPRG program—a climate action planning process where the EPA recognizes these communities as low-income and disadvantaged.

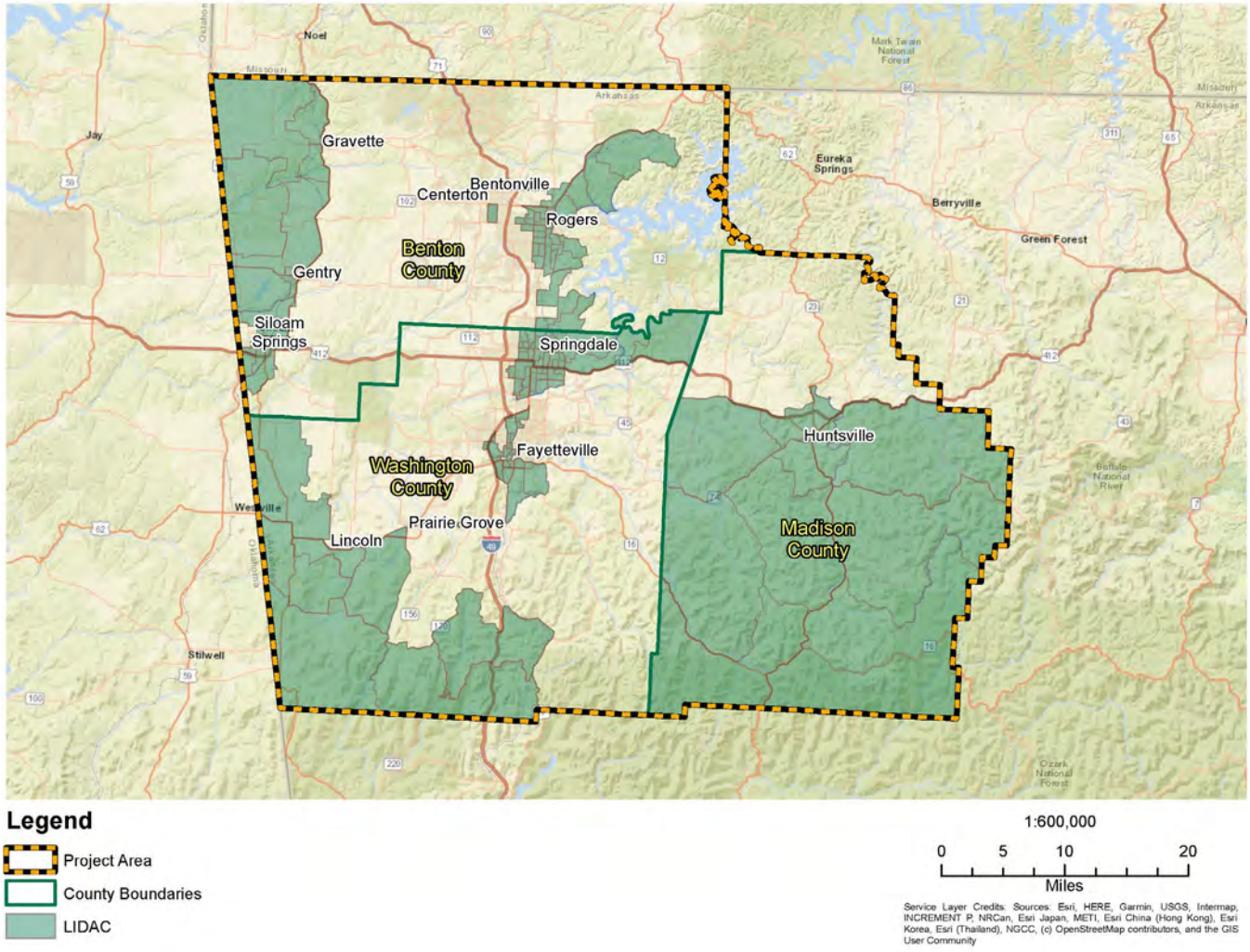
The CEJST serves as a geospatial mapping tool specifically designed to identify marginalized and overburdened communities facing pollution and insufficient investment. The tool assists policymakers, researchers, and organizations in identifying areas where vulnerable populations endure disproportionate environmental and economic burdens. Census tracts are classified through the CEJST as disadvantaged, partially disadvantaged, or not disadvantaged. Any census tract identified as disadvantaged by the CEJST is defined as a LIDAC. The CEJST evaluates various burden categories to determine community disadvantage, using different indicators as data points or measurements for assessing environmental and social conditions. Communities within a census tract are considered disadvantaged if they rank at or above the 90th percentile for one or more burden indicators and meet the threshold for the associated socioeconomic burden in each category.

EJScreen is an online mapping and screening tool developed by the EPA to help identify areas in the United States that may be disproportionately burdened by environmental justice concerns like pollution and other stressors. This tool summarizes socioeconomic and environmental indicators of disadvantage identified at the census block group level for a selected location and can compare these indicators to the rest of the state, EPA region, or nation. Each census block group is assigned a percentile score for environmental or socioeconomic indicators of disadvantage that is based on the percent of the population in that block group that has an equal or higher value when compared to other block groups in the state, EPA region, or nation. Any census block group identified by EJScreen as at or above the 80th percentile for one or more environmental or socioeconomic indicators of disadvantage is defined as disadvantaged for the purposes of this analysis.

Overall, there are 315 census block groups in the NWA region; 122 block groups, or 39 percent, are identified as disadvantaged as defined by EJ Screen. **Figure 3** shows a map of Benton, Madison, and Washington counties; darker coloring indicates LIDAC communities. During data analysis, certain trends emerged on the county-level. In Madison County, all LIDAC tracts surpass the threshold for four or more burden indicators; in Washington County, only 13 percent of LIDAC communities meet or exceed the threshold for four or more burden indicators as defined by the CEJST. However, in Washington County, 54 percent of LIDAC communities meet or exceed the threshold for two or three burden indicators as defined by the CEJST.

See the LIDAC Summary in **Appendix B** for more information regarding burden indicators, further analysis, and comparisons within the NWA region.

Figure 3. Low-income and Disadvantaged Communities (LIDAC) in Northwest Arkansas (CEQ 2010).



Trailblazers

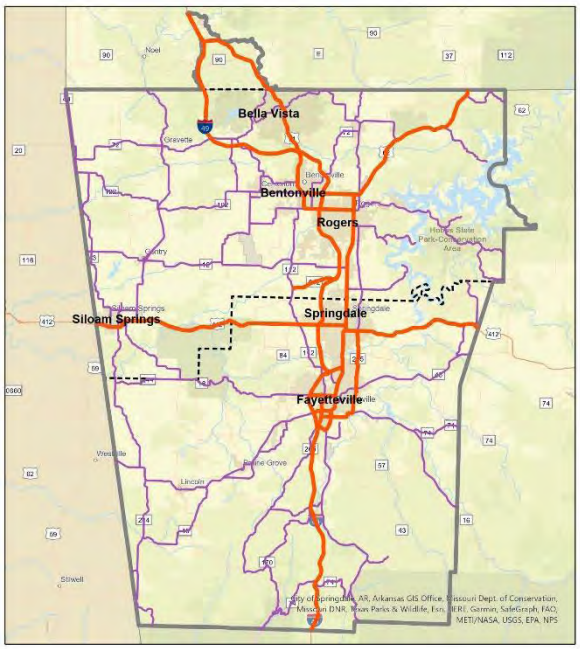
04
Document and Plan Review

Arkansas Department of Transportation

Ozark Regional Transit

A total of nine plans developed by regional and state agencies were reviewed. Eight of these plans focus on the transportation sector, with one plan focusing on natural resources and open space:

- The NWARPC's (2023c) ***Northwest Arkansas Vision Zero Comprehensive Safety Action Plan***'s (CSAP) purpose is to eliminate all fatal and serious injury crashes that occur on the regional roadway network by 2038 by focusing on prioritizing safe, accessible, and equitable mobility for all users. The Safe Routes to School (SRTS) measure enables students to safely walk and/or bike to school, which includes implementation of projects that can improve safety and reduce traffic, fuel consumption, and air pollution around schools. The Complete Streets measure was designed to accommodate all users, including users with disabilities, with the goal of shifting to an increased transit-oriented development. The Northwest Arkansas Vision Zero Safety Plan also intends to encourage public transit to reduce vehicle trips; promote specific transportation demand management to reduce vehicle miles traveled (VMT); change street networks and land use patterns to minimize trip distances and automobile dependence; pursue a sustainable funding source for transit to reduce travel time; and identify walking zones for schools, recreation centers, and other community centers that will promote walking as a form of transportation.

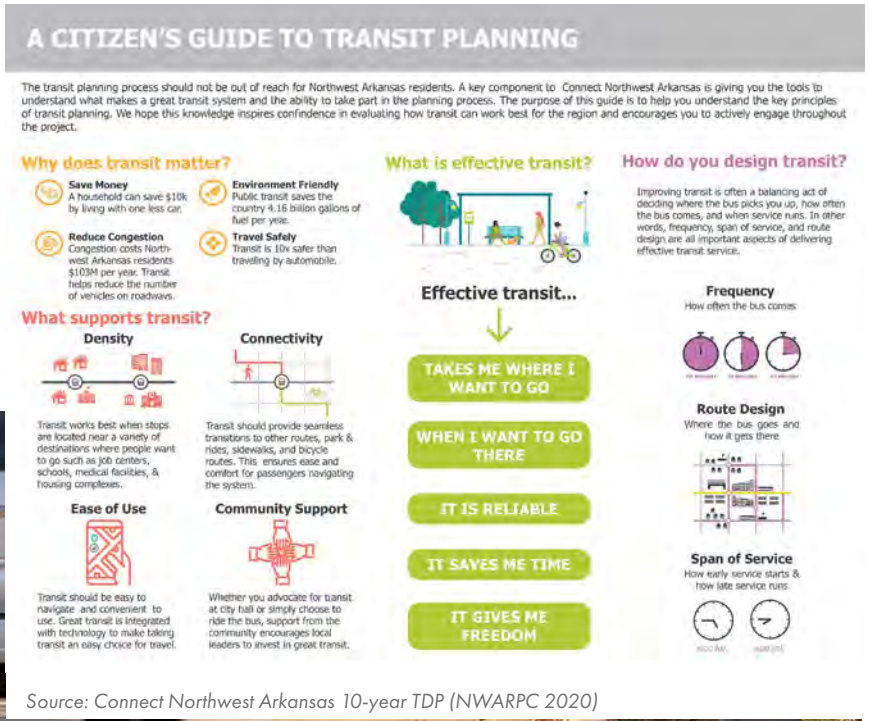


- NWARPC's (2023a) ***Northwest Arkansas Regional Intelligent Transportation Systems (ITS) Architecture Plan*** serves a purpose to anticipate for and implement ITS by embracing technological innovations in the region, provide a framework for encouraging interoperability, and allow for cohesive long-range planning among regional stakeholders. Measures within this program seek to organize a regional committee that will identify opportunities to improve the access to, and safe use of, alternative modes of transportation and promote demand-management strategies. Measures also seek to identify ITS elements and funding sources that can be employed to improve the access to and safe use of alternative modes of transportation.

- Prepared by Cambridge Systematics Inc., NWARPC's (2023b) ***Transportation Systems Management and Operations (TSMO) Plan*** details and develops implementation plans and strategies to optimize the performance of NWA's existing infrastructure. Measures within this plan seek to reduce vehicle travel delay; increase the use of transit, ridesharing, and nonmotorized modes of transportation; and reduce motor vehicle emissions that contribute to air quality issues and climate change. TSMO also promotes the increased access to safe, affordable, and environmentally friendly mobility options.

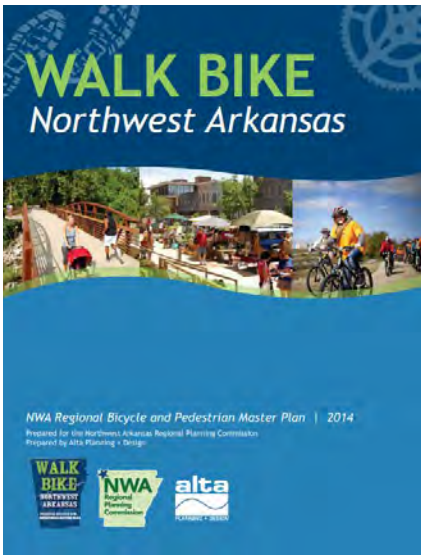
- Also prepared by Cambridge Systematics, Inc., NWARPC's (2022) ***Congestion Management Process Plan*** identifies congestion and develops monitoring processes to measure transportation system performance and reliability and then develop management strategies that move to the funding and implementation stages. This plan includes the Connect Northwest Arkansas 10-year Transit Development Plan (TDP) to encourage the shift from single-occupancy vehicle trips to transit trips. Also included are the Arkansas Statewide Transit Coordination Plan, the Razorback Transit and Ozark Regional Transit Asset Management plans, and Transit Safety plans to enable improved availability, quality, and efficiency of transportation services for groups with limited mobility options.

- Prepared by the Alliance Transportation Group, in collaboration with the Ozark Regional Transit and Razorback Transit, the ***Connect Northwest Arkansas 10-year TDP*** (NWARPC 2020) was created to improve and expand transit in the NWA region, connect NWA at regional and local levels, save commute time, and provide the community with greater mobility. Measures include specifically located mobility hubs within communities where several modes of travel on different networks converge to optimize connections between modes and the broader transportation network. High-capacity transit is also engaged, which incorporates higher frequencies, optimizing direct routes, and intuitive scheduling.

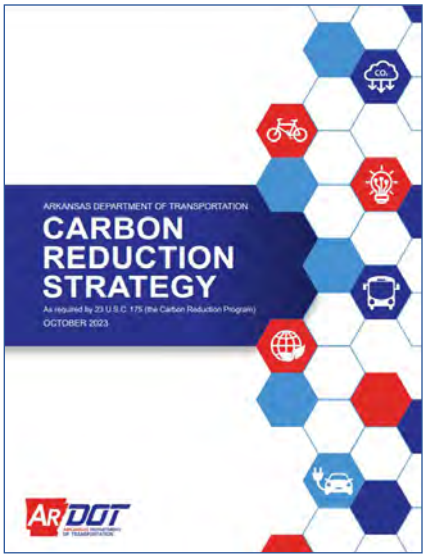


Source: Connect Northwest Arkansas 10-year TDP (NWARPC 2020)

- Prepared by Alta Planning + Design, NWARPC's (2015) ***Regional Bicycle and Pedestrian Master Plan*** was created to develop a regional network of bicycle and pedestrian on-road and off-road trail facilities and routes within the communities of the NWA region. Within this plan, the Regional Safe Routes to School Program enables students to safely walk and bike to school, which encourages physical activity for children and reduces motorized traffic. The Complete Streets Policy directs transportation planners and engineers to consistently design the right-of-way to accommodate all users, which encourages various forms of transportation. Additionally, the Non-Motorized Transportation Training for Engineers and Planners measure consists of the development of training sessions for engineers and planners covering best practices for bike and pedestrian improvements.



- Prepared by URS Corporation, NWARPC's (2014) ***Northwest Arkansas Transportation Alternatives Analysis*** responds to the public interest in the feasibility of a light rail project in the NWA region and plans to reduce the area's heavy reliance on single-occupancy vehicles. Light Rail Implementation in the NWA is a measure within this program's analysis geared at minimizing energy consumption on a systemwide basis by reducing congestion, lessening disturbances of the region's natural aesthetics and wildlife habitat, providing for needed highway and transit system enhancements, and minimizing air, water, noise, and visual pollution.



- Finally, the Arkansas Department of Transportation's (ARDOT 2023) ***Carbon Reduction Strategy*** was created from the Infrastructure Investment and Jobs Act (IIJA) to provide funding for projects that are designed to reduce transportation emissions from on-road highway sources. This strategy includes, but is not limited to, federal programs related to carbon reduction (e.g., National Electric Vehicle Infrastructure, Reduction of Truck Emissions at Port Facilities Program, etc.), intermodal investments, increased use of waterways, ARDOT seizing more opportunities to reduce emissions, ARDOT partnering with other agencies and stakeholders, fleet conversions, electric vehicle (EV) infrastructure deployment, emission reduction projects (i.e., collaboration with West Memphis Metropolitan Planning Organization [MPO]), energy efficient roadway lighting, TSMO, planning and policy development, pavement and bridge preservation, and bridge replacement.

- Prepared by Alta Planning + Design, NWARPC's (2016) ***Northwest Arkansas Open Space Plan*** was created to preserve NWA's natural assets and maintain a high quality of life that allows for the region to continue to grow and prosper. Within this plan, Conservation Subdivisions is a design strategy that attempts to preserve communal open space for residents. Ideally, 50-70 percent of buildable land would be set aside as open space, which can include forests, prairies, and wetlands that would provide mitigation of carbon emissions through the preservation of existing carbon stocks in NW Arkansas.

05 Stakeholder & Public Engagement

The NWA PAP recognizes that active involvement of stakeholder and public engagement is essential for public processes. In addition to the summary below, **Appendix C** details these efforts undertaken by the NWARPC. The following was considered and deployed.

Diverse marketing and outreach strategies were created and deployed during the engagement process, encompassing email communications, boosted and un-boosted social media posts, press releases, posters, flyers, and a dedicated project webpage that is regularly updated and available in English, Spanish, and Marshallese. Additionally, the project team actively participated in events to enhance the project's visibility and reach within the community.

In coordination with the consultant team, the NWARPC identified potential members for the stakeholder committee. These members were identified, in part, because of their eligibility to participate in the CPRG implementation grant process and associated Notice of Funding Opportunity (NOFO) and/or their ability to implement the identified priority action items. The NWARPC worked to provide representation from a variety of sectors.

To assist in the adaptation of the PAP, virtual stakeholder committee meetings were held on October 12, and November 2, 2023. The meeting format included a welcome and brief introduction of the project team and a presentation of the project and proposed measures. Stakeholder poll question exercises were interspersed throughout the presentation and stakeholders were able to participate in the polls via QR codes. Additionally, two public open houses were held on October 23, and October 26, 2023, to present information to the public and gather input on preferred measures via the public survey. The public was invited to attend via email, website information, flyers, and boosted social media posts. All open house materials were posted to the project website following the open houses. Marshallese and Spanish interpreters were available in Springdale to accommodate the unique local population's language needs. Public feedback was gathered via the state's public survey and idea box in English, Marshallese, and Spanish. Attendees for stakeholder committee meetings and public open houses included representatives from public, nonprofit, and private sectors.

As required by the CPRG program, special emphasis was placed on engaging with LIDACs throughout the public participation process. According to the EPA, recipients of planning grants are obligated to carry out meaningful engagement with the affected LIDACs in the creation of planning grant deliverables. To assure compliance with the CRPG program's guidance, the NWARPC actively engaged with Madison, Washington, and Benton County residents. NWARPC took a targeted approach to engagement with LIDACs within the counties after the LIDAC identification and analysis task was completed.

06

Priority Measures

Ozark Regional Transit

Arkansas Department of Transportation

Measure No. 1
Transportation Sector

Arkansas Department of Transportation

A high priority for the NWARPC is to reduce automobile trips and incentivize efficient and low/zero emission modes of transportation through the following:

- Expanding infrastructure such as bicycle facilities, transit stops, sidewalks, and other active transportation-supporting infrastructure.
- Developing and implementing low/zero emission ridesharing and e-bike programs, with priority given to LIDAC communities.
- Updating/adopting building and zoning codes to encourage walkable, bikeable, and transit-oriented development.
- Upgrading vehicle fleets by replacing internal combustion engine vehicles with low/zero emission vehicles.
- Incentivizing eligible agencies, businesses, and individual automobile owners to purchase low/zero emission vehicles and associated infrastructure, with priority given to LIDAC communities.
- Expanding supporting infrastructure for EVs, including bus fleets.

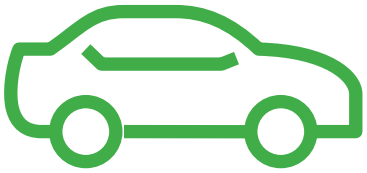
Rationale for Measure

24%

of GHG Emissions

come from the

TRANSPORTATION SECTOR



Approximately 24 percent of the GHG emissions in NWA come from the transportation sector. Expanding opportunities for alternate transportation mode choices and promoting the electrification of vehicles and bicycles provide greater options for Arkansans, many of whom will choose a cleaner mode for travel. The public engagement survey shows that transportation and energy sectors were rated the highest. Specific initiatives that community members and stakeholders mentioned through the series of engagement meetings were things like incentive programs (including high-occupancy vehicle lanes), the electrification of vehicle fleets for cities and the University of Arkansas, development codes, and infrastructure improvements such as charging stations and bus stops. Additional information from the stakeholder and public engagement activities is summarized in **Appendix C**. Though the survey touched on a significant breadth of transportation sector components that the NWA community is interested in, the identified regional need boiled down to transportation choice. By increasing access to viable alternate modes of transportation and expanding infrastructure, low/zero emissions vehicles (from light- to heavy-duty) become options for significantly more people.

Investments in equitable transportation infrastructure is a key pillar of both the IIJA and the Inflation Reduction Act (IRA). Multiple grant programs through the U.S. Department of Transportation (DOT), such as the Reconnecting Communities Pilot (RCP) Program and Neighborhood Access and Equity (NAE) Grant Program, provide funding to support equitable access to community facilities, anchoring institutions and safer roads and streets that can incentivize the use of alternative modes of transportation. Further, federal grant and tax credit programs can aid in the transition of commercial, heavy-duty, and school bus fleets to low or zero emission vehicles. These programs, coupled with the Federal Highway Administration's EV charging infrastructure programs, can aid in the adoption and transition to low- or zero-emission vehicles. However, opportunities also exist for the development of ridesharing and e-bike rebate programs focused within LIDAC communities.

