



NEVADA DIVISION OF  
**ENVIRONMENTAL  
PROTECTION**



Nevada Department of  
**CONSERVATION &  
NATURAL RESOURCES**

# Priority Climate Action Plan **Community Action Workshop**

Las Vegas - January 10

Reno - January 16

**Presented by**

Nevada Division of Environmental Protection  
Sustainability Solutions Group  
Ericka Aviles Consulting LLC

Welcome

# WHAT WOULD MAKE THIS MEETING MEANINGFUL FOR YOU?

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- Learn something, become more informed.
- Talk about near term action.
- Understand goals for PCAP and funding applications.
- “A baseline of ideas to react to, while leaving an opening for new ideas”.
- Digital copy of the presentation.
- Consideration of long-term goals.
- Good quality conversation among interested parties.
- Hearing other ideas and projects.

# PURPOSE

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- **Share information about CPRG process.**
- **Provide an update on analysis and key project areas identified so far.**
- **Gather perspectives to help refine and strengthen projects to be listed in the Priority Climate Action Plan (PCAP).**

# AGENDA

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- 1. Welcome and introductions**
- 2. Purpose**
- 3. Overview of agenda**
- 4. Housekeeping items**
- 5. Presentations and participant group discussions, comments, and questions, organized by key sector for climate action:**
  - a. Transportation**
  - b. Buildings**
  - c. Energy Generation, Waste, Industry, Carbon Sequestration**

# SHARED PURPOSE

## PAIRS DISCUSSION

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**What is the most essential or pressing topic of discussion for you during this workshop?**

- Online - automatically sent into a pairs discussion
- In person - turn to your neighbour
- Listen to the other person uninterrupted until they finish, up to 1 minute.
- Take notes for each other and put them into Menti (or post-its or zoom chat)

# CPRG Climate Action Planning Overview

# U.S. EPA CLIMATE POLLUTION REDUCTION GRANT PROGRAM (CPRG)

## DESCRIPTION

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**The U.S. Environmental Protection Agency's (EPA) Climate Pollution Reduction Grants (CPRG) program provides federal grants to develop and implement plans for reducing greenhouse gas emissions and other harmful air pollution.**

**The Nevada Division of Environmental Protection (NDEP) has received \$3 million in funding for the planning phase of the CPRG, which includes the preparation of three reports: the Priority Climate Action Plan (due March, 2024), the Comprehensive Climate Action Plan (2025), and the Final Report (2027.)**



# U.S. EPA CLIMATE POLLUTION REDUCTION GRANT PROGRAM (CPRG)

## GOALS

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### **The goals of the Climate Action Plans are to:**

- Improve understanding of statewide greenhouse gas emission sources
- Improve projections of statewide greenhouse gas emissions
- Reduce greenhouse gas emissions statewide over time and in accordance with reduction targets' goal through implementation
- Increase climate resilience
- Improve air quality, especially in low-income and historically disadvantaged communities
- Improve health benefits, especially in low-income and historically disadvantaged communities
- Create high-quality jobs
- Enhance community engagement

# **PRIORITY CLIMATE ACTION PLAN (PCAP)**

## **PART OF THE CLIMATE POLLUTION REDUCTION GRANT (CPRG)**

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**The intent of the PCAP is to identify near-term and implementation-ready strategies, initiatives, and other projects that aim to reduce emissions of greenhouse gases and other pollutants.**

**Nevada's completion of the CPRG PCAP, in March 2024, will unlock \$4.6 billion\* in federal grants awarded by the EPA to fund implementation of select CPRG projects (CPRG Phase 2).**

<b>Tier</b>	<b>Grant Ranges</b>	<b>Funds Targeted for Each Tier</b>	<b>Anticipated Number of Grants to be Awarded</b>
Tier A	\$200,000,000 – \$500,000,000	\$2 billion	4-10
Tier B	\$100,000,000 – \$199,999,999	\$1.3 billion	6-13
Tier C	\$50,000,000 – \$99,999,999	\$0.6 billion	6-12
Tier D	\$10,000,000 – \$49,999,999	\$0.3 billion	6-30
Tier E	\$2,000,000 – \$9,999,999	\$0.1 billion	10-50

**\*Nationally available funds granted via a competitive process**

# PROPOSED PROJECT PRIORITIZATION

## CLIMATE POLLUTION REDUCTION GRANT'S PHASE 2 CRITERIA

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### EPA Criteria (in summary)

- Impact on emissions reduction
- Demonstration of funding need
- Benefit to low income, disadvantaged communities
- Environmental benefits
- Transformative
- Job quality



# STATE AND EMISSIONS OVERVIEW

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## Context review

- Demographics
- Low-Income, Disadvantaged Communities
- Greenhouse gas emissions
- Economy and Industry
- Buildings
- Transport
- Electricity





# DEMOGRAPHIC SUMMARY

## 2021 CENSUS DATA

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### Population Context

- Population of 3.1 million
- Clark and Washoe counties are most dense.
- 16 counties and one independent city (Carson City)
- Nearly 87% of land is publicly owned by the federal government