Anticipated Workforce Needs

Implementation of these transportation measures requires a skilled workforce that has expertise in planning, engineering, design, and development. Workers skilled in project management will be essential for successful deployment of transportation programs potentially emerging from CPRG funding opportunities. Additionally, experts in program and policy fields will play a significant role in strategies regarding incentive programs or other promotional efforts for the adoption of EVs. Field service employees will be required for construction and installation of many of these systems, including electricians who may be required to have specific certifications to meet federal requirements for components like EV charging stations. Finally, the workforce will need to include workers to fulfill any compliance or regulation protocol for implemented components. Discretionary grant programs established through the IIJA and the IRA dedicate merit review criteria to workforce development activities connected with the proposed scope of work. Local and state agencies should consider formalizing relationships with local and regional institutions of higher education, and the secondary education system, to expand youth and registered apprenticeships in the construction trades to meet the merit scoring criteria and advance regional workforce development targets.

Review of Authority to Implement

A transportation program could extend incentives to several different entities. If an implementation grant is pursued for this measure, it is anticipated the eligible entities would be a state agency or a coalition of local governments and/or regional organizations. The program would be structured in a manner to assure that the eligible entity or coalition would have the authority to implement one or more components of the measure directly and/or deliver incentives to individuals and entities that could implement components of this measure. Public-private partnerships could also be a mechanism to implement this measure. The state of Arkansas has appointed the Arkansas Council on Future Mobility to identify barriers to the implementation of EVs (and automated vehicles), including existing laws, policy review and recommendations, education and workforce development, and economic development (DOE 2023). Strategic alignment with this council's recommendations and initiatives will assure, as appropriate, state regulations and priorities do not hinder or prohibit implementation.

Greenhouse Gas and Co-pollutant Emissions Reduction or Sequestration

There is substantial room to reduce overall emissions because approximately 24 percent of NWA's regional GHG emissions come from the transportation sector. According to Google's EIE Tool, the City of Fayetteville (the region's most populous city) experienced approximately 758,000,000 VMT annually (Google 2020) in a city with a population of 99,285 (U.S. Census Bureau 2022) in 2022, or an average of 7,635 miles per person per year. If only 1,000 of Fayetteville's residents, or about 1 percent of the total population, stopped driving gas-powered vehicles, it could affect approximately 7,635,000 VMT annually. If extrapolated over the entire populations of Benton, Washington, and Madison counties (combined population of 576,403 in 2022), at 1 percent conversion, this could translate to a reduction of 44,008,140 VMT or approximately 17,600 metric tons of CO_2 annually.

Specific to e-bike incentive programs, following the example of the City of Denver's successful e-bike program (Alvarez 2023), the NWA region could experience similar reductions. At $4.7 million per year, such a program could result in over 4,700 e-bike rebates and a reduction of 2,040 metric tons of CO_2 per year. If such a program were implemented over a five-year period prior to 2030, NWA could see a reduction of over 30,000 metric tons of CO_2 by 2030. Additionally, 67 percent of the City of Denver's e-bike program funding was allocated to income-qualified residents, or people making less than 80 percent of the city's median income. Results from this program showed that income-qualified residents rode their e-bikes 50 percent more than other rebate recipients. Prioritized communities such as LIDACs are also expected to take advantage of the e-bike rebate program. Furthermore, reduced VMT can be shown in results from the program; 71 percent of participants said they used their cars less after purchasing an e-bike, 90 percent were riding weekly, and 65 percent were on their bikes daily.

Bike sharing programs have also been shown to reduce personal vehicle use. Based on the Ride 4 Smilies bike share program in Fort Smith, 1,302 users took advantage of riding bikes (some of which were e-bikes) for 8,152 total miles since inception in May 2022, or a period of 20 months (Tableau Public 2023). This program, which costs approximately $140,000 per year, is focused on low-income residents and underserved communities. Based on the program survey, 36 percent of users indicated that bike trips replaced a personal vehicle trip (Tableau Public 2023). It may therefore be expected that approximately 1,760 miles of personal vehicle trips are eliminated in this program per year. Because the NWA region has more mature bicycle infrastructure than Fort Smith, if it is assumed that 50 percent of bike share users replace a personal vehicle trip, and assuming a tenfold increase in number of bikes available at an annual cost of $1.4 million, it could be assumed that approximately 24,500 VMT would be eliminated annually, resulting in annual savings of approximately 9 metric tons of CO_2 per year. If such a program were implemented over a five-year period to 2030, NWA could see a reduction of more than 45 metric tons of CO_2 by 2030.

The adoption rate of EVs in the NWA area is currently at approximately 4 percent of all new vehicles purchased. As EV adoption increases, annual VMT with zero emission transportation will increase, which will reduce the total miles traveled by combustion engine vehicles. Because the EV consumer personal vehicle market is constantly changing, it is difficult to say how much incentive beyond the existing federal incentive is sufficient to bring new EV adopters. However, if we assume 10 percent EV adoption in new car sales by 2025, approximately 52,810,043 VMT annually would involve zero emission vehicles, resulting in approximately 19,000 metric tons of CO_2 reductions by 2025. If EV adoption grew to 35 percent in 2030, approximately 382,872,811 VMT would involve zero emission vehicles annually, resulting in approximately 138,000 metric tons of CO_2 reductions by 2030. The regional approximation of GHG emissions is included in **Appendix A**.

Low-income and Disadvantaged Community Benefits

A transportation innovation program would be structured in a manner that prioritizes incentives for LIDAC and rural populations. For instance, cash incentive programs can be tailored to allow greater rebates for qualified individuals based on income. As noted through the stakeholder and public engagement process as part of CPRG planning activities, not all populations value GHG emission reduction efforts the same way. For example, some individuals may want to own and drive a personal EV, while others would benefit more from increased public transportation, biking, and walking access. A LIDAC analysis was conducted in accordance with EPA guidance and is included in **Appendix B**.

Measure No. 2

Waste, Recycling, and Sustainable Materials Sector

A high priority for the NWARPC is to develop and implement a waste minimization and management program that reduces carbon emissions through the following:

- Providing incentives for community composting programs.
- Supporting development of a biochar pyrolysis facility.
- Providing incentives for anaerobic digester facilities to be implemented/ constructed to divert organic waste that is currently being landfilled and/ or land applied into compost and into other agricultural and environmentally beneficial products.
- Providing incentives or a voucher system to improve waste management for rural populations.
- Developing a regional materials recovery facility (MRF) with end-market transparency.

Rationale for Measure

Since 1979, the Waste Management Eco Vista landfill located in Tontitown has been the only landfill serving the waste disposal needs of NWA. However, there has been significant growth in this region over the years, with NWA now ranking as the 15th-fastest growing region in the U.S. (Sparkman 2023). And as the 100th-largest metropolitan area in the country (Northwest Arkansas Council 2023), the waste management needs of NWA have increased considerably, and the existing landfill is approaching its capacity. In addition to household and commercial waste, waste from construction and demolition in the region will continue to increase as the region grows. Public and private entities are currently pursuing, or have expressed interest in pursuing, the development of waste minimization and management facilities that can simultaneously reduce carbon emissions in the region. This specific GHG reduction area is ripe for program development with regional and/or state implementation and leadership. Additional information from the public and stakeholder engagement is summarized in **Appendix C**.

Few federal funding programs exist to support the identified implementation measures. However, the EPA's Solid Waste Infrastructure for Recycling Infrastructure Grant program is a prospective funding opportunity to support the development or update of plans to advance post-consumer materials management development; strengthen and/or implement comprehensive data collection efforts; and support the state-led implementation of plans that advance post-consumer materials management.

Anticipated Workforce Needs

The waste, recycling, and sustainable materials industry requires a diverse range of skills and expertise to design, develop, and operate these facilities. Professionals who have backgrounds in engineering, project management, environmental science, and other technical expertise will be in high demand. Organizations that oversee program implementation will also have procurement and oversight responsibilities. In addition, field services will be needed to construct and install these systems. Overall, implementation of this measure is anticipated to result in an increase in demand for workers and an associated need for workforce development, which should have a positive impact on the economy in NWA.

Review of Authority to Implement

A waste minimization and management innovation program could extend incentives to several different entities. If an implementation grant is pursued for this measure, it is anticipated the eligible entities would be a state agency or a coalition of local governments and/or regional organizations. This program would be structured in a manner to assure that the eligible entity or coalition would have the authority to implement one or more components of this measure directly and/or deliver incentives to individuals and entities that could implement components of this measure. Voluntary use and public perception of innovative waste management programs could be a barrier to implementing this measure in certain instances and for certain projects.

Greenhouse Gas and Co-pollutant Emissions Reduction or Sequestration

There is the potential for significant impact in reducing GHG emissions in the region through the implementation of a waste minimization and management program, the removal and sequestration of GHGs into compost, and/or carbon-negative processes such as biochar pyrolysis. Because significant amounts of waste are produced from construction and demolition in this rapidly growing region, there will be an ample source of materials to convert into biochar for the foreseeable future. A significant reduction of methane emissions from the local landfill could be accomplished by diverting food waste and other organic material to composting programs and anaerobic digester facilities. Improving the capture of recyclable materials through an MRF would also have an indirect impact on carbon emissions in the industrial sector by reducing the GHG footprint associated with the extraction, distribution, and manufacture of raw materials by replacing a portion of these with recycled materials.

Solid waste originating in Fayetteville alone generated more than 93,000 metric tons of CO_2 in 2022 (City of Fayetteville staff 2023). In May 2023, Waste Management (WM) opened a renewable natural gas (RNG) facility at the Eco Vista Landfill in Tontitown. This landfill gas-to-energy facility uses the carbon emissions generated from the decomposition of organic material in the landfill, recovering and distributing approximately 750,000 metric million British thermal units (MMBtu) per year at this RNG. This figure is the equivalent of more than 5.1 million gallons of diesel, which is enough to serve the equivalent of 25,000 households annually or 650 heavy-duty vehicles (Gatling 2023). Because of the need for regional alternatives to the Eco Vista Landfill, additional RNG facilities associated with landfills and wastewater treatment facilities in the region may provide an opportunity to reduce carbon emissions while simultaneously providing an alternative fuel source that can partially replace the use of fossil fuels. The regional approximation of GHG emissions is included in **Appendix A.**

Low-income and Disadvantaged Community Benefits

A waste minimization and management innovation program would be structured in a manner that prioritizes incentives for LIDAC and rural populations. Improving access to waste collection services for rural communities and job creation in low-income communities are examples of how this program could benefit LIDAC. This program would be structured in a manner that meets the desires and needs of the population served and would focus on providing equitable outcomes through its incentive programs. A LIDAC analysis was conducted in accordance with EPA guidance and is included in **Appendix B**.


READ
EXPLORE

Measure No. 3

Carbon Removal Sector

A high priority for the NWARPC is to develop and implement a program(s) to improve or increase carbon sequestration on the landscape through nature-based solutions and natural infrastructure through the following:

- Planting native tree and plant species that provide optimal carbon sequestration benefits in publicly owned parks, trails, rights-of-way, and privately owned lands.
- Restoring degraded prairies, forests, riparian buffers, streams, and wetlands in parks, trails, rights-of-way, and private lands.
- Identifying lands with a high carbon sequestration value or are suitable for the development of new parks or recreation areas and create programs for the protection and restoration of these lands through fee-simple acquisition and/or conservation easements.
- Developing conservation plans for new parks and recreation areas that include measures to improve or preserve areas with high carbon sequestration value.
- Incentivizing agriculture practices to reduce carbon emissions and create carbon capture.

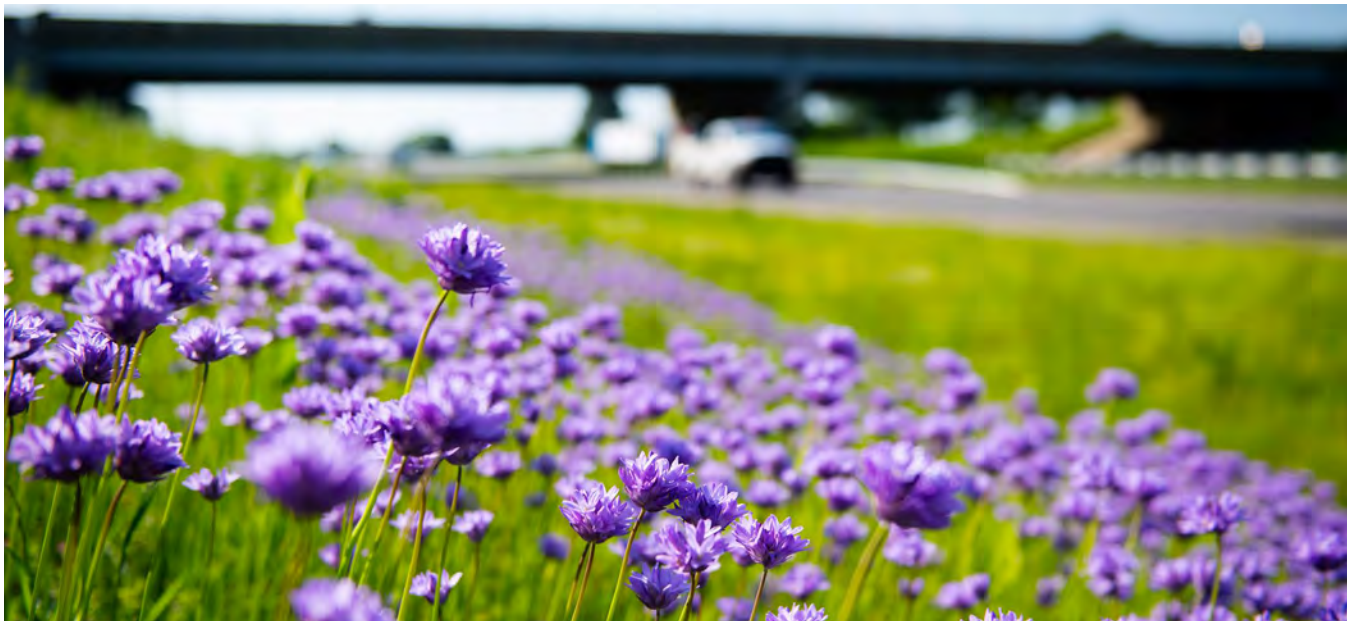
Rationale for Measure

Because it is the 15th-fastest growing region in the U.S. (Sparkman 2023), development in NWA is happening at an astonishing pace. Historically, the region was dominated by native prairies and forests. However, much of the original forest has been logged or cleared, and the native prairies have either been developed or converted to pastures. A program to improve or increase carbon sequestration through land conservation and acquisition could mitigate much of the loss of carbon storage in the region because of this rapidly occurring development. Support is present in NWA for this type of program, which is made evident by the results of the public survey and stakeholder engagement. Additional information from the public and stakeholder engagement is summarized in **Appendix C**.

Plants with large amounts of woody biomass, such as trees, are ideal for aboveground carbon sequestration and storage (Nowak 1993; Nowak and Crane 2000, 2002; McPherson et al. 2005). However, there is a limit to how much carbon upland forests can store because of the limits to both the life span and sizes to which trees are able to grow (Zhu et al. 2018; Forrester 2020). Furthermore, because of the space constraints in urban settings, urban trees are better suited for climate adaptation measures that help city residents cope with climate change, such as urban heat islands and flooding, than for climate and pollution mitigation measures that aim to reduce carbon emissions. As a nature-based climate mitigation measure, carbon sequestration and storage by forests is more effective when implemented on large spatial areas where the trees can be maintained for a long period of time (Pataki et al. 2021), rather than in space-constrained urban settings. Therefore, the protection of existing forests and other high carbon storing ecosystems is a more effective alternative for a nature-based solutions approach to climate mitigation (Forrester 2020).

The soils beneath upland prairies can sequester more carbon than what is found in both the aboveground biomass and belowground soils of upland forests, combined. Soil carbon in prairie ecosystems appears to be related to plant biodiversity and the species richness of these landscapes (Chen et al. 2018; Yang et al. 2019; Pastore et al. 2021). Restoring prairie ecosystems offers an effective nature-based solution for addressing climate change.

Land conservation and acquisition could also provide additional benefits such as improving access to parks and open space for LIDAC communities where such amenities are currently lacking. Additionally, preserved and restored lands could enhance connectivity within the active transportation network in NWA, improving mobility choice for those who lack vehicular transportation. Where these efforts are implemented along riparian areas, additional benefits could also include improvements to stormwater management such as flood control and a reduction in contaminants entering the Illinois River, Beaver Lake, and their tributaries.



Anticipated Workforce Needs

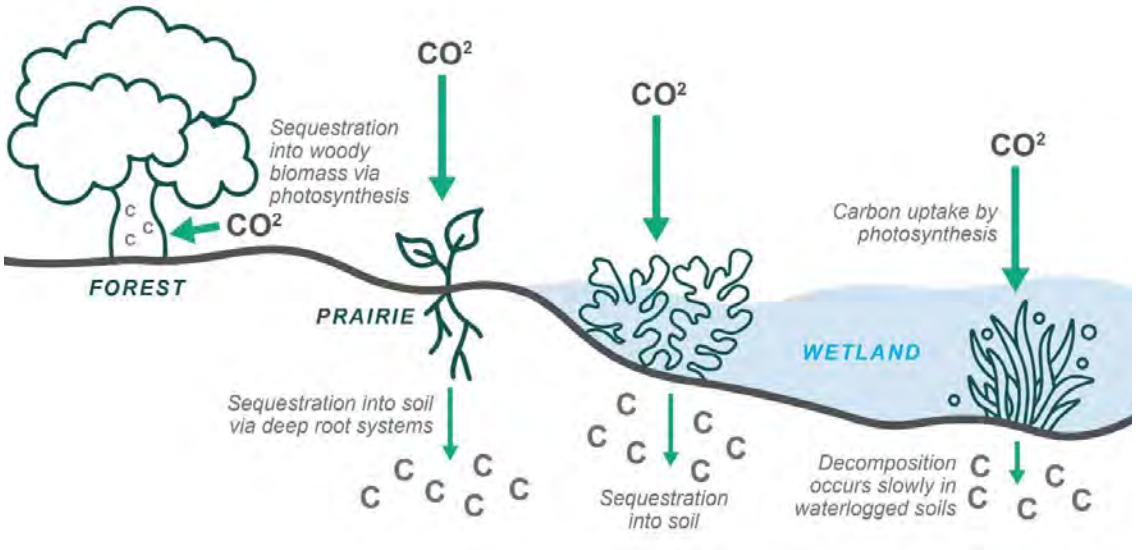
A carbon removal program would require a diverse range of skills and expertise to design, develop, and operate this program. Professionals who have backgrounds in natural resources, land management, project management, environmental science, and other technical expertise would be in high demand. Organizations that oversee program implementation will also have procurement and oversight responsibilities. In addition, field services will be needed to implement this program. Overall, implementation of this measure is anticipated to result in an increase in demand for workers and an associated need for workforce development, which should have a positive impact on the economy in NWA.

Review of Authority to Implement

A land conservation and acquisition program could extend incentives to several different entities. If an implementation grant is pursued for this measure, it is anticipated the eligible entities would be a state agency or a coalition of local governments and/or regional organizations. This program would be structured in a manner to assure that the eligible entity or coalition would have the authority to implement one or more components of this measure directly and/or deliver incentives to individuals and entities that could implement components of this measure. The availability of land for purchase or acquisition could be a barrier to implementing this measure in certain instances and for certain projects.

Greenhouse Gas and Co-pollutant Emissions Reduction or Sequestration

A study published in 2017 in the Proceedings of the National Academy of Sciences estimated that nature-based solutions can account for up to 37 percent of the carbon sequestration needed to keep average global temperatures from increasing 2 degrees Celsius by 2030 (IPBES 2019) and up to 20 percent of the carbon sequestration needed to keep average global temperatures from increasing 2 degrees Celsius by 2050(Griscom et al. 2017). If we assume that 20 percent of the carbon emissions of the region could be offset by carbon removal through conservation and restoration efforts, a land acquisition and conservation program could be combined with other carbon emission reduction strategies to result in an overall reduction of regional GHG emissions. Land acquisition and conservation programs can also be combined with mobility strategies to decrease VMT by incorporating lands used for carbon removal into regional active transportation networks. The regional approximation of GHG emissions is included in Appendix A.



Source: City of Fayetteville, Arkansas Climate Action Plan

During restoration activities, priority would be given to using plant material that provides optimal carbon sequestration and storage. For trees, this includes native species with more than one of the following characteristics: (1) species that are naturally long-lived so that carbon will be stored for a longer period of time; (2) species that produce large quantities of woody biomass so that more carbon will be stored than would be in a species that produces less woody biomass; (3) species with a fast growth rate so that more carbon can be sequestered in a shorter amount of time than would be in slower-growing species; and (4) species with large crowns and/or large leaf sizes so that photosynthetic activity and removal of carbon from the atmosphere would be optimized. For herbaceous species used during restoration activities, priority would be given to species with the following characteristics: (1) perennial species that are naturally long-lived so that carbon will be stored for a longer period of time than in short-lived species, (2) species with fibrous root systems that can sequester a greater amount of carbon into the soil than species with tap root systems, and (3) species with deep root system that sequester carbon deeper into the soil than species with shorter root systems.