Washoe County:  
479,758



Clark County:  
2,231,147

# **LOW-INCOME, DISADVANTAGED COMMUNITIES ANALYSIS**

## **KEY TAKEAWAYS FROM US EPA CLIMATE AND ECONOMIC JUSTICE SCREENING TOOL**

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### **Primary statewide concerns**

- Wildfire risk
- Air quality issues: exposure to diesel particulate matter
- Areas with high impervious surface cover/ cropland
- Wastewater discharge issues
- Legacy pollution from industry, military, etc. (to a lesser extent)

**Washoe County and Clark County have the highest populations as well as a high number of disadvantaged geographic areas.**

# Low-Income, Disadvantaged Communities Analysis

## KEY TAKEAWAYS FROM US EPA CLIMATE AND ECONOMIC JUSTICE SCREENING TOOL

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### Washoe County / Reno-Sparks

- Second most populous county in the state
- Presence of formerly used defense sites
- Critical service gaps: lack of access to **broadband internet, housing burden, transportation access, and food deserts**

**Many places in Washoe County contain Justice40 CEJST disadvantaged communities, EPA IRA disadvantaged communities, as well as American Indian Reservation Lands.**

# **LOW-INCOME, DISADVANTAGED COMMUNITIES ANALYSIS**

## **KEY TAKEAWAYS FROM US EPA CLIMATE AND ECONOMIC JUSTICE SCREENING TOOL**

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### **Clark County: most populous county in the state**

- Environmental hazards: Brownfields; air pollution sites; and hazardous waste facilities
- Critical service gaps: lack of access to **broadband internet, housing burden, transportation access, and food desert**

**Many places in Clark County contain Justice40 CEJST disadvantaged communities, EPA IRA disadvantaged communities, as well as American Indian Reservation Lands.**



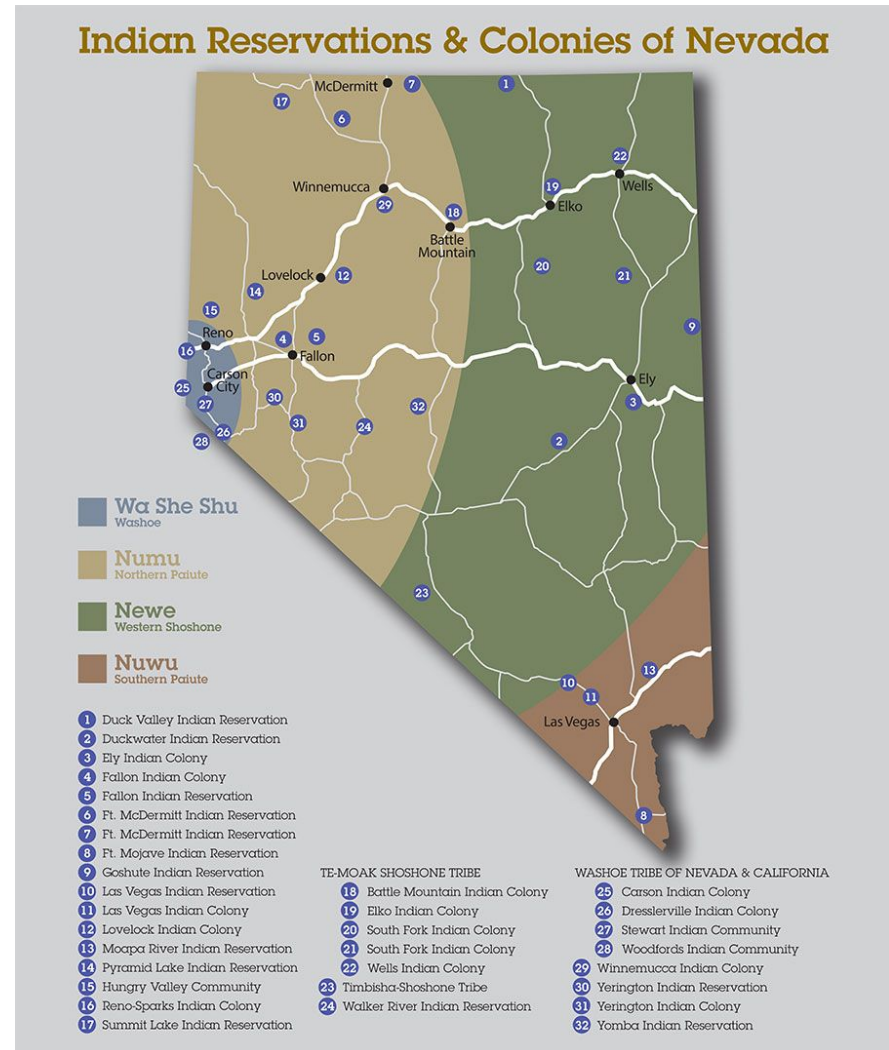
# NEVADA TRIBES

## KEY TAKEAWAYS FROM US EPA CLIMATE AND ECONOMIC JUSTICE SCREENING TOOL

### Nevada Tribal Lands

Nevada is home to:

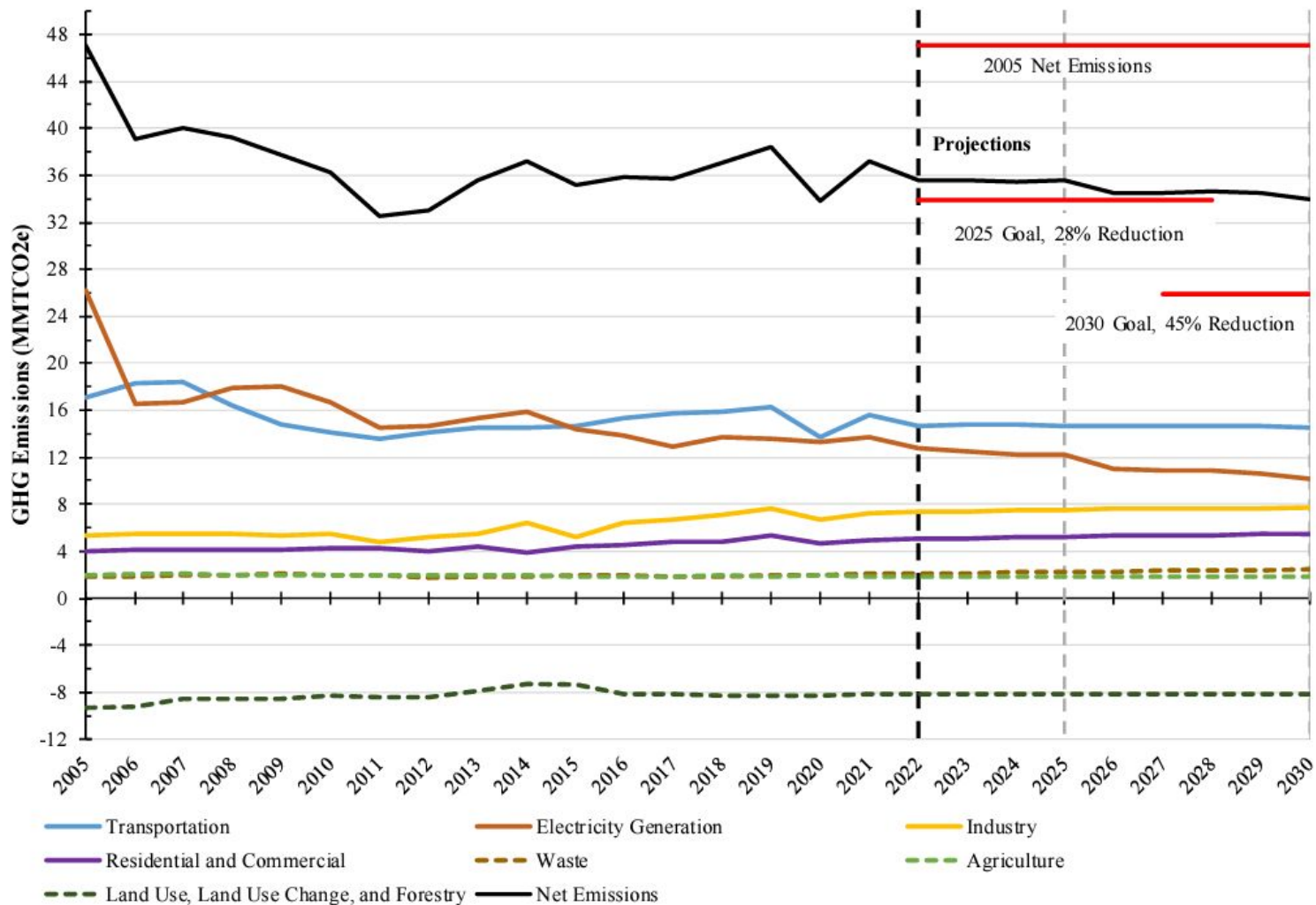
- Wa She Shu (Washoe)
- Numu (Northern Paiute)
- Neue (Western Shoshone)
- Nuwu (Southern Paiute) Tribes



# GREENHOUSE GAS EMISSIONS

## KEY TAKEAWAYS FROM NDEP GHG EMISSIONS INVENTORY

Figure ES-1: Nevada Historical and Projected Net GHG Emissions and Sinks by Sector, 2005-2030, with Projections Beginning in 2022 and Comparisons to Nevada's Emission Reduction Goals for 2025 and 2030