Low-income and Disadvantaged Community Benefits

A land conservation and acquisition program would be structured in a manner that prioritizes incentives for LIDAC and rural populations. Because the majority of LIDAC census tracts are located in rural parts of NWA where opportunities for carbon removal from conservation efforts are more abundant, additional benefits with a land conservation and acquisition program could include improving access for LIDAC to parks and open space where such amenities are currently lacking. Lands acquired for conservation or restoration could improve connectivity for the regional active transportation network and provide access to this network for residents of LIDAC and access to parks or open spaces for those who lack vehicular transportation. Additional benefits of implementing land conservation and acquisitions along riparian areas could include improvements to stormwater management and flood reduction for LIDAC and rural populations living downstream of these improvements. This program would be structured in a manner that meets the desires and needs of the population served and would focus on providing equitable outcomes with its incentive programs. A LIDAC analysis was conducted in accordance with EPA guidance and is included in **Appendix B**.

Measure No. 4

Buildings Sector

A high priority for the NWARPC is to develop a residential/commercial energy efficiency and innovation program through the following:

- Establishing an incentive program for implementation of end-use energy efficiency measures and certified energy-efficient appliances, heating and cooling equipment, and lighting.
- Providing incentives for adoption and implementation of up-to-date building energy codes.
- Developing voluntary programs and policies that promote low and zero emission options and vehicle charging, with a focus on buildings in rural and LIDAC areas; multifamily residential buildings; and commercial buildings.

Rationale for Measure

Approximately 13 percent of the GHG emissions in NWA come from the commercial and residential building sector, which excludes emissions from electricity generation. These emissions are primarily generated from natural gas heating. Energy efficiency measures could include replacing old appliances with newer, higher efficiency appliances; installing higher-efficiency lighting; replacing windows and sealing them to reduce or eliminate leaks; and improving insulation. There are existing energy efficiency programs, for example those provided by Black Hills Energy, which could be expanded on or extended further with CPRG implementation grant funding. Such programs reduce energy use, thereby reducing emissions and cost. Public survey data for NWA indicated an interest in and support for energy efficiency. Additional information from the public and stakeholder engagement activities is summarized in **Appendix C**. Updating building energy codes could help to drive the effectiveness of an energy efficiency program.

At times, electrification of heating may be desired and cost-effective for residential and commercial buildings, especially if paired with an incentive program. Further, developing programs and policies that promote EV charging infrastructure in residential and commercial buildings will help support a faster transition to EVs for those who desire access to such infrastructure.

The IIJA established multiple programs, including the Cost-effective Codes Implementation for Efficiency and Resilience grant program, the Energy Efficiency and Conservation Block Grant Program (EECBGP), and the Building Resilient Infrastructure Communities (BRIC) grant program, to advance building code updates and other building efficiency policies within a particular region, state, or local jurisdiction. Through the IRA, the $1 billion Assistance for Latest and Zero Building Energy Code Adoption program was created to adopt codes for residential buildings that meet or exceed the 2021 International Energy Conservation Code (IECC) and/or adopt a building energy code for commercial buildings that meets or exceeds American National Standards Institute (ANSI)/ American Society of Heating, Refrigerating, and Air-Conditioning (ASHRAE)/ Illuminating Engineering Society (IES) standards. To support the LIDAC households, the Department of Energy (DOE) administers the Weatherization Assistance Program (WAP) and various home energy rebate programs to assist with energy efficient home retrofits. To advance energy efficiency building code updates, the region should look to develop a robust partnership with the state- and community-based organizations to apply for future funding rounds.

Anticipated Workforce Needs

The building energy efficiency industry requires a diverse range of skills and expertise to assess, design, develop, construct, and operate energy efficient buildings. Professionals who have backgrounds in engineering; building design and construction; project management; heating, ventilation, and air conditioning (HVAC); and technical expertise are in high demand. Organizations that oversee program implementation will also have procurement and oversight responsibilities. In addition, qualified construction/renovation professionals and technicians will be needed to make these changes. Overall, implementation of this measure is anticipated to result in an increased demand for workers and an associated need for workforce development and training, which should have a positive impact on the economy in NWA. The state should evaluate existing career and technical college building trade programs (e.g., HVAC, plumbing, electrical, construction technology) for coursework and training on energy-efficient construction methods and materials. These institutions should be encouraged to adopt industry-recognized certificates or credentials in energy-efficient technologies and methods.

Review of Authority to Implement

A building energy efficiency innovation program could extend incentives to several different entities. If an implementation grant is pursued for this measure, it is anticipated the eligible entities would be a state agency or a coalition of local governments and/or regional organizations. This program would be structured in a manner to assure that the eligible entity or coalition would have the authority to implement one or more components of this measure directly and/or deliver incentives to individuals and entities that could implement components of this measure. Public-private partnerships could also be a mechanism to implement this measure, including with Black Hills Energy, that already has an established energy efficiency program (Black Hills Energy 2023).

Greenhouse Gas and Co-pollutant Emissions Reduction or Sequestration

As noted previously, approximately 13 percent of the GHG emissions in NWA come from the commercial and residential building sector. These emissions are primarily generated from natural gas heating. If 20 percent of current building emissions could be reduced by energy efficiency measures and another 20 percent could be reduced by electrification, the impact could be an overall reduction of regional GHG emissions of 5 percent (International Energy Agency 2023). This GHG emissions reduction largely depends on the amount of funding that is available for implementation of the components contained within this measure.

In addition to GHG emissions reductions, other co-pollutant emission reductions would be realized for criteria and hazardous air pollutants, including a resultant positive impact from reduced ozone and particulate matter less than or equal to 2.5 microns in diameter (PM2.5) emissions, and the associated health impacts of those emissions. The regional approximation of GHG emissions is included in **Appendix A.**

Low-income and Disadvantaged Community Benefits

A building energy efficiency innovation program would be structured in a manner that prioritizes incentives for LIDAC and rural populations. Public survey data for NWA indicated an interest in and support for building energy efficiency measures. Energy efficiency measures not only reduce GHG emissions, but also have a positive impact on LIDAC communities on a fixed and/or limited income. Further, such measures can help people feel safer and more comfortable in their housing and may result in positive health impacts. This program would be structured in a manner that meets the desires and needs of the population served and would focus on providing equitable outcomes through its incentive programs. A LIDAC analysis was conducted in accordance with EPA guidance and is included in **Appendix B**.

Measure No. 5

Energy Sector

A high priority for the NWARPC is to develop and implement a regional/statewide renewable energy innovation program through the following:

- Installing renewable energy and energy storage systems on municipal/government facilities.
- Developing distributed and community-scale renewable energy generation and storage, including in LIDAC and rural communities.
- Developing and implementing programs that support smart-grid and/or behind-the-meter technologies.

Rationale for Measure

Approximately 35 percent of the GHG emissions in NWA come from the energy sector. Though GHG emission reductions at all local utilities may not be feasible through the CRPG implementation grant program, there are public and private entities pursuing, or that are interested in pursuing, the installation of renewable energy and energy storage systems. This includes interest from the public, including in rural and LIDAC communities. During stakeholder engagement for the CPRG planning process, several local governments, regional organizations, and the University of Arkansas described ongoing, planned, or potential activities that could gain a critical path forward with grant funding, such as CPRG. Additional information from the public and stakeholder engagement activities is summarized in **Appendix C**. Utility portfolios in NWA consist primarily of fossil fuels, so there is an opportunity for government entities and public-private partnerships to drive GHG emission reduction efforts in the energy sector.

Both the IIJA and the IRA provide substantial funding for green energy project deployment. Programs such as the EPA's Solar for All and the DOE's Grid Resilience and Innovation Partnerships (GRIP) programs provide grant support for developing and advancing clean energy generation and storage projects on public facilities and homes in LIDAC communities. Further, the IRA's direct-pay provisions provide government entities with the ability to benefit from clean energy tax credits. Government entities that elect to use the direct-pay provision can treat the credit as a payment of tax with any overpayment resulting in a refund. Grant programs, coupled with the IRA's direct-pay provisions, allow green and renewable energy projects more feasibility without pursuing traditional debt financing mechanisms.

Anticipated Workforce Needs

The renewable energy industry requires a diverse range of skills and expertise to design, develop, and operate these clean energy systems. Professionals who have backgrounds in engineering, project management, environmental science, and technical expertise are in high demand. Organizations that oversee program implementation will also have procurement and oversight responsibilities. In addition, field services will be needed to construct and install, operate, and maintain these systems.

Overall, implementation of this measure is anticipated to result in an increased demand for workers and an associated need for workforce development and training, which should have a positive impact on the economy in NWA. There are 54 programs across the IIJA and IRA that provide for green workforce development that includes recruiting, training, and hiring workers. Further, the IRA includes tax credits and other rebate programs to support energy-related workforce development activities. Through the IRA's direct-pay provision, the Department of the Treasury can provide tiered tax credits to public entities that include workforce development activities in their renewable energy projects, such as registered apprenticeships and meeting prevailing wage requirements. Additional federal funding proposals should consider partnering with local and regional institutions of higher education to advance on-the-job-training activities, such as registered apprenticeships, to take advantage of these tiered tax credits and advance both clean energy goals and workforce training targets.

Review of Authority to Implement

An energy innovation program could extend incentives to several different entities. If an implementation grant is pursued for this measure, it is anticipated the eligible entities would be a state agency or a coalition of local governments and/or regional organizations. This program would be structured in a manner to assure that the eligible entity or coalition would have the authority to implement one or more components of this measure directly and/or deliver incentives to individuals and entities that could implement components of this measure. Public-private partnerships could also be a mechanism to implement this measure. The state of Arkansas has regulations that affect generation, distribution, and net metering that would need to be evaluated and that could be a barrier to implementing this measure in certain instances and for certain projects.

Greenhouse Gas and Co-pollutant Emissions Reduction or Sequestration

As noted previously, utility portfolios in NWA consist largely of fossil fuels. Considering that approximately 35 percent of the regional inventory is from the energy sector, there is the potential for implementation of a regional energy innovation program that will have a significant impact in reducing GHG emissions. Distributed power generation, though somewhat limited by state regulation, could significantly reduce the region's GHG emissions. As an example, Google's Environmental Insights tool estimates that the City of Fayetteville's buildings consume 943,000 tons of carbon dioxide equivalent (tCO_2e) per year, and the City of Fayetteville's rooftop solar potential is 490,000 tCO_2e per year (Google 2020). Though it may not be feasible or cost-effective to cover all rooftops with solar, such an analysis demonstrates the large potential upside with the comprehensive implementation of a program such as the one envisioned by this measure.

If 33 percent of current energy use could be replaced by zero carbon energy sources, the impact would be an overall reduction of regional GHG emissions of 10 percent. The GHG emissions reduction largely depends on the amount of funding that is available for implementation of the components contained within this measure. As an example of the potential, the City of Fayetteville increased clean energy usage from 16 percent to 72 percent by installing solar power arrays near its two wastewater treatment facilities. In addition to GHG emissions reductions, other co-pollutant emission reductions would be realized for criteria and hazardous air pollutants, including a resultant positive impact from reduced ozone and PM2.5 emissions and the associated health impacts of those emissions. The regional approximation of GHG emissions is included in **Appendix A**.

City of Fayetteville

Low-income and Disadvantaged Community Benefits

An energy innovation program would be structured in a manner that prioritizes incentives for LIDAC and rural populations. As noted through the stakeholder and public engagement process as part of CPRG planning activities, not all populations value GHG emission reduction efforts alike. For example, people in multifamily housing may evaluate the pros and cons of renewable installation differently for their building than someone in a rural community. But both population subgroups would likely appreciate such a project if lower cost, low- or no-carbon energy can be provided in a reliable manner. This program would be structured in a manner that meets the desires and needs of the population served and would focus on providing equitable outcomes with its incentive programs. Generally, a reduction in GHG emissions from the energy sector can result in a reduction in local co-pollutant emissions, thereby having a positive (or reduced negative) impact on health outcomes with a particular benefit to LIDAC communities that typically suffer the most in the localized area. If localized renewable power generation can result in lower costs for customers, this typically has a positive impact in LIDAC populations on fixed incomes. A LIDAC analysis was conducted in accordance with EPA guidance and is included in **Appendix B**.

07

Co-Benefits for Northwest Arkansas

The above measures provide other co-benefits in addition to reducing GHGs and mitigating climate change. These co-benefits are discussed below.

Ground Level Ozone

Ground level ozone (O_3) is a potential emerging issue in northwest Arkansas. Ground level ozone can harm human health and affect sensitive vegetation and ecosystems. The EPA sets the National Ambient Air Quality Standards (NAAQS) for ground-level ozone, which specifies a maximum allowed measurement for ozone to be present in outdoor air. In 2015, the EPA set the NAAQS for ground level ozone at 0.070 parts per million (ppm), measured as the fourth-highest daily maximum 8-hour concentration averaged across three consecutive years. The Arkansas Department of Energy and Environment (ADEE) Division of Environmental Quality's maintains an Ambient Air Monitoring Station in Springdale, which indicated that in 2023 the ground level ozone levels in our region exceeded the limits set by the EPA that year.

Ground level ozone is created when nitrogen oxides (NO_x) react with other volatile organic compounds (VOCs) in the atmosphere as they are exposed to sunlight. Nitrogen oxides are highly reactive gases that form when fossil fuels are burned at high temperatures. NO_x pollution is emitted from a variety of sources, including automobiles, trucks, construction equipment, power plants, and industrial boilers. Thus, reducing emissions from fossil fuels through the measures outlined above is likely to provide a co-benefit of reducing the levels of nitrogen oxides and ground level ozone in the region.

The EPA and ADEE's Division of Environmental Quality have been working to reduce ozone concentrations in Arkansas. High temperatures accelerate the production of ozone, complicating efforts to improve air quality in the region (EPA 2016). High temperatures are also accompanied by weak winds, causing the atmosphere to stagnate and ozone levels to accumulate (Burrows, 2016).

Economic and Health Benefits

Many of the measures described above have economic and health co-benefits. For example, Measure No. #1 above has both economic and health benefits for the residents of Northwest Arkansas that are associated with active transportation. In 2018, a study commissioned by the Walton Family Foundation was conducted to analyze the economic benefits of bicycling in Northwest Arkansas. The study found that the bicycling industry generates $137 million in benefits annually (BBC Research & Consulting 2018). A similar study conducted in 2022 by the Center for Business and Economic Research at the Sam M. Walton College of Business found that the bicycling industry generated $159 million in total economic impacts from cycling-related jobs, tourism revenue and taxes in Northwest Arkansas that year (Jebaraj, M. 2023).

A 2019 study concluded that switching from short car trips to walking or bicycling can achieve substantial health gains and healthcare cost savings, and that implementing infrastructural improvements to encourage active transportation is likely to be a cost-effective way to improve the overall health of the population (Mizdrak et. al. 2019).

A reduction in GHGs and ground-level ozone will provide additional health co-benefits by reducing diseases related to poor air quality in the region. Ground-level ozone aggravates lung diseases such as asthma and increases the risk of premature death from heart or lung disease. Certain people such as children, the elderly, the sick, and the poor are especially vulnerable (EPA, 2016).

Stormwater and Flooding

Excessive amounts of stormwater runoff from heavy precipitation events can exceed the capacity of gray infrastructure, resulting in flash flooding and negative impacts to the residents of Northwest Arkansas (Boyett and Lee 2022; Early 2021). Measure No. #3 will help the region adapt to these heavier precipitation events through the restoration of riparian buffers along streams. Riparian buffers help slow stormwater runoff and improve the absorption of flood waters, which reduces peak flows and lessens downstream flooding.

Illinois River Watershed Partnership

08 Conclusion

In conclusion, this NWA PAP provides a priority assessment of five key action measures to facilitate GHG emissions reduction, address the needs of LIDACs, and outline meaningful engagement processes for both stakeholders and the public within Northwest Arkansas. The PAP serves as the foundational framework for the forthcoming Comprehensive Action Plan (CAP).

As we move forward, the execution of the PAP will require concerted efforts from various stakeholders, including government agencies, businesses, communities, and individuals. The integration of community engagement and collaboration assures a holistic approach, fostering partnerships that are essential for successful plan implementation. Regular monitoring and adaptive management will be crucial to address evolving dynamics and assure the plan's continued relevance and effectiveness.

Ultimately, the PAP illustrates a strategic and forward-looking framework designed to address critical aspects of energy and environmental stewardship. Through a comprehensive analysis and prioritization process, this plan aims to guide actions and initiatives that align with the overarching goal of promoting a sustainable and resilient future.

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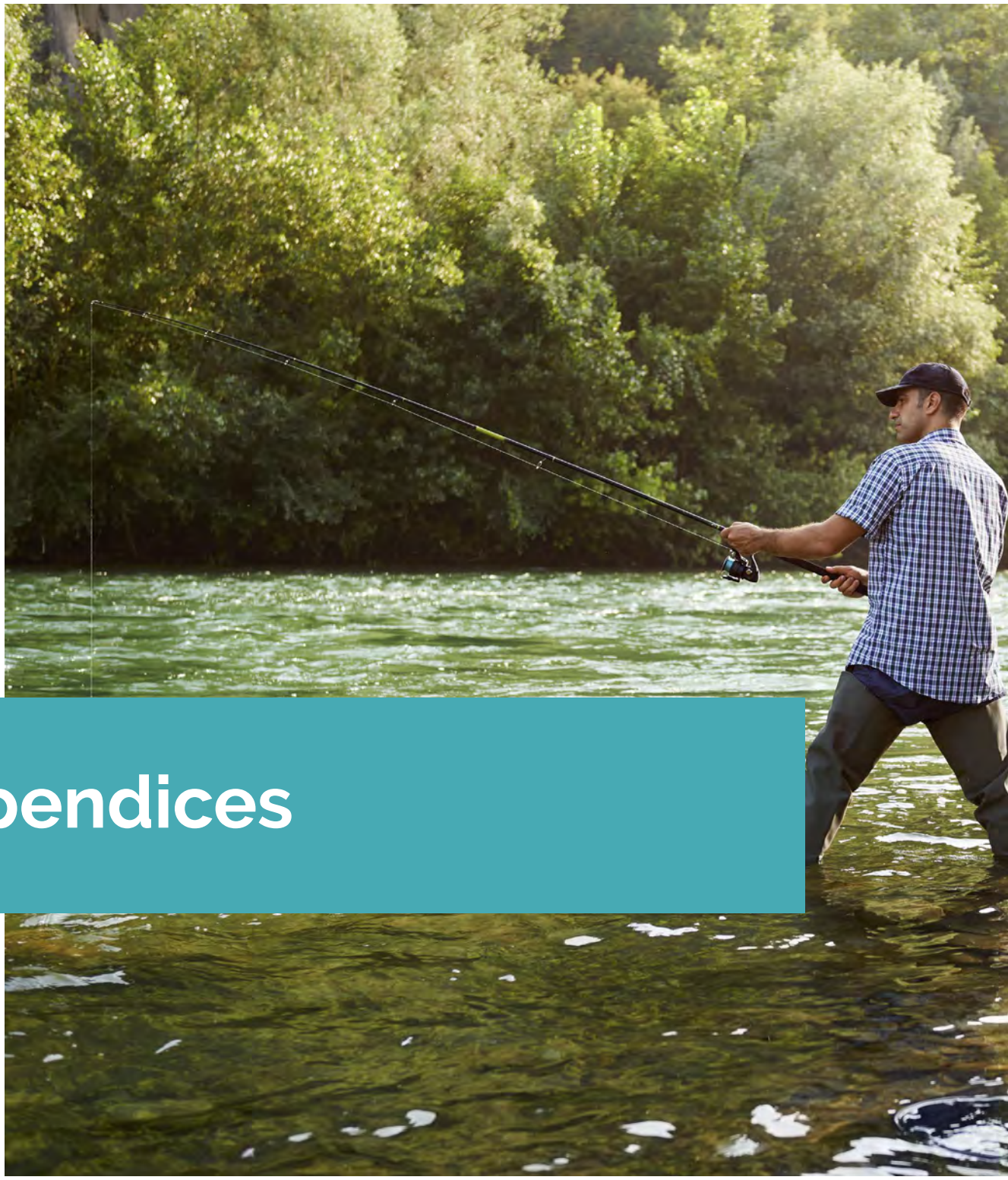

Appendices

Appendix A Greenhouse Gas Approximation Summary

Appendix B Low-Income and Disadvantaged Community Summary

Appendix C Stakeholder and Public Engagement Summary

Appendix A

Greenhouse Gas Approximation Summary

GHG Approximation Summary for Northwest Arkansas (NWA)
November 2023

Overview

Greenhouse gas (GHG) emissions include carbon dioxide (CO_2), nitrous oxide (NO_2) and methane. GHG emissions data is often collected and reported at various administrative levels, including national, regional, and sometimes state or local levels. The region of Northwest Arkansas (NWA) includes Benton, Madison, and Washington Counties. Transparent communication is essential for building trust in the accuracy of the NWA regional GHG emission estimates. It is understood that there are inevitable uncertainties with the estimation process, but it is also recognized that these NWA approximations have been reinforced and compared with data from multiple reliable sources.

This summary describes the results of an analysis of the data pulled from the U.S. Environmental Protection Agency's (EPA) National Emissions Inventory (NEI). With that, approximations were based on the comparisons of Arkansas statewide data from the EPA's Greenhouse Gas Inventory Data Explorer, in addition to city-level data from Google's Environmental Insights Explorer (EIE) and directly from the City of Fayetteville.

Data Sources and Methodology

EPA Greenhouse Gas Inventory (state-level data)

The EPA is also subject to produce the United States' official Greenhouse Gas Inventory, which is a comprehensive report detailing the country's emissions of GHGs. This inventory can be broken down into statewide reports, which was done for the state of Arkansas. This inventory is an essential tool for understanding the sources and trends of GHG emissions in the United States. The inventory includes emissions from various sectors, such as the electric power industry, transportation, industrial processes (industry), agriculture, commercial, and residential. This 2020 state-level data was used to compare and approximate regional emissions.

The electric power industry includes fossil fuel combustion, incineration of waste, and other electricity generation categories. Transportation includes fossil fuel combustion and the use of fluorinated gases. Industry includes fossil fuel combustion, natural gas and petroleum systems, chemical industry, mineral industry, metal industry, coal mining, production and use of fluorinated gases, and other industrial categories. Agriculture includes crop cultivation, livestock, and fuel combustion. Commercial includes fossil fuel combustion, landfill and waste services, and the use of fluorinated gases. Residential includes fossil fuel combustion and the use of fluorinated gases.

EPA NEI (county-level transportation data)

The NEI is a comprehensive database maintained by the EPA that can be extracted down to the county-level. The NEI compiles information on the emissions of air pollutants from various sources, including

industrial facilities, power plants, transportation, and other activities contributing to air pollution. The data is collected from a variety of sources, including emissions inventories submitted by industries, fuel usage data, and other relevant information. The NEI provides data on the types and amounts of pollutants released into the air and serves as a critical tool for air quality management and regulatory decision-making. For the basis of this analysis, 2020 county-level transportation data was used to approximate regional emissions. Figure 1 gives a comparison of the transportation GHG emissions data collected through NEI versus the estimated overall GHG emissions per person in NWA.

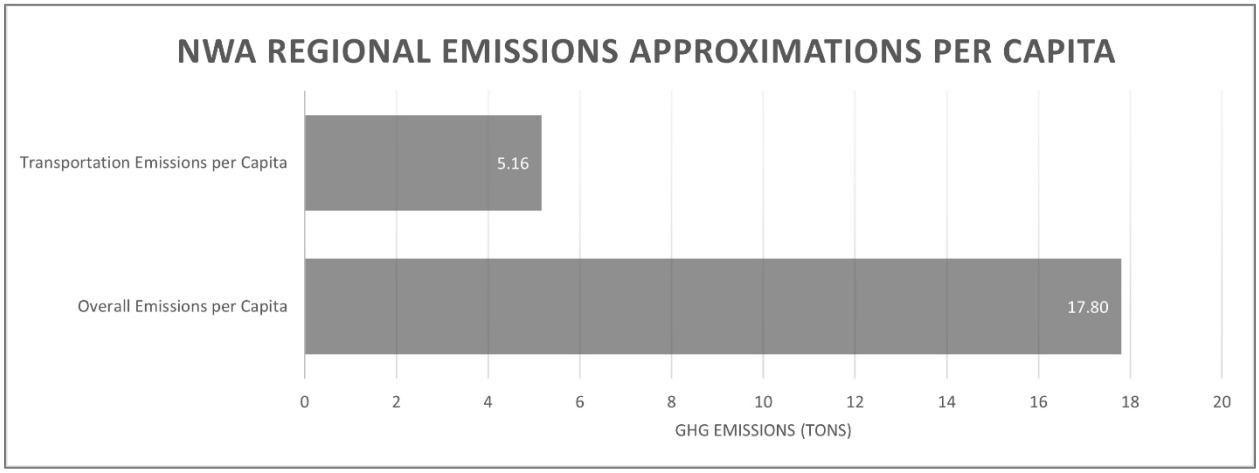

Figure 1. NWA Regional emissions approximations per capita.

Google EIE (city-level data)

Google's Environmental Insights Explorer (EIE) is a tool that provides data and insights related to GHG emissions. EIE allows users to effectively measure, visualize, and explore city-level emissions sources and data. This tool provided useful data on the city of Fayetteville, which is the largest city within the NWA region located in Washington County. It should be noted that agricultural emissions data was not included in this inventory given the city's urban landscape. This 2020 city-level data was used to compare and approximate regional emissions.

City of Fayetteville

Additionally, the City of Fayetteville provided valuable emissions inventory data for the years 2010 through 2022 that was used to compare and approximate regional emissions. It should be noted that agricultural emissions data was not included in this inventory given the city's urban landscape.

Results

GHG emission approximations were made based on NEI transportation data for the NWA region consisting of Benton, Madison, and Washington Counties. Assumptions were then made to approximate for the remaining sectors based on state-level emissions data from the EPA's Greenhouse Gas Inventory database and city-level emissions data from Google's EIE and the City of Fayetteville.

Approximately 9,731,972 tons of GHG emissions were estimated for NWA. This approximated amount was broken up into sectors including the electric power industry, transportation, agriculture, industry, commercial, and residential. For a visual breakdown including tons of GHG emissions and percentages per sector, see Figure 2.

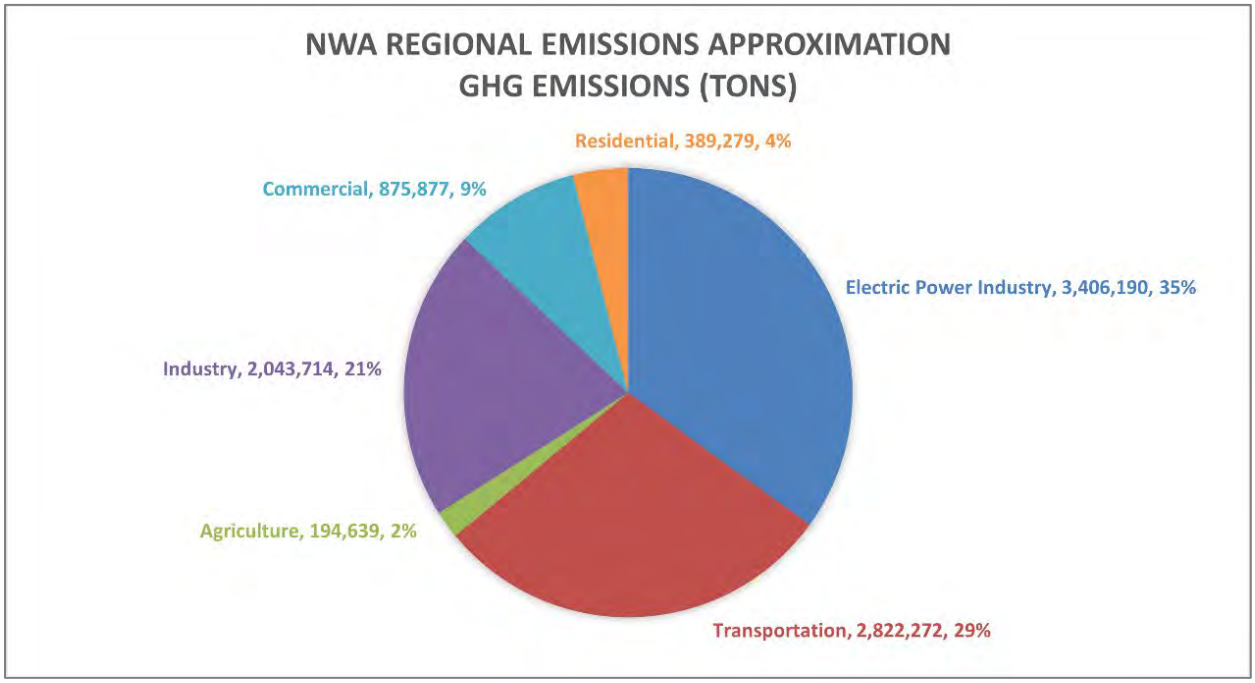

Figure 2. Northwest Arkansas Regional GHG Emissions Approximation

The *agricultural sector* accounts for approximately two percent or 194,639 tons of GHG emissions. Agricultural emissions are accumulated from livestock, agricultural soils, and crop production. Approximately 90 percent of NWA is rural and 10 percent is urban. In comparison, about 99 percent of Arkansas is rural and one percent is urban. Since the NWA agriculture emissions data was estimated based on state-level data, this needed to be adjusted. NWA has a larger urban landscape compared to the state of Arkansas, so emissions from the agricultural sector needed to reflect that. Assumptions were made that the agriculture sector emissions should be reduced by 90%, from 21 to two percent. The remaining percentage points were re-allocated to the other sectors.

The *electric power industry sector* accounts for approximately 35 percent or 3,406,190 tons of the region's GHG emissions. This includes emissions from electricity production used by other end use sectors. In 2021, 60 percent of the country's electricity came from burning fossil fuels, mostly coal and natural gas (EIA 2022). This sector was slightly adjusted based on assumptions made for the agricultural sector.

The *transportation sector* accounts for approximately 29 percent or 2,822,272 tons of the region's GHG emissions. GHG emissions from this sector are mainly derived from burning fossil fuels for cars, trucks, and trains. More than 94 percent of the fuel used for transportation is petroleum based, which includes

primarily gasoline and diesel (IPCC 2022). This sector was slightly adjusted based on assumptions made for the agricultural sector.

The *industry sector* accounts for approximately 21 percent or 2,043,714 tons of the region's GHG emissions. Emissions from industry primarily come from burning fossil fuels for energy, as well as GHG emissions from certain chemical reactions necessary to produce goods from raw materials. This sector was slightly adjusted based on assumptions made for the agricultural sector.

The *commercial sector* accounts for approximately 9 percent or 875,877 tons of the region's GHG emissions, while the *residential sector* accounts for approximately 4 percent or 389,279 tons of the region's GHG emissions. Emissions from the commercial and residential sector include fossil fuels burned for heat, the use of gases for refrigeration and cooling in buildings, and non-building specific emissions such as the handling of waste. These sectors were also slightly adjusted based on assumptions made for the agricultural sector.

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Appendix B

Low-Income and Disadvantaged Community Summary

Low Income/Disadvantaged Communities (LIDAC)
Summary for Northwest Arkansas (NWA)
October 2023 (revised May 2024)

Northwest Arkansas (NWA) encompasses a broad spectrum of communities, varying in socioeconomic backgrounds, including urban, suburban, and rural areas. Within NWA, low-income and disadvantaged communities (LIDAC) have been identified at the census tract level using the U.S. Environmental Protection Agency's (EPA) Climate & Economic Justice Screening Tool (CEJST). This summary describes the results of an analysis of the data contained on the CEJST and serves the purpose of pinpointing communities categorized as LIDAC as part of the planning initiative for the EPA's Climate Pollution Reduction Grant (CPRG) program. This program involves a three-county climate action planning process, and the EPA recognizes these communities as low-income and disadvantaged.

The CEJST is a geospatial mapping tool created with the specific goal of identifying marginalized and overburdened communities that suffer from pollution and lack of investment. The CEJST helps policymakers, researchers, and organizations pinpoint areas where vulnerable populations face disproportionate environmental and economic burdens. It is often used in the context of environmental justice and initiatives aimed at addressing disparities in environmental quality and access to resources, such as the Justice40 Initiative. Census tracts were identified through the CEJST as either disadvantaged, partially disadvantaged, or not disadvantaged. Furthermore, any census tract identified as disadvantaged by the CEJST is defined as a LIDAC.

The CEJST typically considers a variety of burden categories when assessing whether a community is disadvantaged. Within each burden category, different indicators are used as data points or measurements to assess the environmental and social conditions in a community. Communities in a census tract are considered to be disadvantaged when they are at or above the 90th percentile for one or more of these burden indicators, while also being at or above the threshold for the socioeconomic burden associated with each burden category. Combined, these burden and socioeconomic thresholds help identify communities that face a disproportionate burden of environmental pollution and economic challenges.

Associated socioeconomic thresholds used in CEJST include:

1. **Low Income:** People in household where income is less than or equal to twice the federal poverty level and does not include students enrolled in higher education.
    - Associated with all of the above Burden Categories below, except Workforce Development.

2. **High School Education:** Percent of people above the age of 25 whose high school education is less than a high school diploma.
    - Associated with Workforce Development only.

Burden Categories used in CEJST include:

1. **Climate Change*:*** This category assesses the impact of climate change-related factors, such as extreme weather events, rising temperatures, and sea-level rise, on communities. It helps identify areas vulnerable to climate change effects.
    - Burden indicators: Expected agriculture lost rate, Expected building loss rate, Expected population loss rate, Projected flood risk, and Projected wildfire risk.

    Associated socioeconomic threshold: at or above the 65th percentile for low income.

2. **Energy:** The energy category considers factors related to energy production, distribution, and consumption in a community. This can include the presence of power plants, energy infrastructure, and energy efficiency measures.
    - Burden indicators: Energy cost and PM2.5 in the air.

    Associated socioeconomic threshold: at or above the 65th percentile for low income.

3. **Health:** Health categories evaluate the health status of a community, including rates of illnesses and diseases, particularly those linked to environmental pollution and hazards.
    - Burden indicators: Asthma, Diabetes, Heart disease, and Low Life Expectancy.

    Associated socioeconomic threshold: at or above the 65th percentile for low income.

4. **Housing:** This category looks at housing conditions within a community, including factors like housing quality, affordability, and overcrowding. Poor housing conditions can affect residents' well-being.
    - Burden indicators: Housing cost, Lack of green space, Lack of indoor plumbing, and Lead paint.

    Associated socioeconomic threshold: at or above the 65th percentile for low income.

5. **Legacy Pollution:** Legacy pollution refers to the historical contamination of land and water resources from past industrial or hazardous waste activities. This category assesses the presence of such legacy pollution and its impact on communities.
    - Burden indicators: Abandoned mine land, Formerly Used Defense Sites, Proximity to hazardous waste facilities, Proximity to Risk Management Plan facilities, and Proximity to Superfund sites.

    Associated socioeconomic threshold: at or above the 65th percentile for low income.

6. **Transportation:** Transportation categories consider factors related to transportation infrastructure, such as proximity to highways, public transportation options, and traffic-related pollution. They also assess transportation equity and access.
    - Burden indicators: Diesel particulate matter exposure, Transportation barriers, and Traffic proximity and volume.

Associated socioeconomic threshold: at or above the 65th percentile for low income.

7. **Water and Wastewater:** This category assesses the quality and availability of water resources, as well as wastewater treatment infrastructure. Access to clean and safe drinking water is a critical component of environmental justice.
    - Burden indicators: Underground storage tanks and releases and Wastewater discharge.

    Associated socioeconomic threshold: at or above the 65th percentile for low income.

8. **Workforce Development:** Workforce development categories consider employment opportunities, job training programs, and economic development initiatives in a community. Access to meaningful employment can significantly impact residents' well-being.
    - Burden indicators: Linguistic isolation, Low median income, Poverty, and Unemployment.

    Associated socioeconomic threshold: at or above the 65th percentile for low income, and more than 10% of people ages 25 years or older whose high school education is less than a high school diploma.

Additionally, the EPA's EJScreen Tool was also utilized to further gather data and information pertaining to the assessment of LIDAC communities. EJScreen is an online mapping and screening tool developed by the EPA. It stands for "Environmental Justice Screening and Mapping Tool." EJScreen is designed to help identify areas in the United States that may be disproportionately burdened by environmental pollution and other stressors, especially in terms of environmental justice concerns.

LIDAC Summary: NWA

The CEJST relies on American Community Survey data from 2015-2019. According to this dataset, NWA has a population of about 514,259 people across three counties, which includes:

- Benton County with a population of 265,759;
- Washington County with a population of 232,289; and
- Madison County with a population of 16,211.

Overall, 37% of the population in NWA live in a LIDAC. By county, the percentage of the population living in a LIDAC are as follows:

- 32% in Benton County;
- 76% in Madison County; and
- 39% in Washington County.

Throughout NWA, a total of 33 census tracts are identified as meeting the criteria for being a LIDAC (see Figure 1 below). Within these tracts, there are a couple of trends that were identified during the data analysis. First, of the LIDAC tracts in Madison County, each one meets or exceeds the threshold of four or more burden indicators, while in Washington County only 13% of the LIDAC communities meet or exceed the threshold for four or more burden indicators. However, in Washington County, 54% of the LIDAC communities meet or exceed the threshold of two or three burden indicators.

In total, eighteen of the LIDAC tracts identified in NWA meet or exceed the thresholds for two or more burden indicators. Of these eighteen tracts, five meet or exceed the threshold for four or more of the following burden indicators: Projected Wildfire Risk, Energy Cost, Heart Disease, Lack of Indoor Plumbing, Proximity to Risk Management Plan Facilities, Transportation Barriers, and Linguistic Isolation.

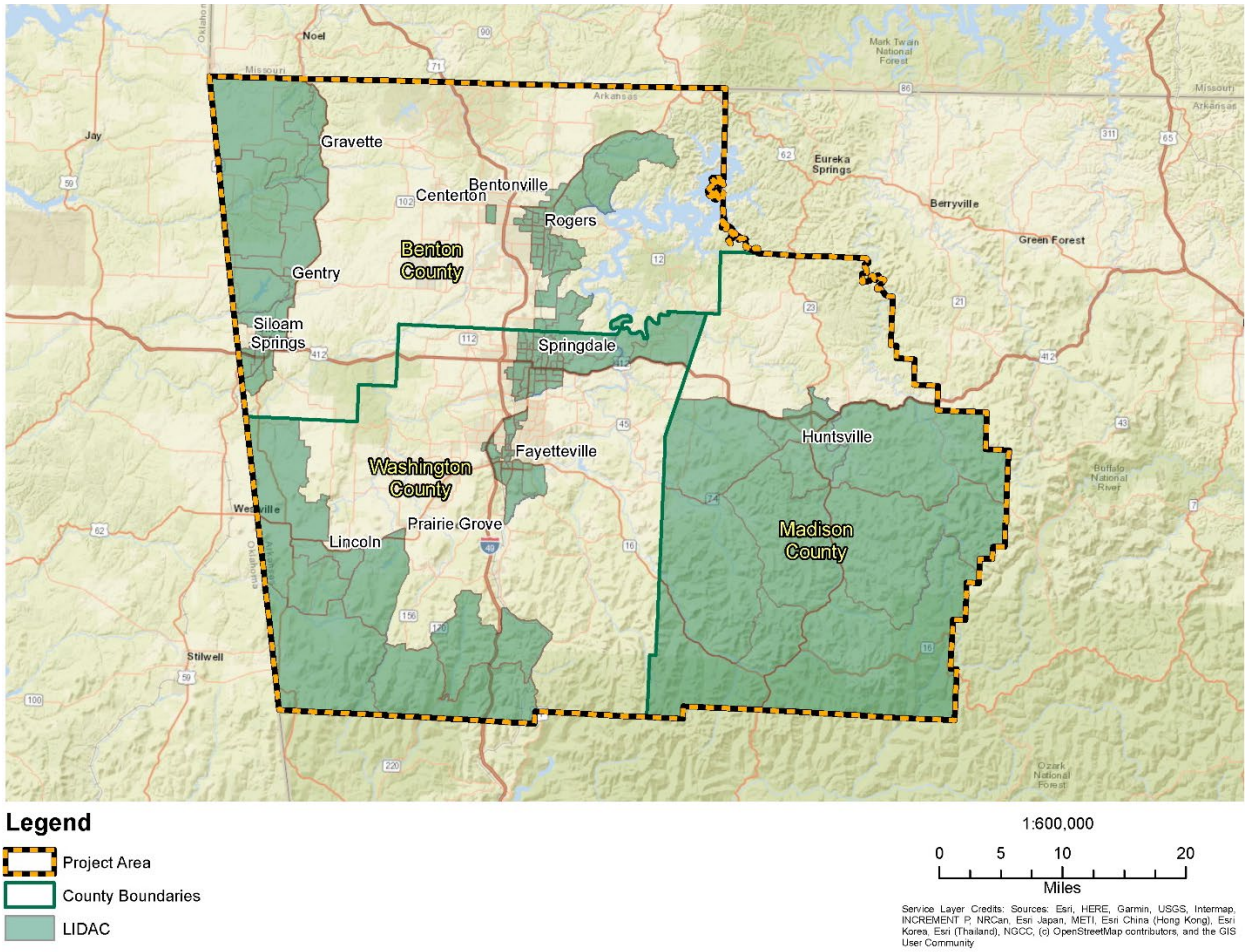


Figure 1. Map of the LIDAC communities within Northwest Arkansas

Appendix C

Stakeholder and Public Engagement Summary

INTRODUCTION

Stakeholder and public engagement are critical to public processes, and this project is no exception. As a requirement of the Climate Pollution Reduction Grants Program, engagement with low-income and disadvantaged communities (LIDACs) was a priority of this public participation process. Per the Environmental Protection Agency, planning grant recipients must conduct meaningful engagement with affected LIDACs in the development of the planning grant deliverables.

Per the *Climate Pollution Reduction Grants Program: Technical Reference Document for States, Municipalities, and Air Pollution Control Agencies*:

> *In the context of climate action planning, a meaningful engagement process ensures that the full range of the potential impacts (both benefits and disbenefits) of greenhouse gas emission reduction measures are understood and considered. Such engagement can help ensure that planning grant recipients:*
>
> - *Communicate with residents of LIDACs about greenhouse gas reduction measure opportunities in their areas;*
> - *Minimize to the extent possible any anticipated disbenefits to residents of LIDACs;*
> - *Identify and incorporate community-driven priorities into plan design and engage with residents of LIDACs throughout plan implementation; and,*
> - *Continue engagement with residents, leaders, and representatives of LIDACs into the future.*
>
> *Engagement strategies can cover multiple communities and should be inclusive of linguistic, cultural, institutional, geographic, and other differences to assure meaningful participation. Meaningful engagement under the Climate Pollution Reduction Grant program should include early outreach, sharing information, and soliciting input on the Priority Action Plan and Comprehensive Action Plan development, especially in the LIDACs.*

To ensure compliance with the above guidance, the NWARPC actively engaged with Madison, Washington, and Benton counties and took a targeted approach to engagement with LIDACs within the counties after the LIDAC identification and analysis task was complete. This appendix summarizes those efforts. Note that this appendix only summarizes the engagement efforts undertaken for the Priority Action Plan phase of the project.