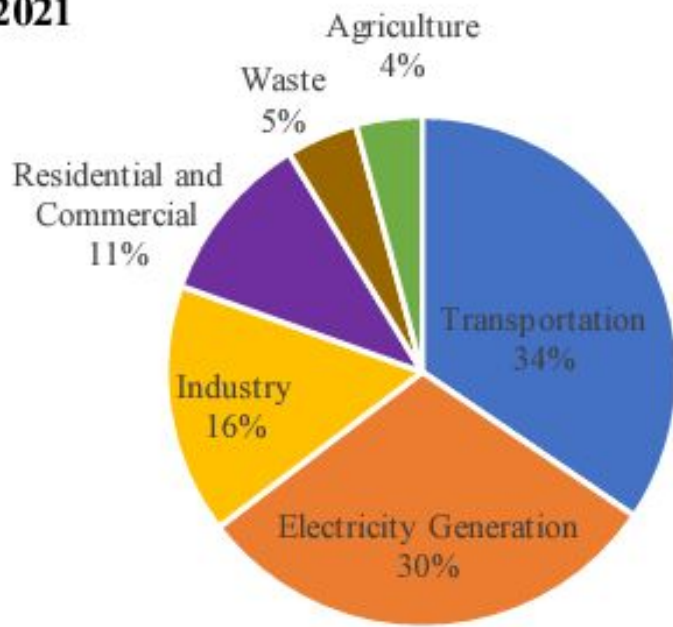
# GREENHOUSE GAS EMISSIONS

## KEY TAKEAWAYS FROM NDEP GHG EMISSIONS INVENTORY

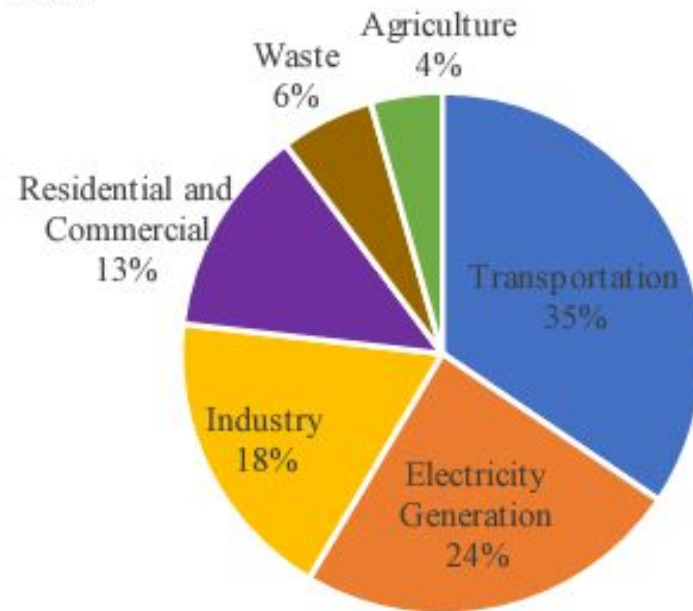
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Transportation is the major source of emissions, followed by electricity, industry and buildings.

**2021**



**2030**



# QUESTIONS OR COMMENTS

## PAUSE FOR FEEDBACK

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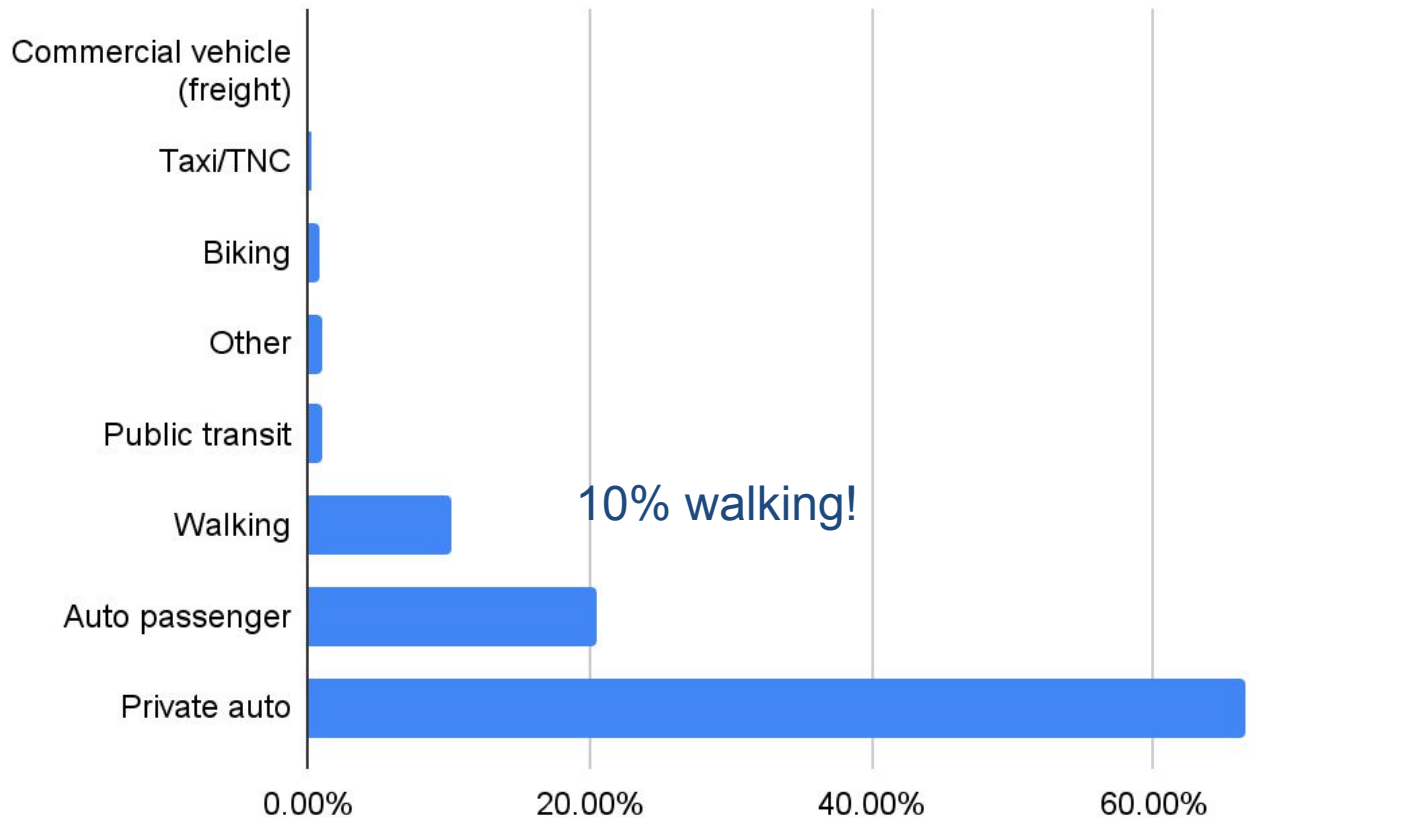
**What questions and comments do you have?**

# Transportation Action Planning

# TRANSPORTATION

PEOPLE ARE MOSTLY DRIVING FOR PERSONAL TRIPS.

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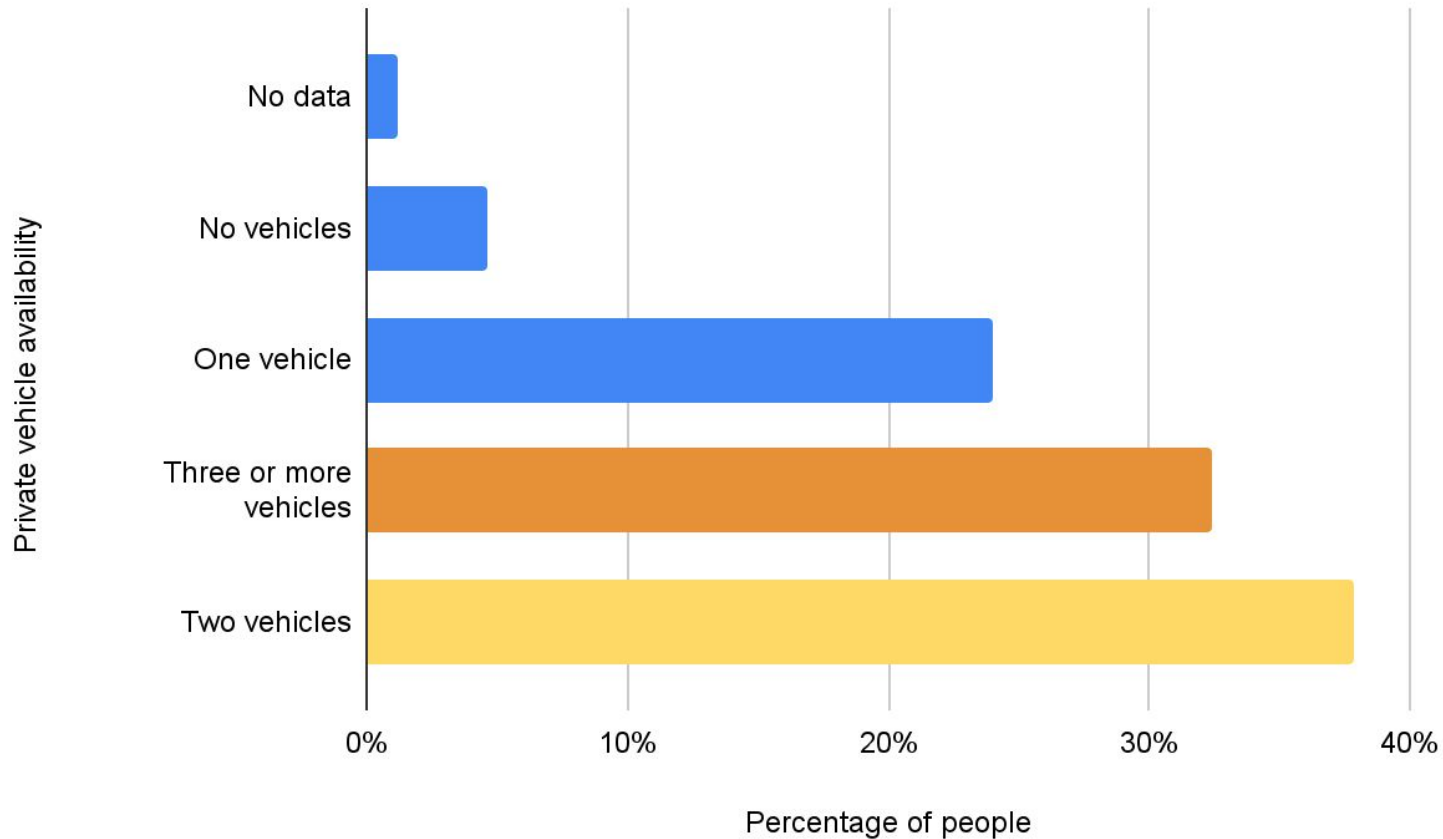
Primary Mode of Trips taken in Nevada Counties,  
Thursday, Spring, 2023