PUBLIC ENGAGEMENT PLAN

As the first deliverable for the engagement process, a public engagement plan (PEP) for the Priority Action Plan process was developed by Olsson to guide public and stakeholder participation efforts. The PEP was continuously updated throughout the Priority Action Plan process and will continue to be revised throughout the Comprehensive Action Plan and Status Report phases of the larger project.

The PEP included general guidelines for the engagement process, which public engagement spectrums were being utilized, and a detailed schedule of engagement tactics and coordination tasks.

To view the entire PEP, see ***Public Engagement Plan*** as follows.

Public Engagement Plan

NORTHWEST ARKANSAS ENERGY AND ENVIRONMENT INNOVATION ACTION PLAN

Northwest Arkansas Regional Planning Commission (NWARPC)

olsson

Last revised on November 16, 2023

“Public engagement is a process that brings people together to address issues of common importance, to solve shared problems, and to bring about positive social change. Effective public engagement invites average citizens to get involved in deliberation, dialogue, and action on public issues that they care about. And it helps leaders and decision makers better understand the perspectives, opinions, and concerns of citizens and stakeholders.”

- Unknown

This Public Engagement Plan (PEP) supports and reinforces the principles and goals of the NWARPC Public Participation Plan.

General Guidelines

Review and Quality Control. All public-facing material will be reviewed by the Northwest Arkansas Regional Planning Commission (NWARPC) prior to publishing to ensure the material is consistent with the organization's preferred messaging, brand, and communication style.

Work Sharing and Coordination. Each item/task shown in this PEP will be developed through coordination between Olsson and the NWARPC. Olsson will share marketing materials with the NWARPC's project manager and staff members for distribution.

Engagement Tactics vs. Coordination Tasks. Within the body of this PEP, Engagement Tactics (ET) and Coordination Tasks (CT) are referenced. ETs refer to times when Olsson or NWARPC will actively be engaging with stakeholders and/or the public. CTs refer to times of coordination and planning for ETs to function successfully.

PEP Snapshot

NWARPC PROJECT CONTACTS

Tim Conklin

Nicole Gibbs

PUBLIC ENGAGEMENT SPECTRUM LEVELS

Inform, Consult, and Involve

Phase One: Priority Action Plan (PAP)

PUBLIC ENGAGEMENT SPECTRUM LEVEL(S)

Inform, Consult, and Involve

PHASE ONE SUMMARY

- The established Stakeholder Committee will serve in an advisory capacity to NWARPC in the development of the Priority Action Plan.
- Multiple engagement tactics will be used to complete the above-mentioned activities, including a virtual stakeholder meeting, in-person public open house meetings, and initial development of a project webpage, social media, email blasts, and public survey.

GENERAL TIMEFRAME

September 2023 through December 2023

SCHEDULE OF ENGAGEMENT TACTICS (ET) AND COORDINATION TASKS (CT)

COMPLETE?	TYPE	TASK + DESCRIPTION	LEAD PARTY	DATE
X	ET	**Public Survey Launch.** NWARPC will create a survey to gather public input about the communities' priorities related to the reduction of climate pollution. Results will be used to inform the PAP.	NWARPC	9/12/23
X	CT	**Stakeholder Identification.** NWARPC will create the first draft of the stakeholder committee member list. Olsson will review and provide comments. NWARPC will finalize the member list and gather individual contact information for each stakeholder. NWARPC will be responsible for communicating with the Stakeholder Committee.	NWARPC	9/29/23
X	CT	**Prep Meeting for Stakeholder Committee Meeting #1.** Prior to Stakeholder Committee Meeting #1, Olsson will meet virtually with NWARPC and lead a meeting to discuss the draft plan for Stakeholder Committee Meeting	Olsson	10/4/23

		#1. The purpose of this prep meeting is to gather NWARPC feedback on the program for Stakeholder Committee Meeting #1.		
X	CT	**LIDAC Assessment.** Olsson will conduct a LIDAC assessment consistent with guidance provided publicly by the EPA. The results of the LIDAC assessment will be documented.	Olsson	10/6/23
X	CT	**Project Webpage Draft Content.** Olsson will coordinate with NWARPC to prepare initial material for the project webpage to be posted by 10/13/23. Information will include project description and purpose, open house meeting information and a link to the survey and idea box.	Olsson	10/6/23
X	CT	**Marketing and Outreach Materials.** Olsson will develop content for three social media posts by the NWARPC account, three email blasts, and one press release to advertise the public open houses, survey, and pop-up events.	Olsson	10/6/23
X	ET	**Stakeholder Committee Meeting #1.** Olsson will host a two-hour virtual Zoom Stakeholder Committee Meeting #1, staffed with four Olsson team members. NWARPC will be responsible for staffing the meeting, as well. The purpose of the meeting is to educate stakeholders on the purpose of the project, the timeline, anticipated outcomes, and previous recommendations from existing regional plans. If deemed necessary, separate breakout sessions will be included with distinct technical topics. Olsson will prepare the program for the meeting and exercise(s) to get feedback on prior recommendations and their alignment with future implementation funding. This meeting will be recorded.	Olsson	10/12/23, 11 a.m. – 1 p.m. via Zoom

X	CT	**Prep Meeting for Public Open House Meeting #1.** Prior to Public Open House Meeting #1, Olsson will meet virtually with NWARPC and lead a meeting to discuss the draft plan for Public Open House Meeting #1. The purpose of this prep meeting is to gather NWARPC feedback on the program for Public Open House Meeting #1.	Olsson	10/12/23, 3 p.m.
X	CT	**Prepare Public Meeting Materials.** Olsson will work with NWARPC to develop content for the open houses, including up to eight (8) stations with display boards or posters, sign in sheets, comment forms, and handouts.	Olsson	10/17/23
X	ET	**LIDAC Outreach.** Based on community analysis, targeted outreach to LIDACs will include posters advertising the open house meetings and survey, social media posts, and emails in English, Spanish, and Marshallese in the LIDAC communities.	Olsson / NWARPC lead translations	10/18/23
X	CT	**Stakeholder Committee Meeting #1 Summary Deliverable.** Olsson will prepare a concise summary of the process and findings from Stakeholder Committee Meeting #1. This deliverable will be an appendix to the PAP.	Olsson	10/18/23
X	CT	**Public Open House Outreach #2.** Repost social media and consider sending reminder emails.	NWARPC	10/23/23 *(morning before afternoon open house)*
X	CT	**Public Open House Outreach #3 (Final).** Repost social media and consider sending reminder emails.	NWARPC	10/26/23 *(morning before afternoon open house)*
X	ET	**In-Person Public Open House Meetings.** NWARPC will host two in-person public open house meetings to introduce the project, prioritized recommendations established by the Stakeholder	NWARPC leading / Olsson assisting	• Carroll Electric Community Room in Huntsville –

		Committee, and direct the public to the online public survey. Olsson will attend with three to four (3-4) staff people if available.		10/23; 4-7 p.m. • Jones Center in Springdale – 10/26; 4-7 p.m.
X	CT	**Survey Closes.** NWARPC will close the survey and provide the results to Olsson to incorporate into Stakeholder Meeting #2.	NWARPC	10/30/23
X	ET	**Stakeholder Committee Meeting #2.** Olsson will host a two-hour virtual Zoom Stakeholder Committee Meeting #2, staffed with four Olsson team members. NWARPC will be responsible for staffing the meeting, as well. The purpose of the meeting is to share a draft of the prioritized PAP supplement measures and will include commenting exercises to gather feedback on the draft measures. Olsson will prepare the program for the meeting and feedback exercise(s). This meeting will be recorded.	Olsson	11/2/23, 11 a.m. – 1 p.m. via Zoom
X	CT	**Engagement Summary (Complete for Phase One - PAP).** Olsson will finalize the complete engagement summary for the PAP phase.	Olsson	11/16/23
	CT	**NWAPRC Board Meeting.** Olsson will attend with one staff person to help present the final PAP.	NWARPC / Olsson	12/6/23, 1:30 p.m.

Phase Two: Comprehensive Action Plan (CAP)

GENERAL TIMEFRAME

To be prepared upon notice-to-proceed for phase two.

Phase Three: Status Report (SR)

GENERAL TIMEFRAME

To be prepared upon notice-to-proceed for phase three.

STAKEHOLDER COMMITTEE

In coordination with the consultant team, the Northwest Arkansas Regional Planning Commission (NWARPC) identified potential members for the stakeholder committee. These members were identified, in part, because of their eligibility to participate in the CPRG implementation grant process and associated Notice of Funding Opportunity, and/or their ability to implement the identified priority action items. The NWARPC worked to ensure representation from a variety of sectors. Email invitations were extended to the identified stakeholders to join the committee. The table below and on the following page details the makeup of the stakeholder committee.

CATEGORY	ORGANIZATION
Project Partners	ADEQ
Project Partners	Metroplan
Project Partners	Fort Smith
Project Partners	Arkansas Department of Transportation (ARDOT)
Project Partners	Olsson
Project Partners	Northwest Arkansas Regional Planning Commission (NWARPC)
City/County	Fayetteville
City/County	Springdale
City/County	Rogers
City/County	Bentonville
City/County	Bentonville Utilities
City/County	Washington County
City/County	Benton County
City/County	Siloam Springs
Transportation	ORT
Transportation	Razorback Transit
Transportation	XNA
Education/Health	University of Arkansas Sustainability Officer
Education/Health	University of Arkansas
Education/Health	NWACC
Education/Health	Northwest Technical Institute
Education/Health	Washington Regional
Education/Health	Mercy
Education/Health	Northwest Medical Center
Education/Health	UAMS

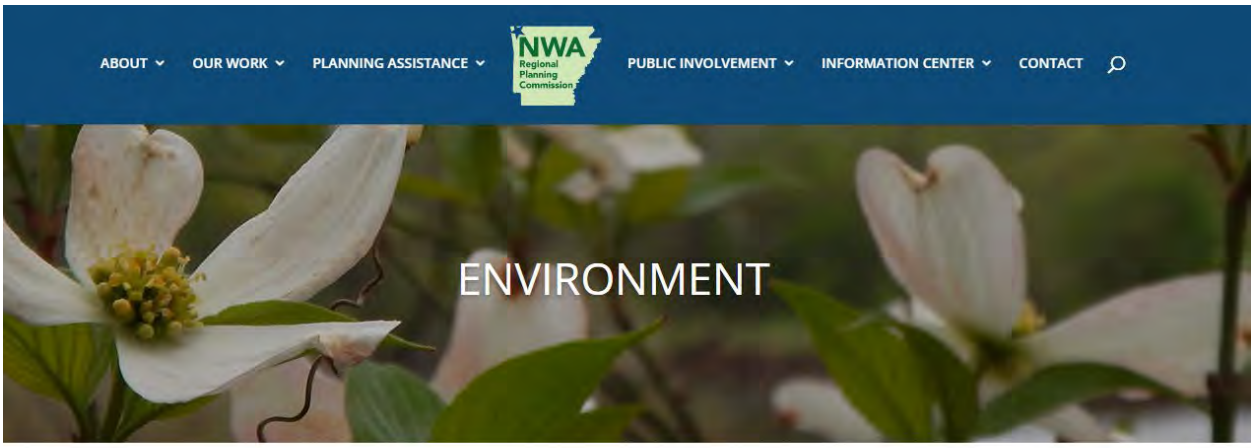
CATEGORY *(CONTINUED)*	**ORGANIZATION** *(CONTINUED)*
Community Partners	Illinois River Watershed Partnership
Community Partners	Beaver Watershed Alliance
Community Partners	Beaver Water District
Community Partners	NWA Council
Community Partners	UAEX
Community Partners	Walton Family Foundation
Community Partners	Trailblazers
Community Partners	Runway Group
Community Partners	Watershed Conservation Resource Center
Community Partners	NWA Land Trust
Community Partners	The Nature Conservancy
Community Partners	Audubon Delta
Industry-Energy	Arkansas Advanced Energy Association
Industry-Energy	Stitt Energy
Industry-Energy	Entegrity
Industry-Energy	Carroll Electric
Industry-Energy	Ozarks Electric
Industry-Energy	SWEPCO
Employers	Walmart
Employers	JB Hunt
Employers	Georges
Employers	Tyson
Employers	Simmons Food
Employers	McKee Foods
Employers	Arvest
School Districts	Fayetteville School District
School Districts	Rogers School District
School Districts	Bentonville School District
School Districts	Springdale School District
Madison County	Huntsville School District
Madison County	County Government
Madison County	Huntsville City Government
Solid Waste	Boston Mtn Solid Waste
Solid Waste	Benton County Solid Waste District
Solid Waste	Waste Management Ecovista Tontitown Landfill
Building/Construction	Newell Development
Building/Construction	Specialized Realty Group

MARKETING AND OUTREACH EFFORTS

Various marketing and outreach tools were developed and utilized throughout the engagement process, including email blasts, social media boosted and non-boosted posts, press releases, posters/flyers, and a project webpage. Events were also attended by the project team to further spread the word about the project.

Project Webpage

NWARPC hosted and regularly updated a project webpage on their website, in which materials were available in English, Spanish, and Marshallese.



Events Attended

The project team attended the following events and hosted a table about the project:

- September 28, 2023 - Smart Growth for Source Water Protection Forum #6
- September 30, 2023 - NWA Drive Electric Event
- October 6, 2023 - Square 2 Square Bicycle Ride

Email Outreach

The following emails were sent to NWARPC contact lists:

- October 2, 2023 - Stakeholder Committee - Energy and Environment Innovation (EEI) Plan - Request for Stakeholder Committee
- October 3, 2023 - TAC/RPC Info Email - Energy and Environment Innovation (EEI) Plan Launch!
- October 13, 2023 - Stakeholder Committee - Follow-up
- October 13, 2023 - Public Email Blast - Arkansas Energy and Environment Innovation (EEI) Plan - We want to hear from you!
- October 23, 2023 - Public Email Blast - Follow-up

Press Releases

A press release was distributed on October 13, 2023, and was released by the Arkansas Times, Northwest Arkansas Democrat Gazette, KNWA FOX24, and AXIOS NW Arkansas. The release read as follows:

FOR IMMEDIATE RELEASE
Contact: Tim Conklin
Phone: 479-751-7125
E-mail: tconklin@nwarpc.org

NWARPC ASKS FOR PUBLIC'S INPUT ON ENERGY AND ENVIRONMENT INNOVATION PLAN

SPRINGDALE, AR *October 11, 2023 – The Northwest Arkansas Regional Planning Commission (NWARPC) is asking for the public's input on the Arkansas Energy and Environment Innovation (EEI) Plan to reduce pollutant emissions in the region.*

Two public open houses are scheduled to share information about the planning process and gather the public's input on priority actions items. The open houses will be Monday, October 23 from 4:00-7:00 p.m. at the Carroll Electric Community Room, 5056 Hwy 214B in Huntsville and Thursday, October 26 from 4:00-7:00 p.m. at the Jones Center (Room 226), 922 E. Emma Ave., in Springdale. Both open houses are drop-in events.

In addition to the public open houses, NWARPC is asking for the public's input via an online survey and online idea box. Both the survey and idea box are available at www.nwarpc.org/energy-environment-innovation-plan.

The Arkansas EEI Plan is aimed at reducing pollutant emissions, creating high-quality jobs, and spurring economic growth in the state. NWARPC is collaborating with the Arkansas Department of Energy and Environment (ADEE), City of Fort Smith and Metroplan to develop the EEI Plan. The EEI Plan will enable Arkansas state and local government agencies to compete for federal grant funding for energy infrastructure and investments in technology. The EEI Plan development process is funded through a $3 million grant to ADEE from the U.S. Environmental Protection Agency.

This initial phase of the planning process will result in recommendations for the Priority Action Plan to be included with other recommendations from across the state in 2024. The Priority Action Plan is the first phase of the EEI Plan. A second phase will develop recommendations for the Comprehensive Action Plan, anticipated in 2025. Together, the Priority Action Plan and Comprehensive Action Plan will make up the EEI Plan. Opportunities for future public input will be available throughout the entire planning process.

Those unable to attend the open houses can access event materials at www.nwarpc.org/energy-environment-innovation-plan beginning Monday, October 23.

For more information, contact Tim Conklin at tconklin@nwarpc.org, 479-751-7125.

Facebook Outreach

NWARPC boosted three Facebook posts, as follows:

- October 18, 2023 - Facebook Post (English/Spanish/Marshallese)
- October 20, 2023 - Huntsville Open House
- October 23, 2023 - Springdale Open House
- October 24, 2023 - PILS Facebook Live Marshallese Community Event with Eric Fuselier (https://www.facebook.com/profile.php?id=61550332464692)

Poster/Flyer Outreach

NWARPC boosted three Facebook posts, as follows:

- October 18, 2023 - Facebook Post for Survey and Idea Box (English/Spanish/Marshallese)
    - This post ran from October 18 to November 2, 2023, and received 158 engagements and reached 3,672 people.
- October 20, 2023 - Huntsville Open House
    - This post ran from October 20 to October 24, 2023, and received 10 engagements and reached 424 people.
- October 23, 2023 - Springdale Open House
    - This post ran from October 23 to October 26, 2023, and received 30 engagements and reached 296 people.

NWARPC also posted a non-boosted post on October 24, 2023 for the PILS Facebook Live Marshallese Community Event with Eric Fuselier (https://www.facebook.com/profile.php?id=61550332464692).

STAKEHOLDER COMMITTEE MEETING #1 SUMMARY

To assist in the creation of the Priority Action Plan portion of the Northwest Arkansas Energy and Environment Innovation Plan, a virtual stakeholder committee meeting was held on October 12, 2023, from 11:00 a.m. to 1:00 p.m. via Zoom to educate and connect stakeholders with specific interests and influence on the project and to gather input on topics and measures.

Stakeholders were identified by the NWARPC, as previously described in ***Stakeholder Committee***, and invited via email to attend. Attendees included representatives from many public, non-profit, and private sectors. For a complete list of meeting attendees, see ***Stakeholder Committee Meeting #1 Attendees***. Representatives from the NWARPC and the consultant team facilitated the meeting. The meeting format included a welcome and brief introduction of the project team, and a presentation of the project, including an overview of the:

- Environmental Protection Agency's Climate Pollution Reduction Grants (EPA CPRG),
- Award of an EPA CPRG to the Arkansas Department of Energy and Environment (ADEE),
- Agreement between ADEE and NWARPC to develop a regional Priority Action Plan and Comprehensive Action Plan for Northwest Arkansas,
- Planned stakeholder and public engagement process,
- Notice of Funding Opportunity for implementation grants,
- Example greenhouse gas reduction measures, and
- Next steps.

Stakeholder Committee Meeting #1 Attendees

- Josh Beam, Benton County Road Department
- Wendy Bland, Benton County Solid Waste District
- Eric Boles, University of Arkansas Sustainability Department
- Andy Brewer, Olsson
- Frank Broadstreet, JB Hunt
- Chris Brown, City of Fayetteville
- John Coleman, Entegrity Partners
- Tim Conklin, Northwest Arkansas Regional Planning Commission
- Lane Crider, Beaver Water District
- Sunny Farmahan, Arkansas Department of Transportation
- Eric Fuselier, Olsson
- Joel Gardner, Ozark Regional Transit
- Nicole Gibbs, Northwest Arkansas Regional Planning Commission
- Bradley Hardin, Southwest Electric Power Company

- Chris Herrera, City of Springdale
- Brandi Holt, Huntsville City Government
- Dan Holtmeyer, NWA Council
- Glen Hooks, Audubon Delta
- Lance Jobe, City of Rogers
- Madison Kienzle, Benton County
- Leif Kindberg, Illinois River Watershed Partnership
- Travis Matlock, City of Bentonville Utilities
- John McCurdy, City of Rogers
- Chris McNamara, City of Fayetteville
- John Mulford, Fayetteville School District
- Dina Nash, Citizen's Climate Lobby
- Peter Nierengarten, City of Fayetteville
- Justin Northcutt, Ozarks Electric Cooperative
- Leif Olson, City of Fayetteville
- Stephanie Orman, City of Bentonville
- Taylor Osburn, Benton County Solid Waste
- Tyler Overstreet, City of Bentonville
- Jacqueline Perez, City of Springdale
- Aaron Pinedo, Arkansas Department of Transportation
- Taylor Plummer, Olsson
- Jodi Reynolds, Waste Management Ecovista Tontitown Landfill
- Stacey Roach, Olsson
- Becky Roark, Beaver Watershed Alliance
- Joshua Robertson, City of Fort Smith
- Bridget Russell, Washington County
- Janet Schwanhausser, Bentonville School District
- Nick Steinke, Olsson
- Orlo Stitt, Stitt Group
- Graham Thompson, Watershed Conservation Resource Center
- Jennifer Turner, City of Rogers
- Paul Wallace, Bentonville School District
- Katrina Wille, Olsson
- Jason Willey, Arkansas Department of Energy & the Environment
- Lydia Wilkerson, Benton County Solid Waste District

Stakeholder poll question exercises were interspersed throughout the presentation. Stakeholders were able to participate in the polls via QR codes linked to Mentimeter. The following is a summary of the poll questions asked and their respective results.

Poll Question #1

If you are aware of any other local or regional projects/plans related to energy and emission reduction, please tell us the name or provide a link.