Source: [Replica, 2023](#)

# TRANSPORTATION

## THERE ARE LOTS OF CARS IN NEVADA

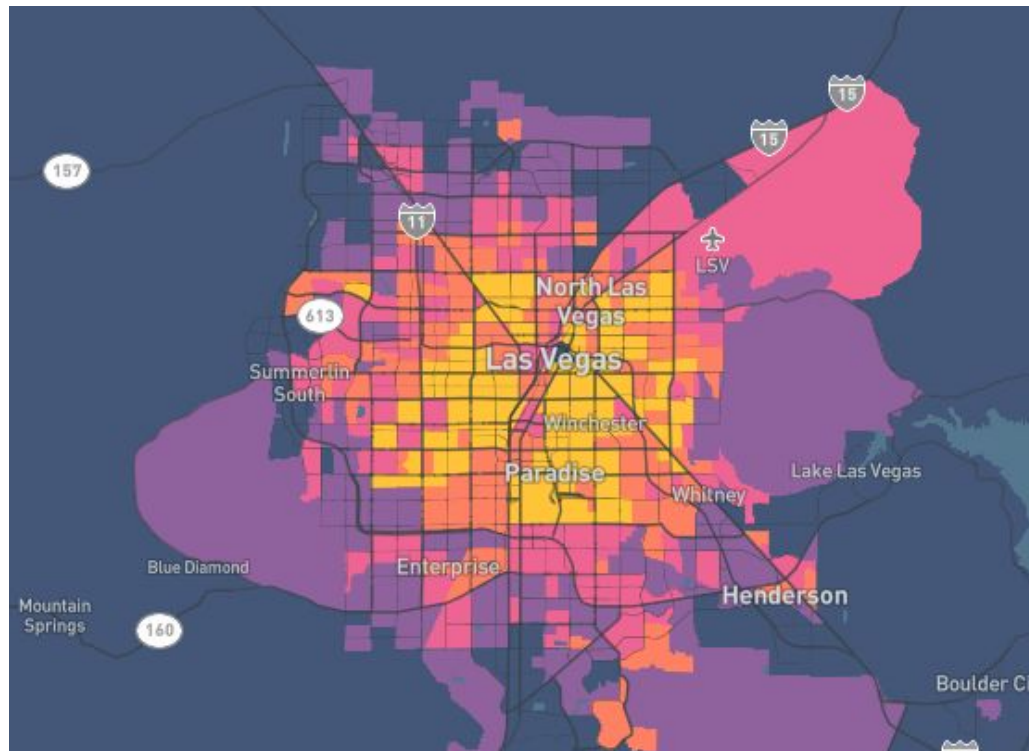
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Source: [Replica, 2023](#)

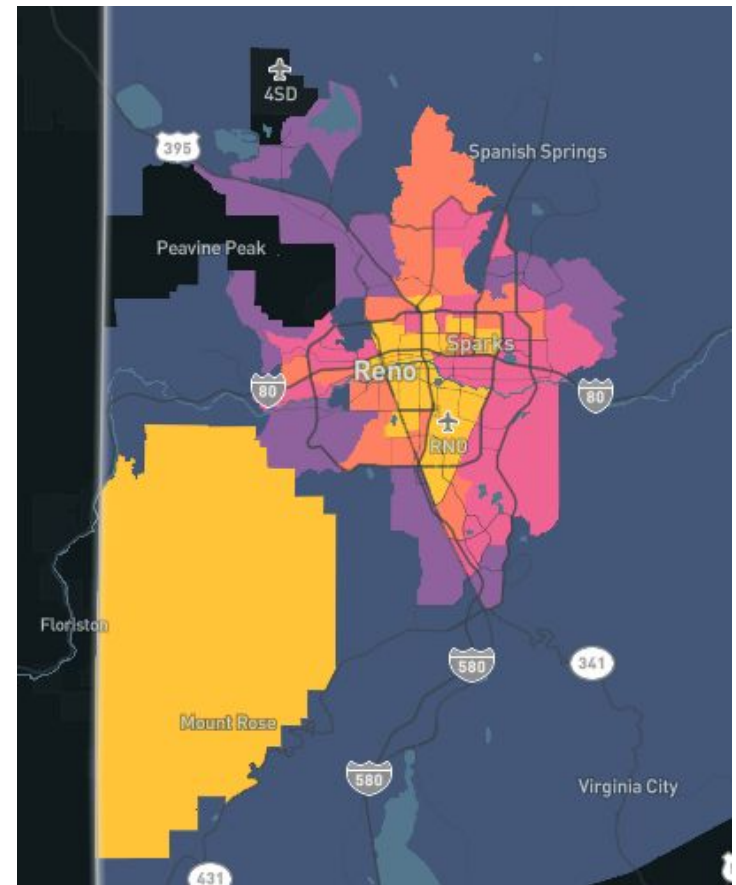
# TRANSPORTATION

ON A TYPICAL WEEKDAY, VEHICLE MILES TRAVELLED IS 10-40X  
HIGHER IN RURAL AND SUBURBAN AREAS.