- Fayetteville in process of developing an updated climate action plan
- UofA Climate Action Plan
- UofA Transportation Plan
- Audubon Delta and Arkansas Advanced Energy Association are launching a project aimed at improving electric transmission capacity in NWA. That's critical to adding more clean energy in the region.
- Rogers, AR solar farm. Not sure on info
- Jon that I am familiar with.
- Orlo Stitt
- https://www.orlando.gov/Initiatives/2018-Community-Action-Plan
- J.B. Hunt is working toward a 5MW solar array in Gentry.
- Holistically Green Living is about to train builders, appraisers, bankers, realtors, etc. in sustainable building.
- City of Rogers is installing solar arrays to serve municipal facilities.
- Holistically Green Living conducted a 90-minute program at the Fay. library last month.
- Large scale solar services agreement
- Bike share and e-scooter share
- Countless other projects. Refer to sustainability.Uark.edu
- J.B. Hunt will be installing a few electric car charging stations at a new office space in the upcoming months.

Poll Question #2

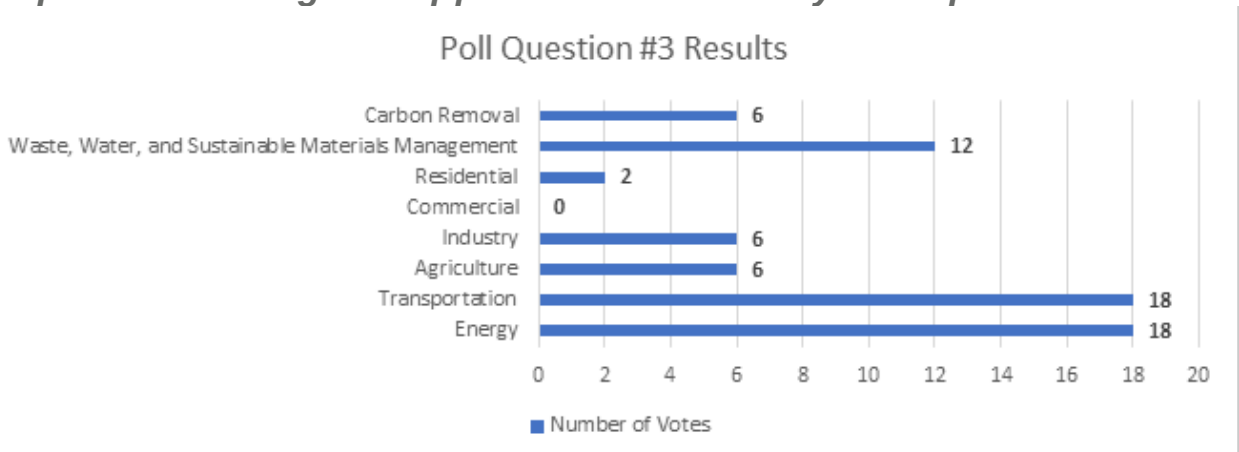
Has your agency/community implemented any projects/plans targeting reduction of energy consumption or greenhouse gas emissions? If so, what?

- Yes we've done this
- Stream restoration projects in Rogers establish riparian zones
- Also the already mentioned roundabout and bike projects"
- We are working toward our plan to reduction energy consumption by County facilities prior to using our EECBG.

- Fayetteville's Climate Action Plan
- The Arkansas Electric Vehicle Infrastructure Deployment Plan. Though it does not target reducing greenhouse has emissions directly.
- https://climate.colorado.gov/denver-80x50-climate-action-plan#:~:text=This%20climate%20action%20plan%20from,(from%20a%202005%20baseline)
- Yes Fayetteville has implemented 10 MW of solar with battery storage at our two wastewater treatment plants.
- Carbon dioxide reduction has been the primary mission of The Stitt group for 45 years. (www.thestittgroup.com)
- 5 MW Solar Array
- City of Little Rock has recently issued a solar RFP aimed at moving to clean energy for its municipal power use. Perhaps worth visiting with Brittany Nichols and James Owen at the city for more info
- There are ongoing projects to preserve native prairie, riparian areas, forest canopy and other vegetation which sequester and hold carbon. These proven solutions need to be expanded in our region.
- Rogers is executing a major solar program which will cover all (I believe) city power needs

Poll Question #3

Which sector(s) should be prioritized for a successful implementation grant application? Choose your top three.



Poll Question #4

What is the most feasible or most implementable Priority Action for your organization?

- Construction and Demolition Waste
- Divert/reduce waste from landfill through a larger scale reuse program
- Would definitely be interested in implementing potentially several of these action points
- Community solar
- Solar and other carbon-based energy and fuels reduction projects
- Electrification of the UA's fleet vehicles, bus fleet, and lawn care tools
- Solar energy production, infrastructure, and equipment acquisition support for heavy duty ZEVs.
- Reduce NWA transmission load pocket issue so Flint Creek coal plant can be shut down
- Electrification of city fleets; development code amendments; bus stop improvements
- For our agency: Waste diversion/reduction; increasing recycling; increasing composting; C&D diversion; partner with ag industry to increase composting; large scale reuse; energy storage on govt facilities
- NWA community tree planting
- Holistically Green Living will maybe need to partner with a governmental entity on sustainable building training for new workers and builders already in existence. The U of A/NWTI project might fit.
- Fleet transition, solar, residential solar for low income, eV charging, recycling initiatives especially regionally
- Programs to reuse waste, including construction and demolition waste. For example, a Re-Source Park.
- Electrification of public and private river ports
- HOV lane on I-49
- Bus Rapid Transit along 71B corridor
- Solar Power is the vaccine to combat climate change distraction. Expanded solar power generation for homes, commercial, agriculture etc. is the future—AR government has not been favorable
- Programs to reuse waste (composting, etc.)
- Solsmart for communities to streamline permitting
- Regional development code template
- Regional recycling sort facility
- Complete streets policies

At the end of the meeting, stakeholders were asked to complete the following “next steps:”

- Help share the public outreach materials (to be shared by NWARPC)
- Take the public survey via the NWARPC project webpage
- Fill out the idea box via the NWARPC project webpage
- Mark their calendar for Stakeholder Meeting #2 on November 2, 2023, from 11:00 a.m. to 1:00 p.m.

To view the entire PowerPoint from the meeting, see ***Stakeholder Committee Meeting #1 Presentation Slides*** as follows.

NWA Regional Planning Commission

NWARPC ENERGY & ENVIRONMENT INNOVATION PLAN

STAKEHOLDER MEETING #1
OCTOBER 12, 2023 / 11AM-1PM
ZOOM

1

HOUSEKEEPING

- Please keep yourself muted throughout the meeting
- This meeting will be recorded
- If you have technical difficulties during the meeting, email Stacey at sroach@olsson.com
- Nicole will provide the meeting presentation slides, the poll results, and public outreach marketing materials in a follow-up email
- We will be using ***Mentimeter*** during today's meeting; you can participate using your phone, or by opening a web browser
- Mute button: 

- Chat button: 

2

2

PRESENTERS


Tim Conklin, AICP
Executive Director
NWARPC


Nicole Gibbs, AICP
Regional Planner
NWARPC


Eric Fuselier, PWS, ENV, SP
Project Manager
Olsson


Nick Steinke, PE, CPEA, SFP
Industry Expert
Olsson

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CPRG PLANNING GRANTS

- **EPA awarded $250 million in formula grants to states, tribes, and local governments under its Climate Pollution Reduction Grants (CPRG) Program.**
- **Grant recipients will use funds to develop plans for reduction of greenhouse gas (GHG) and other pollutant emissions within their covered jurisdiction.**

CPRG IMPLEMENTATION GRANTS

- EPA will award $4.6 billion in competitive grants for measures developed under the CPRG planning grant.
- EPA anticipates awarding individual grants between $2 million and $500 million, with funding tiers allowing comparably sized projects to compete against one another.
- Implementation grant guidance issued September 2023 with applications due April 1, 2024. Submission of CPRG priority plan is prerequisite to application for implementation grants.

5

5

AR E&E'S CPRG GOALS

Enable access to and enhance Arkansas's competitiveness for federal funding for energy infrastructure

Support investment in technologies that reduce pollutant emissions, create high-quality jobs, and spur economic growth in the state

01 IIJA/IRA GRANTS

02 IRA TAX CREDITS

03 OTHER MEASURES

HALO hydrogen hub
LOUISIANA • OKLAHOMA • ARKANSAS

ARKANSAS CLEAN CITIES COALITION

PERFORMANCE CONTRACTING ENERGY $AVING

ENERGY EFFICIENCY ARKANSAS

RIPE
RURAL INVESTMENT TO PROTECT OUR ENVIRONMENT

6

ENERGY & ENVIRONMENT INNOVATION PLAN

- Arkansas Department of Energy and Environment's Division of Air Quality (DEQ) - $3 million planning grant through the EPA's Carbon Pollution Reduction Grant (CPRG)
- Create an Arkansas Energy and Environment Innovation Plan to identify key carbon reduction/sequestration strategies across various sectors in the state
- The Arkansas Energy and Environment Innovation Plan will make state and local governments eligible for CPRG implementation grants, which will likely be due on or around **April 1, 2024 (AWARD ALL FUNDING IN FIRST YEAR)**
- The EPA CPRG program will grant a total of $4.6 billion nationwide in competitive implementation grants, with individual grants ranging from $2 million to $500 million
- DEQ has approached NWARPC to partner on the **Fayetteville-Springdale-Rogers Metropolitan Statistical Area (Benton, Madison, and Washington County)** - Energy and Environment Innovation Plan
- NWARPC received $440,000 suballocation to do regional planning for carbon reduction/sequestration – 4-year project

https://www.epa.gov/inflation-reduction-act/climate-pollution-reduction-grants 7

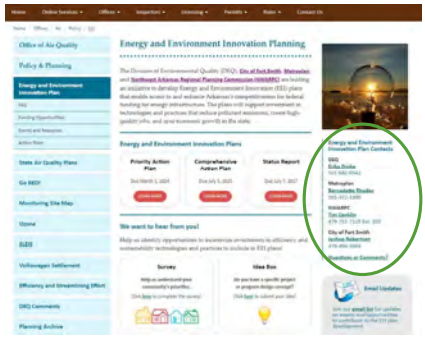
7

NWARPC GRANT ACTIVITY

- Signed MOA between ADEE and NWARPC in September
- Hired Olsson as a consultant in September
- Survey/website/idea box
- Identified City, County, and State plans for review
- Initiated public engagement and stakeholder planning activities

https://www.fhwa.dot.gov/innovation/everydaycounts/edc-7/integrating_ghg.cfm 10

10



https://www.adeq.state.ar.us/air/planning/eei/ 8

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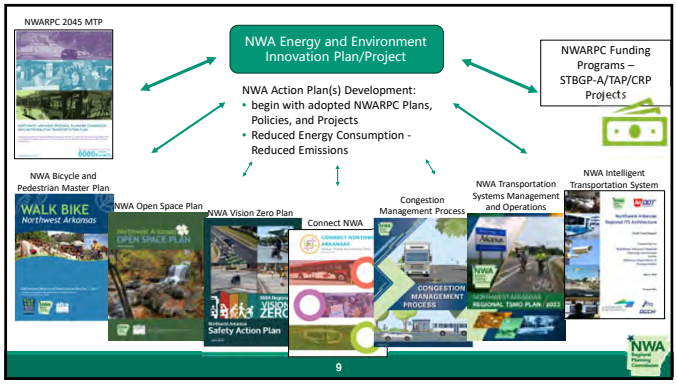

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9

? POLL

If you are aware of any other local or regional projects/plans related to energy and emission reduction, please tell us the name or provide a link.

Scan the QR code or visit *menti.com* and enter code 4974 5421

12

12

? POLL

Has your agency/community implemented any projects/plans targeting reduction of energy consumption or greenhouse gas emissions? If so, what?

Scan the QR code or visit *menti.com* and enter code 2169 1653

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NOTICE OF FUNDING OPPORTUNITY (NOFO)

IMPLEMENTATION GRANTS

14

NOTICE OF FUNDING OPPORTUNITY (NOFO)

IMPLEMENTATION GRANTS

- EPA intends to award approximately 30 to 115 grants ranging from $2 million to $500 million.
- Applications for grants must seek funding to implement measures that are included in the PCAP developed with funding from a CPRG planning grant.
- There are funding tiers based upon grant ranges, and applications will be evaluated against other applications within the same tier.
- A group of eligible applications applying as a coalition may not submit multiple applications for the same set of GHG reduction measures using different lead applicants.
- An eligible application may submit one application as the individual applicant and one application as the lead applicant for a coalition.
- Grants are intended to support measures for which dedicated funding or financing from other sources (e.g., BIL, IRA) is unavailable, or that leverage other sources of public and private funding to the fullest extent possible, prior to seeking CPRG funding.

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SCORING

SUMMARY/APPROACH - 45 POINTS (18%)

- Description of GHG Reduction Measures **(20 points)**
- Demonstration of Funding Need **(10 points)**
- Transformative Impact **(15 points)**

16

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SCORING

GHG REDUCTION - 60 POINTS (12%)

- Magnitude of GHG Reductions from 2025 through 2030 **(20 points)**
- Magnitude of GHG Reductions from 2025 through 2050 **(10 points)**
- Cost Effectiveness of GHG Reductions **(15 points)**
- Documentation of GHG Reduction Assumptions **(15 points)**

17

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SCORING

OUTPUTS/OUTCOMES - 30 POINTS (12%)

- Expected Outputs and Outcomes **(10 points)**
- Performance Measures and Plan **(10 points)**
- Authorities, Implementation Timeline, and Milestones **(10 points)**

18

18

SCORING

LIDAC - 35 POINTS (14%)

- Community Benefits **(25 points)**
- Community Engagement **(10 points)**

JOBS - 5 POINTS (2%)

19

SCORING

CAPABILITY/PAST PERFORMANCE - 30 POINTS (12%)

- Past Performance **(10 points)**
- Reporting Requirements **(10 points)**
- Staff Expertise **(10 points)**

20

SCORING

BUDGET - 45 POINTS (18%)

- Budget Detail **(20 points)**
- Expenditure of Awarded Funds **(15 points)**
- Reasonableness of Costs **(10 points)**

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SCORING OVERVIEW (250 POINTS TOTAL)

- **SUMMARY/APPROACH - 45 POINTS (18%)**
- **GHG REDUCTION - 60 POINTS (12%)**
- **OUTPUTS/OUTCOMES - 30 POINTS (12%)**
- **LIDAC - 35 POINTS (14%)**
- **JOBS - 5 POINTS (2%)**
- **CAPABILITY/PAST PERFORMANCE - 30 POINTS (12%)**
- **BUDGET - 45 POINTS (18%)**

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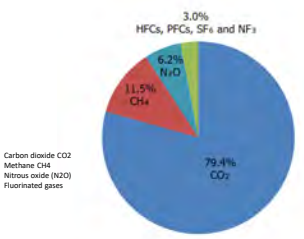
Overview of U.S. Greenhouse Gas Emissions

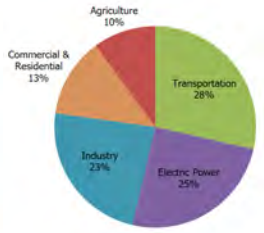
https://www.epa.gov/ghgemissions/overview-greenhouse-gases



Carbon Dioxide 79.4 %

Total U.S. Greenhouse Gas Emissions by Economic Sector in 2021

https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions

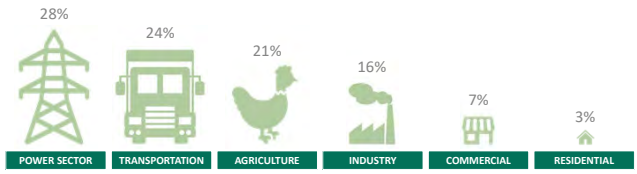


Transportation 28%

23

ARKANSAS GREENHOUSE GAS EMISSIONS

- **The power sector is currently the largest contributor to GHG Emissions in Arkansas**
- **Carbon dioxide makes up 70% of Arkansas GHG emissions followed by methane (19%) , nitrous oxides (10%), and fluorinated gases (3%)**



Arkansas Greenhouse Gas Emissions (CO_2e), 2020 obtained from U.S. EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks by State: 1990 - 2020

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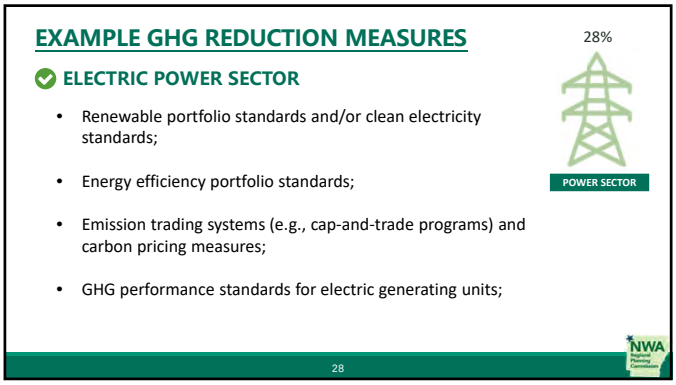

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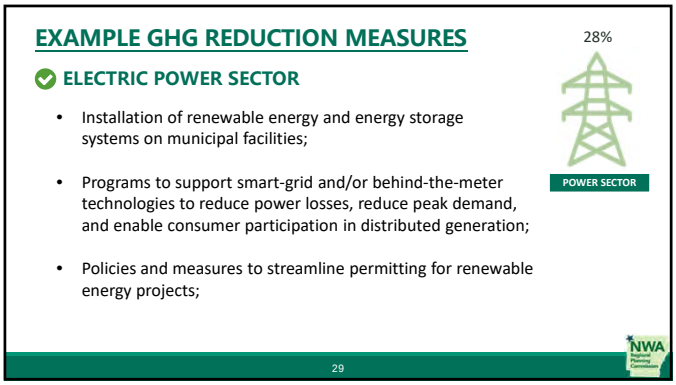

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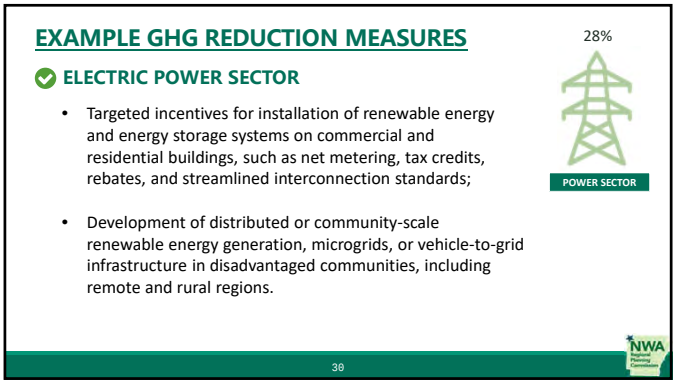

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EXAMPLE GHG REDUCTION MEASURES

TRANSPORTATION SECTOR

24%

TRANSPORTATION

- Programs to increase the share of electric light-, medium-, and heavy-duty vehicles, and to expand electric vehicle charging infrastructure;
- Transportation pricing programs that reduce vehicle miles traveled (VMT), such as parking pricing and congestion and road pricing;
- New or expanded transportation infrastructure projects to facilitate public transit, micro-mobility, car sharing, bicycle, and pedestrian modes;

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EXAMPLE GHG REDUCTION MEASURES

TRANSPORTATION SECTOR

24%

TRANSPORTATION

- Policies to support transportation management incentive programs to reduce vehicle trips or travel and expand transit use, such as van-pool programs, ridesharing, transit fare subsidies, and bicycle facilities;
- Incentive programs to purchase zero-emission vehicles and equipment to replace older heavy-duty diesel vehicles and equipment;
- Electrification requirements for municipal vehicle, transit, or equipment fleets;

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EXAMPLE GHG REDUCTION MEASURES

TRANSPORTATION SECTOR

24%

TRANSPORTATION

- Update building and zoning codes to encourage walkable, bikeable, and transit-oriented development;
- Encourage mode shift from private vehicles to walking, biking, and public transportation (e.g., complete streets, bike share programs, bike storage facilities, low-speed electric bicycle subsidies, public transit subsidies).

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EXAMPLE GHG REDUCTION MEASURES

AGRICULTURAL SECTOR

21%

AGRICULTURE

- Incentive programs to fund electric agricultural equipment technologies;
- Incentives for technologies and techniques that reduce nitrous oxide emissions from fertilizer application;
- Incentives to promote anaerobic digesters to capture methane and generate renewable energy or produce renewable fuel.

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EXAMPLE GHG REDUCTION MEASURES

INDUSTRIAL SECTOR

16%

INDUSTRY

- Standards addressing GHG emissions from industrial facilities and from energy production sectors, including emissions from industrial process heat and industrial processes;
- Programs to support or incentivize implementation of energy efficiency measures in industry, including energy audits, strategic energy management, equipment upgrades, and waste heat utilization;

35

35

EXAMPLE GHG REDUCTION MEASURES

INDUSTRIAL SECTOR

16%

INDUSTRY

- Programs to support or incentivize GHG reductions in industrial energy use and industrial processes, including use of low/no carbon fuels, electrification, renewable energy, and process improvements;
- Programs to develop, expand, and support markets for low-embodied carbon materials and products, such as cement and steel.

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EXAMPLE GHG REDUCTION MEASURES

BUILDINGS

- Adoption and implementation of the most up-to-date building energy codes or stretch codes for new commercial and residential buildings;
- Implementation of a clean heat standard;
- Incentive programs for implementation of end-use energy efficiency measures in existing government-owned, commercial, and residential buildings;

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EXAMPLE GHG REDUCTION MEASURES

BUILDINGS

- Incentive programs for the purchase of certified energy-efficient appliances, heating and cooling equipment, lighting, and building products to replace inefficient products;
- Programs and policies to promote electrification of government-owned, commercial, and residential buildings;
- Programs and policies to accelerate the incorporation of efficient electric technologies and electric vehicle charging at new single-family, multi-unit, or affordable residential buildings and commercial buildings, including building codes related to electric vehicle charging;

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EXAMPLE GHG REDUCTION MEASURES

BUILDINGS

- Implementation of a building energy performance management program for government-owned buildings;
- Implementation of a new benchmarking and building performance standards;
- Programs to promote recovery and destruction of high-global warming potential (GWP) hydrofluorocarbons (HFCs) used in existing appliances, air conditioning systems, and commercial chillers.

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EXAMPLE GHG REDUCTION MEASURES

WASTE, WATER, AND SUSTAINABLE MATERIALS MANAGEMENT

- Standards and incentives to reduce methane emissions from landfills and wastewater treatment facilities, including through collection for use or destruction;
- Programs and incentives to reduce or divert waste (including food and/or yard waste) through improved production practices, improved collection services, and increased reuse or recycling rates;
- Programs and incentives to reduce GHG emissions associated with plastics production, use, and waste management;

40

40

EXAMPLE GHG REDUCTION MEASURES

WASTE, WATER, AND SUSTAINABLE MATERIALS MANAGEMENT

- Programs to expand composting and bio-digestion infrastructure to reduce GHG emissions and increase beneficial use of organic waste;
- Policies and programs to reduce construction and demolition waste through building reuse, deconstruction, and material diversion and reuse;
- Installation of renewable energy and energy efficiency measures at wastewater treatment facilities.

41

41

EXAMPLE GHG REDUCTION MEASURES

CARBON REMOVAL MEASURES

- Policies to promote improved forest management to enhance carbon stocks on forested land;
- Urban afforestation and green infrastructure programs and projects;
- Restoration of degraded lands (e.g., brownfields, mine reclamation) and forested lands to enhance carbon sequestration.

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POLL

What is the most feasible or most implementable Priority Action for your organization?

Scan the QR code or visit *menti.com* and enter code 4248 5796

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THANK YOU!

NWA Regional Planning Commission

1. **Please share public outreach materials**
   Will be emailed to you
2. **Take the survey**
3. **Fill out idea box**
4. **Mark your calendar for next meeting**
   November 2 11AM-1PM

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NEXT STEPS

Event/Deliverable	Date/Due Date
Public Engagement Meetings	October 23 & October 26
Stakeholder Meeting #2	November 2, 2023
NWARPC Priority Plan Supplement to ADEE	December 1, 2023
ADEE Priority Plan to EPA	March 1, 2024
CPRG Implementation Grant Applications	April 1, 2024
Comprehensive Plan Supplement	February 28, 2025
Status Report Supplements	March 1, 2027

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PUBLIC OPEN HOUSES SUMMARY

To assist with the creation of the Priority Action Plan segment of the Northwest Arkansas Energy and Environment Innovation Plan, two public open houses were held to present information to the public and gather input on preferred measures via the public survey. Public Open House #1 was held on October 23, 2023 (Carroll Electric Community Room, Huntsville, AR) from 4:00 p.m. to 7:00 p.m.; and Public Open House #2 was held on October 26, 2023 (The Jones Center, Springdale, AR) from 4:00 p.m. to 7:00 p.m.

The public was invited to attend via email, website information, flyers, and boosted social media posts. Attendees included representatives from public, non-profit, and private sectors—refer to the ***Public Open House #1 Attendees*** and ***Public Open House #2 Attendees*** for a full list of attendance. Representatives from the NWARPC and the consultant team facilitated both open houses and related discussions with attendees, as well as worked together to develop the content for the open houses. The public open house content included eight stations with display boards/posters, sign-in sheets, and handouts. The posters included the following content:

- Welcome / please sign in;
- NWARPC Regional Plan Phases;
- Environmental Protection Agency's Climate Pollution Reduction Grants (EPA CPRG);
- Award of an EPA CPRG to the Arkansas Department of Energy and Environment (ADEE);
- Award of funding from ADEE to NWARPC to develop a Priority Action Plan supplement;
- Greenhouse gas (GHG) emissions across major sectors in Arkansas;
- NWARPC's previous planning efforts and plans;
- Invitation to participate in the public survey in English/Spanish/Marshallese while following along with the following topic posters: Reliable Low and Zero-Emissions Energy, Efficiency and Waste Minimization, Electrification, Workforce and Technical Assistance, and Sequestration; and
- Thank you / next steps.

All open house materials were posted to the project website following the open houses. Marshallese and Spanish interpreters were available in Springdale to accommodate the unique local population's language needs. Public feedback was gathered via the state's public survey and idea box in English, Marshallese, and Spanish.

Public Open House #1 Attendees [October 23, 2023]

- Cameron Caja, Polaris High Performance Homes
- Kenneth Lovett, Citizen
- Steve Starrett, Halff Assoc.
- Travis Dotson, City of Huntsville
- Charlie Sciate, Utility Provider
- Larry Garrett, Madison Co.
- Nicole Gibbs, NWARPC
- Mariah Crews, Olsson
- Andy Brewer, Olsson
- Tim Conklin, NWARPC
- Brandi Holt, City of Huntsville
- Eric Fuselier, Olsson

Public Open House #2 Attendees [October 26, 2023]

- Tim Conklin, NWARPC
- Christopher Savage, Marek Industries
- Heather Ellzey, City of Fayetteville
- Jay Hoyt, First Christian Church of Bentonville
- Darryl Holliday, UADA
- Ronaldo Kabua, PILS
- Philmar Mendoza Kabua, PILS
- Andy Brewer, Olsson
- Don Lourie, ColvillaCompost.com
- Rob Smith, NWA Council
- Shannon Weathers, Emerald Solutions
- Eric Fuselier, Olsson
- Danny Forkner
- Tim Reavis, NWARPC
- Gary Wilson
- Peter Nierengarten, City of Fayetteville
- Orlo Stitt, The Stitt Group
- Mary Stitt, The Stitt Group
- Charlie Sciate, Utility Provider
- Robin Mizell, Black Hills Energy
- Michelle Pedro, ACOM

- Nicole Gibbs, NWARPC
- Valerie Miller, Olsson
- Stacey Roach, Olsson

To view the posters from the open houses, see ***Public Open House Posters*** as follows.

NWARPC Energy & Environment Innovation Plan

WELCOME!

Please sign in

Northwest Arkansas Regional Planning Commission (NWARPC)

Regional Plan Phases

THIS is what we're working on right now!

1

PRIORITY ACTION PLAN

SEPT 2023 - NOV 2023

- Review existing regional action plans
- Public and stakeholder engagement
- Prepare at least three Priority Actions for inclusion in state-wide plan

2

COMPREHENSIVE ACTION PLAN

MARCH 2024 - FEB 2025

- Public and stakeholder engagement
- Prepare at least three additional Comprehensive Actions for inclusion in state-wide plan

3

STATUS UPDATES

BEGINNING IN 2027

- Required to report on progress made
- Project updates will be made available to the public

What is this all about?

U.S. Environmental Protection Agency's (EPA) Climate Pollution Reduction Grant (CPRG)

Arkansas Department of Energy and Environment

- Awarded $3 million planning grant from EPA to create an Arkansas Energy and Environment Innovation Plan
- Plan will make state and local governments eligible for future CPRG Implementation Grants

PURPOSE OF THE PLANNING GRANT

To ensure targeted investment in energy infrastructure and technologies that **reduce pollutants, create high-quality jobs,** and **spur economic growth** in your region and across the state.

OUR ASK OF YOU

Take the survey so we can understand what kinds of **pollutant reduction incentive programs or specific projects** you would like us to include both in the state and region-specific plans.

You'll learn more about the survey questions on the following posters.

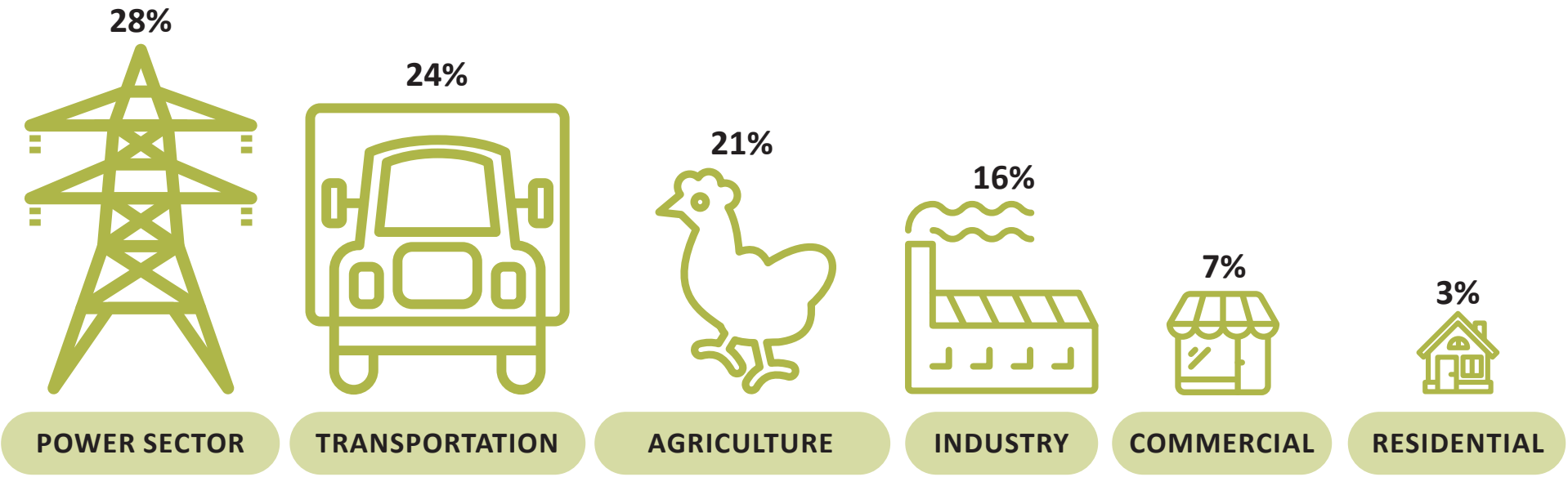
THIS is what we need your help with!

Northwest Arkansas Regional Planning Commission

- Awarded funding for an NWA regional plan to be included in state-wide plan
- Partners: Arkansas Dept. of Energy & Environment, Metroplan, NWA Regional Planning Commission, and the City of Fort Smith

DID YOU KNOW?

- The power sector is currently the largest contributor to greenhouse gas emissions in Arkansas
- Carbon dioxide makes up 70% of Arkansas greenhouse gas emissions followed by methane (19%), nitrous oxides (10%), and fluorinated gases (3%)



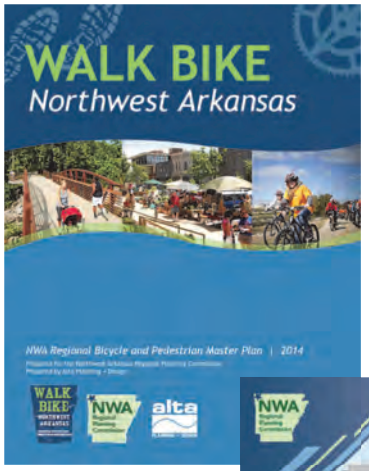
Arkansas Greenhouse Gas Emissions (CO2e), 2020 obtained from U.S. EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks by State: 1990 - 2020

DID YOU KNOW?

The Northwest Arkansas Regional Planning Commission has been working on pollutant reduction efforts for a long time.

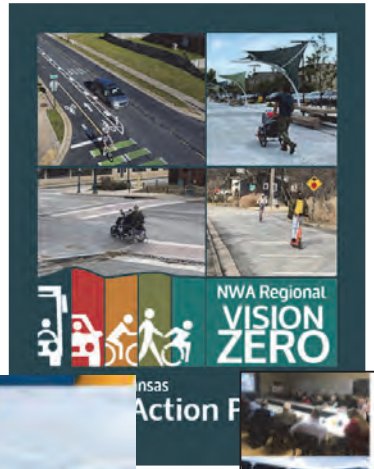
Here are some examples of other projects they've worked on.

NWA BICYCLE AND PEDESTRIAN MASTER PLAN

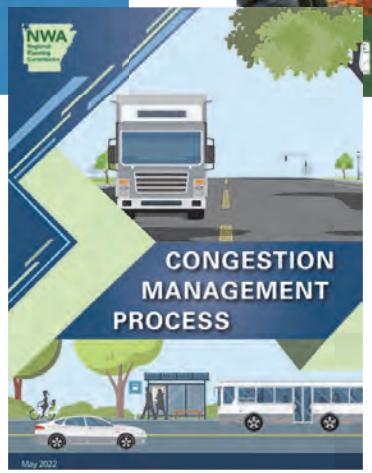


NWA OPEN SPACE PLAN

NWA VISION ZERO PLAN

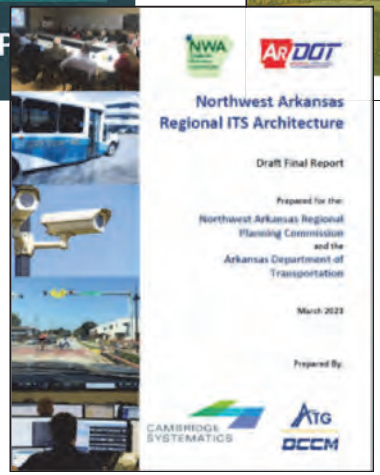


CONNECT NWA



CONGESTION MANAGEMENT PROCESS

NWA TRANSPORTATION SYSTEMS MANAGEMENT AND OPERATIONS



NWA INTELLIGENT TRANSPORTATION SYSTEM

It's time to take the survey!

Take the survey by scanning the QR code below or pulling up the website listed below and pressing the "Take the Survey" button.

ENGLISH / SPANISH

MARSHALLESE

You can answer each question by following along with the upcoming posters.

nwarpc.org/energy-environment-innovation-plan

Reliable Low and Zero-Emissions Energy

Reducing emissions from energy production.

SMALL-SCALE SOLAR

Example: Incentives for solar panels at individual residences and small businesses

MEDIUM-SCALE SOLAR

Example: Incentives and enabling policies for neighborhood/community-scale solar projects and solar panels at large businesses

LARGE-SCALE SOLAR

Example: Incentives for utility-scale solar energy production to supply the power grid

AGRICULTURE AND SOLAR FIELD DEMONSTRATIONS

Example: Incentives for demonstrations that use crop and grazing land for both agriculture and solar energy generation

LOW-GREENHOUSE GAS HYDROGEN

Example: Incentives for hydrogen-combustion capable turbines, pipeline infrastructure, hydrogen fueling stations, and facilities that produce hydrogen using renewables or carbon capture

ELECTRIC GRID UPGRADES NEEDED FOR LOW AND ZERO-EMISSIONS GENERATION SOURCES

Example: Assistance with electric grid interconnection costs for low and zero emissions power generation sources, such as renewables, nuclear, and hydrogen

BATTERY STORAGE

Example: Incentives for batteries to store electricity from renewable energy

Efficiency and Waste Minimization

Making the best use of our resources. Avoiding waste. Doing more with the same amount of (or less) energy and pollution.

MATERIALS MANAGEMENT & RECYCLING

Example: Incentives to demonstrate new processes that use or reuse materials more productively and sustainably over their entire life cycles

TRANSPORTATION CHOICE

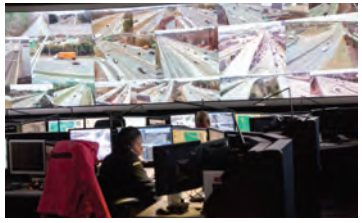
Example: Incentives for transportation infrastructure (roads, transit routes, sidewalks, paths, and trails) that help people more easily choose or transition between options such as walking, biking, transit, and micromobility (e-bikes, e-scooters)

CONNECTED COMMUNITIES

Example: Local policies and incentives that encourage more compact, walkable, and transit-oriented development

COMPLETE & GREEN STREETS

Example: Build/retrofit streets to enable safe use and support mobility of all users and to reduce stormwater runoff, improve water quality, and mitigate urban heat island effects



INTELLIGENT TRANSPORTATION SYSTEMS (ITS) & TRAFFIC MANAGEMENT CENTERS (TMCS)

Example: Incorporate technology (cameras, sensors) into traffic monitoring to reduce emissions by improving driving, parking, delivery, and traffic signal efficiency

AGRICULTURAL WASTE

Example: Incentives to treat or capture pollution in manure

LANDFILL AND DIGESTER GAS CAPTURE & REUSE

Example: Incentives for equipment needed to capture methane from landfills or farm digesters (big tanks that hold livestock waste) for use in electricity production, heating, and powering heavy-duty vehicles and equipment

COMPOSTING

Example: Grants to pilot community-wide compost pickup programs

ENERGY EFFICIENCY

Example: Incentives for projects that reduce the energy consumed by equipment, appliances, and technologies

Electrification

Running more things on electricity where it makes sense.

As the electricity sector reduces its emissions through installation and operation of low and zero-emission generation, other sectors can reduce their emissions by switching from traditional fuels to electricity.

PERSONAL ELECTRIC VEHICLES (EVS)

Example: Incentives to reduce upfront barriers to personal electric vehicle ownership (which can include battery, plug-in hybrid, and hydrogen fuel cell vehicles)

ELECTRIC FLEETS AND EQUIPMENT

Example: Incentives for replacement or retrofit of current bus, truck, train, barge, agricultural, and port equipment with all-electric or fuel cell equivalents

ELECTRIC VEHICLE SUPPORTING INFRASTRUCTURE

Example: Incentives for electric vehicle charging equipment and electrical upgrades necessary to install charging equipment

ELECTRIC APPLIANCES

Example: Incentives to retrofit existing residential and commercial buildings with all-electric appliances (e.g., replacement of gas furnaces with highly efficient electric heat pumps)

ZERO-ENERGY BUILDINGS

Example: Incentives for the construction of buildings that are air-tight, well insulated, and energy efficient

Workforce and Technical Assistance

Getting people ready to work new jobs in renewable energy and sustainability.

WORKFORCE DEVELOPMENT

Example: Incentives to technical colleges or similar institutions to create or expand renewable energy, energy efficiency, and electric vehicles technician training programs

TECHNICAL ASSISTANCE

Example: Provide information and training to public and private organizations to implement Energy & Environment Innovation measures (e.g., train water/wastewater engineers about greenhouse gas-reducing equipment and practices)

Sequestration

Capturing pollutants out of the air or before they are emitted.

CARBON CAPTURE & SEQUESTRATION (CCS)

Example: Incentives to install carbon capture equipment, for the development of carbon dioxide pipelines, and sequestration (storage) wells

Definitions

Carbon Capture **-** The trapping of carbon dioxide just after it has been emitted but before it can enter the atmosphere. The carbon dioxide is then compressed into a liquid and stored in tanks or distributed via pipelines to sequestration (storage) wells.

Carbon Sequestration **-** The long-term storage of captured carbon, often by being pumped into a storage well deep underground.

Note: CCS projects are often paired with large greenhouse gas (GHG)-emitting facilities such as energy, manufacturing, or fuel production facilities.

STREAMLINE PERMITTING FOR CARBON SEQUESTRATION WELLS

Example: Implement state-level permitting of sequestration wells to speed and streamline the permitting process

TREES & NATURAL AREAS - CONSERVATION, RESTORATION & EXPANSION

Example: Incentives to conserve natural lands and to plant trees and native plants along streets, highways, interstates, and between agricultural fields

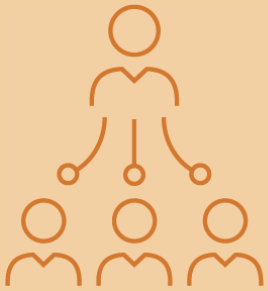
SUSTAINABLE FARMING METHODS

Example: Incentives for farmers and ranchers to implement and document sustainability best practices that reduce energy use, fertilizer use, and/or sequester carbon

NWA Regional Planning Commission

THANK YOU!

Share our Facebook posts!



Take the survey!

Have an idea?

Watch your email for project updates!

STAKEHOLDER COMMITTEE MEETING #2 SUMMARY

To continue the development of the Priority Action Plan, a second stakeholder committee meeting was held on November 2, 2023, from 11:00 am to 1:00 p.m. via Zoom to share information with the stakeholders and gather their input.

Stakeholders were identified by the NWARPC, as previously described in ***Stakeholder Committee***, and invited via email to attend. Attendees again included representatives from many public, non-profit, and private sectors. For a complete list of meeting attendees, see the ***Stakeholder Committee Meeting #2 Attendees***. Representatives from the NWARPC and the consultant team facilitated the meeting. The meeting format included a welcome and brief introduction of the project team, and a presentation of the project and proposed measures, including:

- A recap of the previous stakeholder meeting,
- Greenhouse gas emissions for the United States and Arkansas, and an approximation of greenhouse gas emissions in Northwest Arkansas
- The path to proposed measures to reduce greenhouse gas emissions in Northwest Arkansas including a review of existing plans, feedback from in-person and online public and stakeholder engagement activities, and public survey,
- Proposed Priority Action Plan measures, and
- Next steps.