## Residential VMT

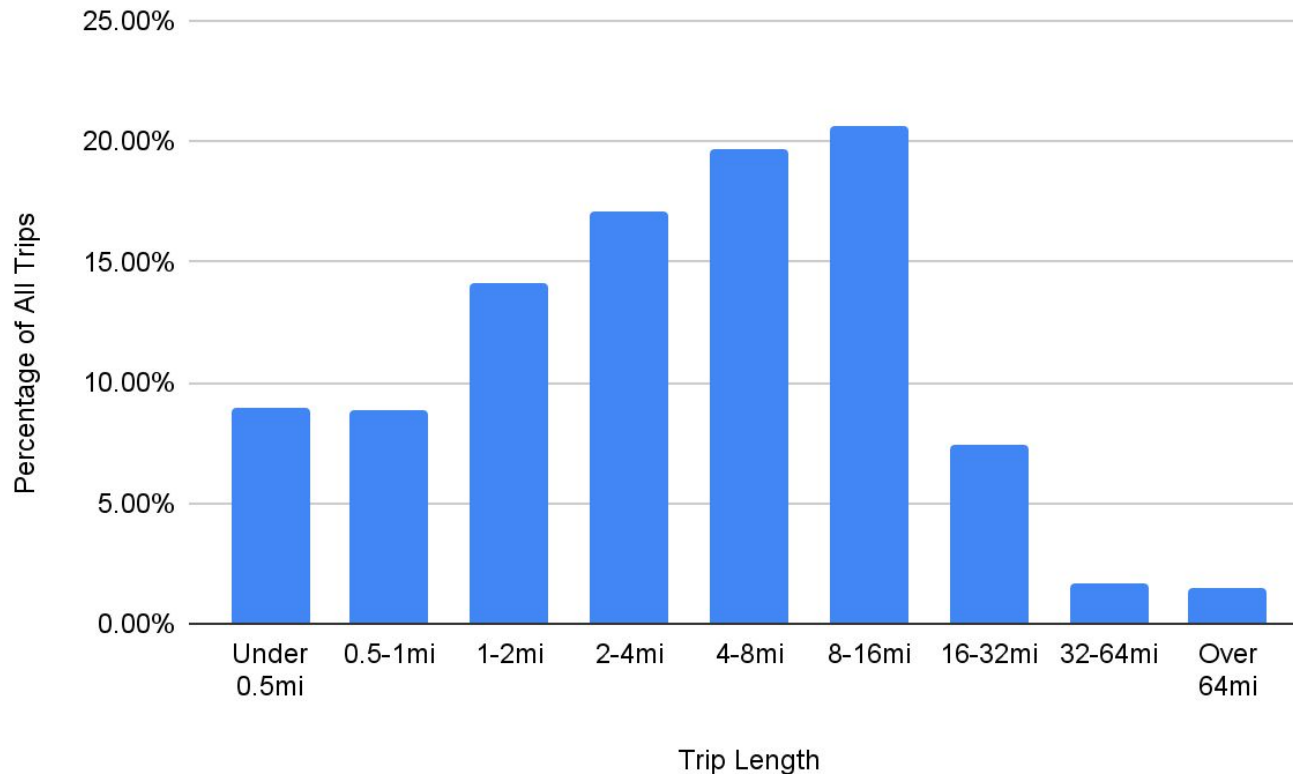
Vehicle Miles Traveled in each area per resident





# TRANSPORTATION

## HIGH OPPORTUNITY FOR MODE SHIFT IN NEVADA'S URBAN AREAS



**Nearly half of trips (49%) taken in Nevada are less than 4 miles!**

Source: [Replica, 2023](#)