Stakeholder Committee Meeting #2 Attendees

- Aaron Pinedo, Arkansas Department of Transportation
- Alan Athey
- Andy Brewer, Olsson
- Anthony Hunter
- Aury Kangelos, Olsson
- Becky Roark, Beaver Watershed Alliance
- Bernadette Rhodes, Metroplan
- Brandi Holt, Huntsville City Government
- Casey Covington
- Casey Wilhelm
- Chris Brown, City of Fayetteville
- Chris Herrera, City of Springdale
- Chris McNamara, City of Fayetteville
- Cristina Scarlat, Northwest Arkansas Regional Planning Commission
- Dan Weese, City of Bentonville

- David Criswell (Trailblazers) (David Criswell)
- Dina Nash, Citizen’s Climate Lobby
- Eric Boles, University of Arkansas Sustainability Department
- Eric Fuselier, Olsson
- Frank Broadstreet, JB Hunt
- Graham Thompson, Watershed Conservation Resource Center
- Jamie Vernon, Waste Management Ecovista Tontitown Landfill
- Jason Willey, Arkansas Department of Energy & the Environment
- Jennifer Turner, City of Rogers
- Jodi Reynolds, Waste Management Ecovista Tontitown Landfill
- John McCurdy, City of Rogers
- Joshua Robertson, City of Fort Smith
- Justin Northcutt, Ozarks Electric Cooperative
- Katrina Wille, Olsson
- Leif Kindberg, Illinois River Watershed Partnership
- Leif Olson, City of Fayetteville
- Markos Mylonas
- Meredith Bergstrom | WFF (Meredith Bergstrom)
- Michelle Queen, Olsson
- Mikayla Shaddon
- Nick Steinke, Olsson
- Nicole Gibbs, Northwest Arkansas Regional Planning Commission
- Orlo Stitt, Stitt Group
- Peter Nierengarten, City of Fayetteville
- Quinton Harris
- Rebecca Pinson
- Rob Smith, Northwest Arkansas Council
- Robin Mizell, Black Hills Energy
- Robyn Reed, Boston Mountain Solid Waste
- Stacey Roach, Olsson
- Tim Conklin, Northwest Arkansas Regional Planning Commission
- Trent Jones
- Wendy Bland, Benton County Solid Waste District

During the presentation of proposed Priority Action Plan measures, the project team welcomed discussion from the stakeholder committee to understand the measures their agency or

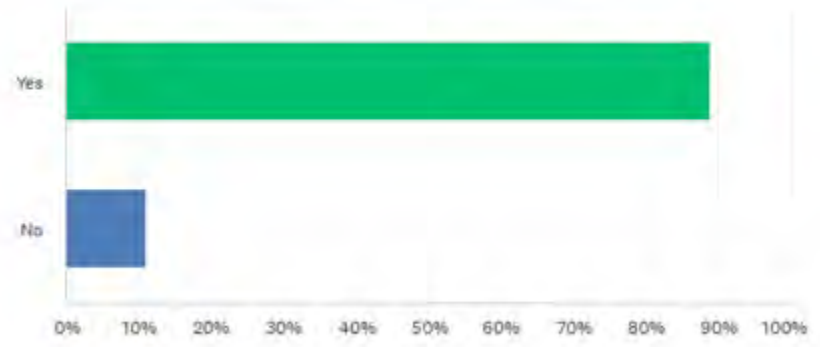
organization would likely be able to support through implementation. The stakeholders also suggested refinement of some language to clarify the intent of the measure and discussed the possibility of combining measures to create a more compelling implementation grant application.

Following the discussion of proposed Priority Action Plan measures, stakeholders were asked to complete a survey that included their name, agency or organization, and their email address. Of the 20 participants that responded, 16 believed their agency or organization would be open to leading or being part of a coalition to lead any of the Priority Action Plan measures. The top two measures of interest to the stakeholders were, “Develop and implement a program to improve or increase carbon sequestration on city-owned lands and using a program of land conservation and acquisition,” (11 votes) and “Reduce automobile trips and incentivize more efficient and lower/no emission modes of transportation” (10 votes). All respondents said they would be interested in attending a future discussion about implementation grants. The meeting concluded with an overview of the next step actions and the stakeholders being thanked for their participation.

The following includes the survey questions and responses from the meeting.

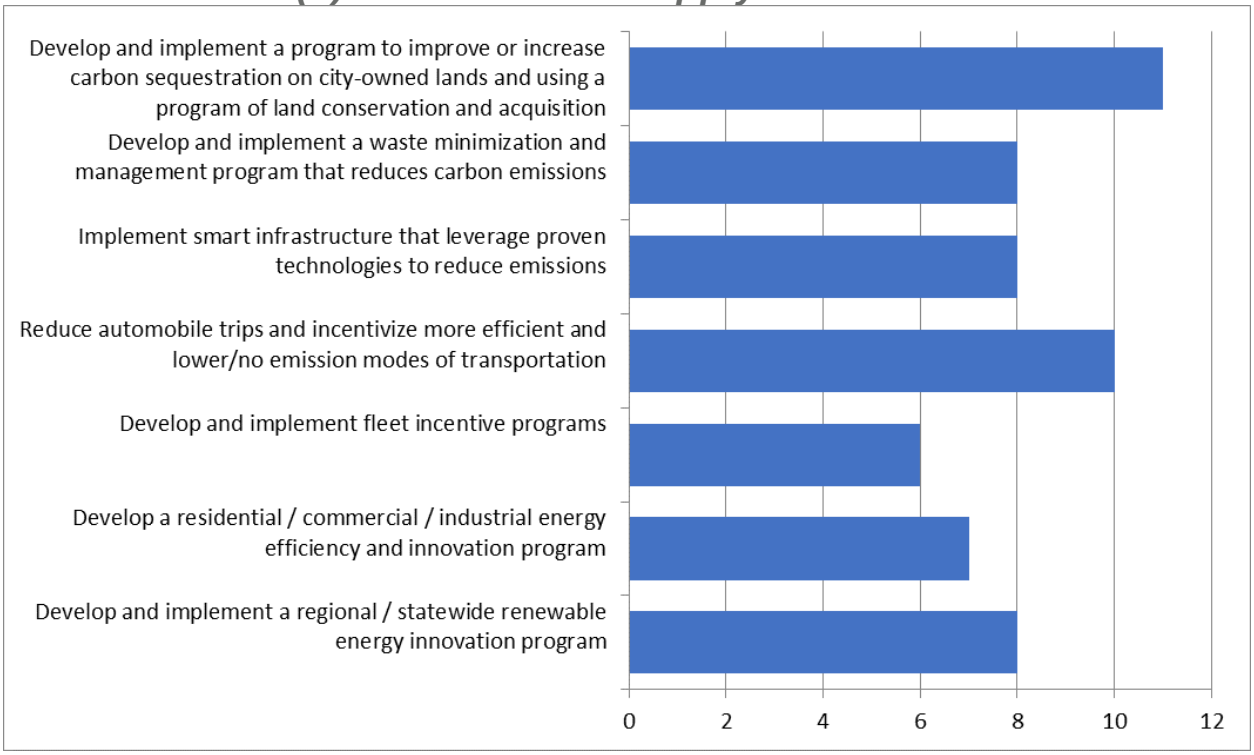
Survey Question

Do you believe your agency/organization would be open to leading or being part of a coalition to lead any of the Priority Action Plan measures?



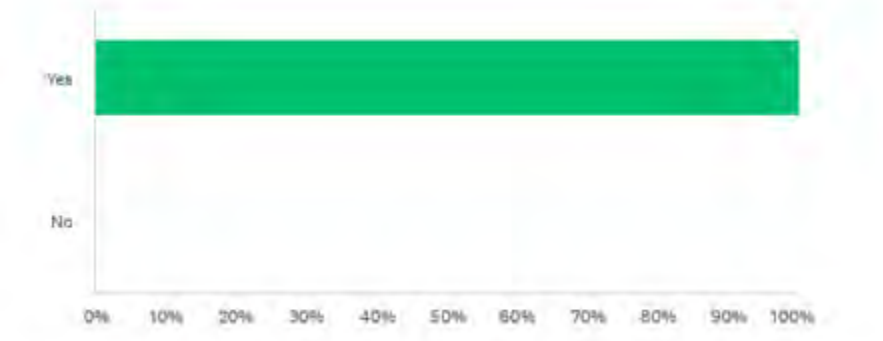
Survey Question

Which measure(s)? Check all that apply.



Survey Question

Would you be interested in attending a future discussion about implementation grants?



To view the entire PowerPoint from the meeting, see ***Stakeholder Committee Meeting #2 Presentation Slides*** as follows.

NWA Regional Planning Commission

NWARPC ENERGY & ENVIRONMENT INNOVATION PLAN

STAKEHOLDER MEETING #2

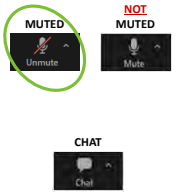
NOVEMBER 2, 2023 | 11:00 AM - 1:00 PM

ZOOM VIRTUAL MEETING

1

HOUSEKEEPING

- Please keep yourself muted throughout the meeting
- This meeting will be recorded
- If you have technical issues during the meeting, email **Stacey Roach** at *sroach@olsson.com*
- **Nicole Gibbs** will provide the meeting presentation slides in a follow-up email
- If you have questions during the meeting, please utilize the chat function



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PRESENTERS

Tim Conklin, AICP
Executive Director
NWARPC

Nicole Gibbs, AICP
Regional Planner
NWARPC

Eric Fuselier, PWS, ENV, SP
Project Manager
Olsson

Nick Steinke, PE, CPEA, SFP
Industry Expert
Olsson

3

4

CPRG PLANNING GRANTS

- **EPA awarded $250 million in formula grants to states, tribes, and local governments under its Climate Pollution Reduction Grants (CPRG) Program.**
- **Grant recipients will use funds to develop plans for reduction of greenhouse gas (GHG) and other pollutant emissions within their covered jurisdiction.**

CPRG IMPLEMENTATION GRANTS

- EPA will award $4.6 billion in competitive grants for measures developed under the CPRG planning grant.
- EPA anticipates awarding individual grants between $2 million and $500 million, with funding tiers allowing comparably sized projects to compete against one another.
- Implementation grant guidance issued September 2023 with applications due April 1, 2024. Submission of CPRG priority plan is prerequisite to application for implementation grants.

5

AR E&E'S CPRG GOALS

- Enable access to and enhance Arkansas's competitiveness for federal funding for energy infrastructure.
- Support investment in technologies that reduce pollutant emissions, create high-quality jobs, and spur economic growth in the state.

01 IIJA / IRA GRANTS

02 IRA TAX CREDITS

03 OTHER MEASURES

PERFORMANCE CONTRACTING ENERGY SAVING

ARKANSAS CLEAN CITIES COALITION

ENERGY EFFICIENCY ARKANSAS

RIPE
RURAL INVESTMENT TO PROTECT OUR ENVIRONMENT

6

ENERGY & ENVIRONMENT INNOVATION PLAN

- Arkansas Department of Energy and Environment's Division of Air Quality (DEQ) - $3 million planning grant through the EPA's Carbon Pollution Reduction Grant (CPRG)
- Create an Arkansas Energy and Environment Innovation Plan to identify key carbon reduction/sequestration strategies across various sectors in the state
- The Arkansas Energy and Environment Innovation Plan will make state and local governments eligible for CPRG implementation grants, which will likely be due on or around **April 1, 2024 (AWARD ALL FUNDING IN FIRST YEAR)**
- The EPA CPRG program will grant a total of $4.6 billion nationwide in competitive implementation grants, with individual grants ranging from $2 million to $500 million
- DEQ has approached NWARPC to partner on the **Fayetteville-Springdale-Rogers Metropolitan Statistical Area (Benton, Madison, & Washington County)** - Energy & Environment Innovation Plan
- NWARPC received $440,000 suballocation to do regional planning for carbon reduction/sequestration – 4-year project

Source: www.epa.gov/inflation-reduction-act/climate-pollution-reduction-grants

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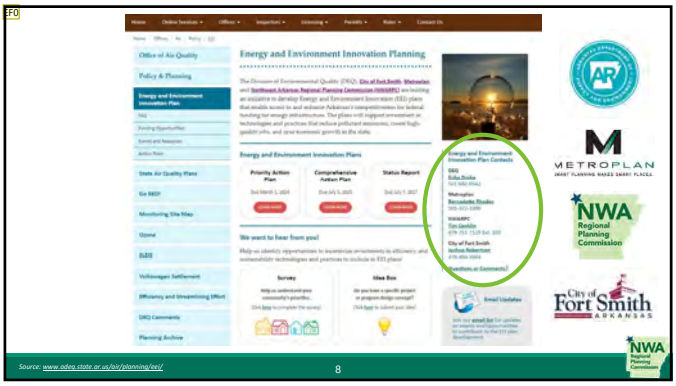

Source: www.adeq.state.ar.us/air/planning/eei/

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NWARPC GRANT ACTIVITY

- Signed MOA between ADEE and NWARPC in September
- Hired Olsson as a consultant in September
- Survey / Website / Idea Box
- Identified City, County, and State plans for review
- Initiated public engagement and stakeholder planning activities

Source: www.fhwa.dot.gov/innovation/everydaycounts/edc_7/integrating_pba.cfm

9

NOTICE OF FUNDING OPPORTUNITY (NOFO)

IMPLEMENTATION GRANTS

- EPA intends to award approximately 30 to 115 grants ranging from $2 million to $500 million.
- Applications for grants must seek funding to implement measures that are included in the PCAP developed with funding from a CPRG planning grant.
- There are funding tiers based upon grant ranges, and applications will be evaluated against other applications within the same tier.
- A group of eligible applications applying as a coalition may not submit multiple applications for the same set of GHG reduction measures using different lead applicants.
- An eligible application may submit one application as the individual applicant and one application as the lead applicant for a coalition.
- Grants are intended to support measures for which dedicated funding or financing from other sources (e.g., BIL, IRA) is unavailable, or that leverage other sources of public and private funding to the fullest extent possible, prior to seeking CPRG funding.

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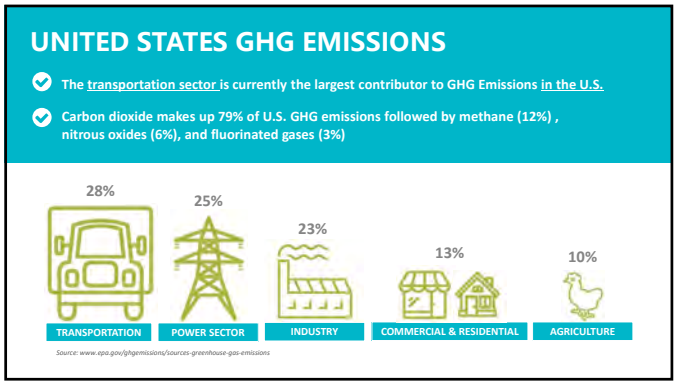
SCORING OVERVIEW

TOTAL	250 POINTS
SUMMARY / APPROACH	45 POINTS (18%)
GHG REDUCTION	60 POINTS (24%)
OUTPUTS / OUTCOMES	30 POINTS (12%)
LIDAC	35 POINTS (14%)
JOBS	5 POINTS (2%)
CAPABILITY / PAST PERFORMANCE	30 POINTS (12%)
BUDGET	45 POINTS (18%)

12

13

14



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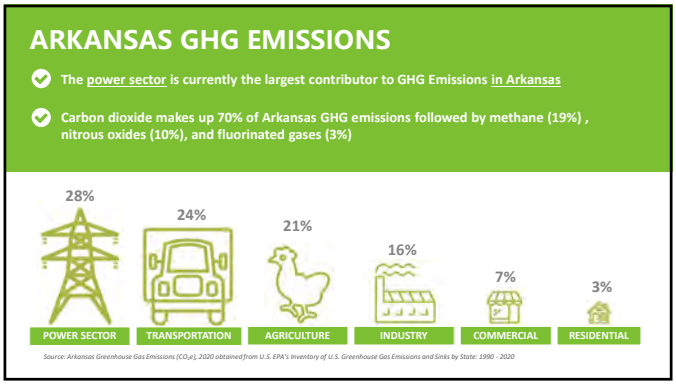

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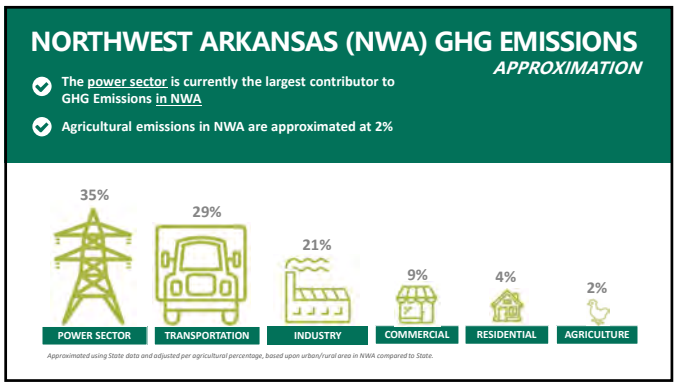

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NWA ENERGY & ENVIRONMENT INNOVATION PLAN / PROJECT

NWA Action Plan(s) Development:
- Begin with adopted NWARPC Plans, Policies, and Projects
- Reduced Energy Consumption = Reduced Emissions

NWARPC FUNDING PROGRAMS:
STBGP-A / TAP / CRP Projects

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PUBLIC OUTREACH

IN-PERSON
- 3 Pop-Up Events
- 2 Open House Meetings

ONLINE
- Public Survey and Idea Box: *English, Spanish, and Marshallese*
- Social Media ads promoting the engagement activities
- Facebook Live with Marshallese interpreter

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THE SURVEY SAYS....

TOP 6 MEASURES
1. Trees & Natural Areas
2. Sustainable Farming Methods
3. Materials Management & Recycling
4. Complete and Green Streets
5. Transportation Choice
6. Energy Efficiency

276 RESPONSES
TO THE PUBLIC SURVEY FROM THE NWARPC AREA (825 RESPONSES STATE-WIDE)

21

STAKEHOLDER OUTREACH

- Stakeholder Meetings
- Technical Advisory Committee Meetings
- Regional Planning Commission Meetings

ALL 3 GROUPS PRIORITIZED
Transportation
Energy &
Waste, Water, and Sustainable Materials Management

22

23

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PRIORITY ACTION PLAN MEASURES

ELECTRIC POWER SECTOR

35%

POWER SECTOR

Develop and implement a regional/statewide renewable energy innovation program to:

- Install renewable energy and energy storage systems on municipal/government facilities
- Develop distributed and community-scale renewable energy generation and storage, including in LIDAC and rural communities
- Develop and implement programs that support smart-grid and/or behind-the-meter technologies.

25

25

PRIORITY ACTION PLAN MEASURES

BUILDINGS

13%

BUILDINGS

Develop a residential/commercial/industrial energy efficiency and innovation program to:

- Establish an incentive program for implementation of end-use energy efficiency measures and certified energy-efficient appliances, heating and cooling equipment, and lighting
- Provide incentives for adoption and implementation of up-to-date building energy codes
- Develop voluntary programs and policies that promote energy efficiency and vehicle charging, with a focus on buildings in rural and LIDAC areas; multi-family residential buildings; commercial buildings; and industrial buildings.

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PRIORITY ACTION PLAN MEASURES

TRANSPORTATION SECTOR

29%

TRANSPORTATION

Develop and implement fleet incentive programs that:

- Upgrade vehicle fleets by replacing internal combustion engine with low/no emission vehicles
- Incentivize eligible agencies and individual automobile owners to purchase low/no emission vehicles and associated infrastructure, with priority given to LIDAC communities
- Expand supporting infrastructure for electric vehicles

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PRIORITY ACTION PLAN MEASURES

TRANSPORTATION SECTOR

29%

TRANSPORTATION

Reduce automobile trips and incentivize more efficient and lower/no emission modes of transportation by:

- Expanding infrastructure such as bicycle facilities, transit stops, sidewalks, and other active transportation supporting infrastructure
- Developing and implementing low/no emission ridesharing and e-bike programs, with priority given to LIDAC communities
- Update/adopt building/zoning codes to encourage walkable, bikeable, and transit-oriented development.

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PRIORITY ACTION PLAN MEASURES

TRANSPORTATION SECTOR

29%

TRANSPORTATION

Implement smart infrastructure that leverage proven technologies to reduce emissions by:

- Upgrading traffic signal infrastructure and support proper use to minimize idling
- Implementation of driver notification systems on roads and parking structures to reduce unnecessary driving and idling

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PRIORITY ACTION PLAN MEASURES

WASTE, WATER, & SUSTAINABLE MATERIALS MANAGEMENT

16%

INDUSTRY

Develop and implement a waste minimization and management program that reduces carbon emissions, including:

- Providing incentives for community composting programs.
- Support development of biochar pyrolysis facility.
- Provide incentives for anaerobic digester facilities for landfills and wastewater treatment.
- Provide incentives for cardboard recycling.
- Provide incentives or a voucher system to improve waste management for rural populations.
- Materials Recovery Facility with end-market transparency.

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30

PRIORITY ACTION PLAN MEASURES

CARBON REMOVAL MEASURES

Develop and implement a program to improve or increase carbon sequestration on city-owned lands and using a program of land conservation and acquisition, including:

- Plant native tree and plant species that provide optimal carbon sequestration benefits in City-owned parks, trails, and rights-of-way.
- Restore degraded forests, prairies, and wetlands in parks, trails, and rights-of-ways.
- Identify and acquire lands with high carbon sequestration value for conservation, restoration, and for the development of new parks or recreation areas. Consider co-benefits.
- Develop conservation plans for new parks and recreation areas that include measures to improve or preserve areas with high carbon sequestration value.

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TAKE THE QUICK SURVEY

Scan the QR code or visit the website at:

www.surveymonkey.com/r/NWARPC-EEI

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NEXT STEPS

EVENT/DELIVERABLE	DATE/DUE DATE
Public Engagement Meetings	October 23 & October 26
Stakeholder Meeting #2	November 2, 2023
TAC Meeting	**November 16, 2023**
NWARPC Priority Plan Supplement to ADEE	December 1, 2023
ADEE Priority Plan to EPA	March 1, 2024
CPRG Implementation Grant Applications	April 1, 2024
Comprehensive Plan Supplement	February 28, 2025
Status Report Supplements	March 1, 2027

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THANK YOU!

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