# TRANSPORTATION

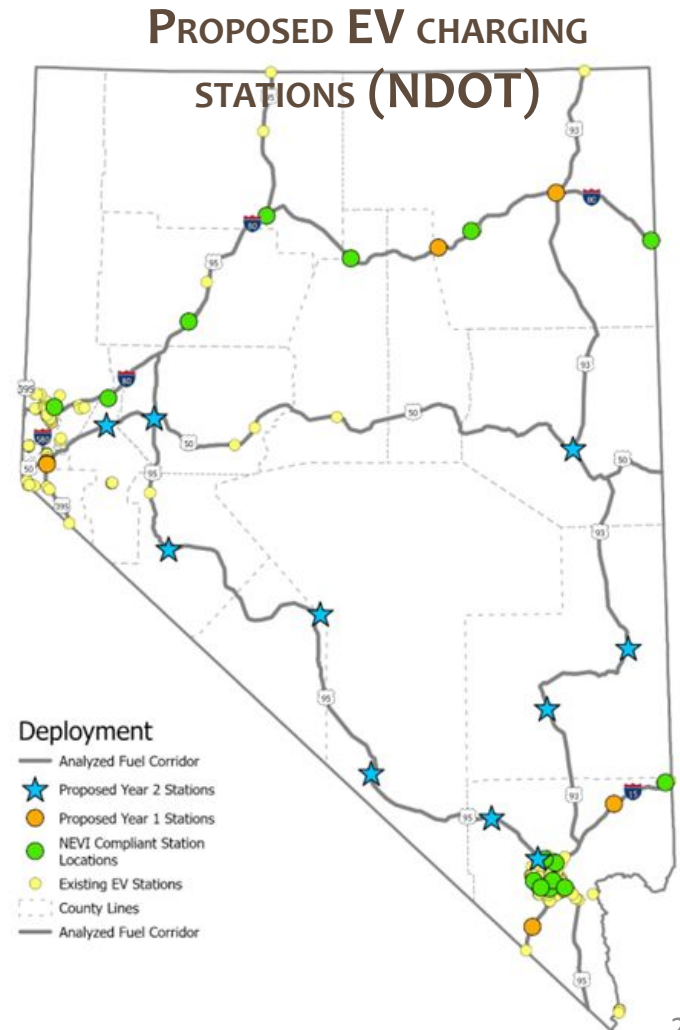
## ELECTRIC VEHICLES

### The EV revolution has not yet arrived

- In 2022, there were just 41,700 electric vehicles registered in Nevada, 1.65% of total
- Higher than national average of 1.2%

### EV infrastructure is coming soon to interstates

- Fast-charging station available every ~50 miles, within 1 mile of the highway
- Builds on Nevada Electric Highway program which funded 30 stations before 2022



# TRANSPORTATION

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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**Existing areas of interest from state, local, and other entities from prepared submissions and questionnaire results:**

- Nevada Clean Fleets Initiative
- Clean Transportation 4 All
- Supercharge EV Charging
- Sustainable Community Pathways Program
- Clean Trucks Incentive Program
- Nevada Clean Green Tourism Program

# TRANSPORTATION

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Nevada Clean Fleets Initiative**

Develop a comprehensive set of programs and incentives to encourage adoption and conversion to clean fleets, including converting county and large scale commercial fleets to zero-emission, EV, and alternative fuel vehicles; making updates and repairing existing EV infrastructure; and promoting alternative fuel vehicles and EV adoption. Encourage and support state agencies, county governments of the 5 most populous counties, and businesses with largest fleets to convert fleets to zero emission vehicles by 2030, and encourage and support remaining Counties to convert fleets to zero emission vehicles by 2035.

# TRANSPORTATION

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Clean Transportation 4 All**

Develop a comprehensive strategy, including program development, grant and technical assistance, and educational programming, to promote clean transportation options for all. Provide incentives particularly for low-income people living in priority areas and businesses operating in low-income areas to replace old polluting vehicles with new, clean transportation.

# TRANSPORTATION

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Supercharge EV Charging**

Develop a statewide ZEV infrastructure plan to incentivize the adoption of ZEV across the state, building on the Nevada Electric Vehicle Infrastructure Deployment Plan. At the same time, provide grants and technical assistance for counties and municipalities to develop and implement ZEV; incentivize EV stations for on-site parking, and target network improvements in select low-income and priority areas.

# TRANSPORTATION

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Sustainable Community Pathways Program**

Expand on and address gaps in existing public transit, bicycle, micro-mobility, car sharing and pedestrian networks by funding existing city and county plans and initiatives that support network improvement; develop a network of public charging for e-micro mobility; and incentivize micro-mobility facilities and infrastructure for e-bikes that promotes connectivity and longer distance trips.

# TRANSPORTATION

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Clean Trucks Incentive Program**

Develop incentive program for clean trucks, plan and develop battery swapping stations and/or hydrogen fueling stations for for medium and heavy-duty trucks along the state's freight corridors; incentivize large commercial fleets to electrify; incentivize higher sales of new medium and heavy-duty trucks; and promote reduction in carbon intensity of all transportation fuels by 2030.



# TRANSPORTATION

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Nevada Clean Green Tourism Program**

Enhance the state's reputation for green tourism by planning and implementing the expansion of high speed rail within the state and with Northern California; incentivising decarbonization of airport buildings and transit facilities; developing sustainable aviation fuels near airports; and enhancing seamless multi-modal network connections for residents and visitors.

# DISCUSSION

## BREAKOUT GROUPS

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**What's working already and is an opportunity to build on?**

**What actions could lead to a dramatic reduction in GHG emissions from transportation in your community?**

**What would it take to make that transformation?**

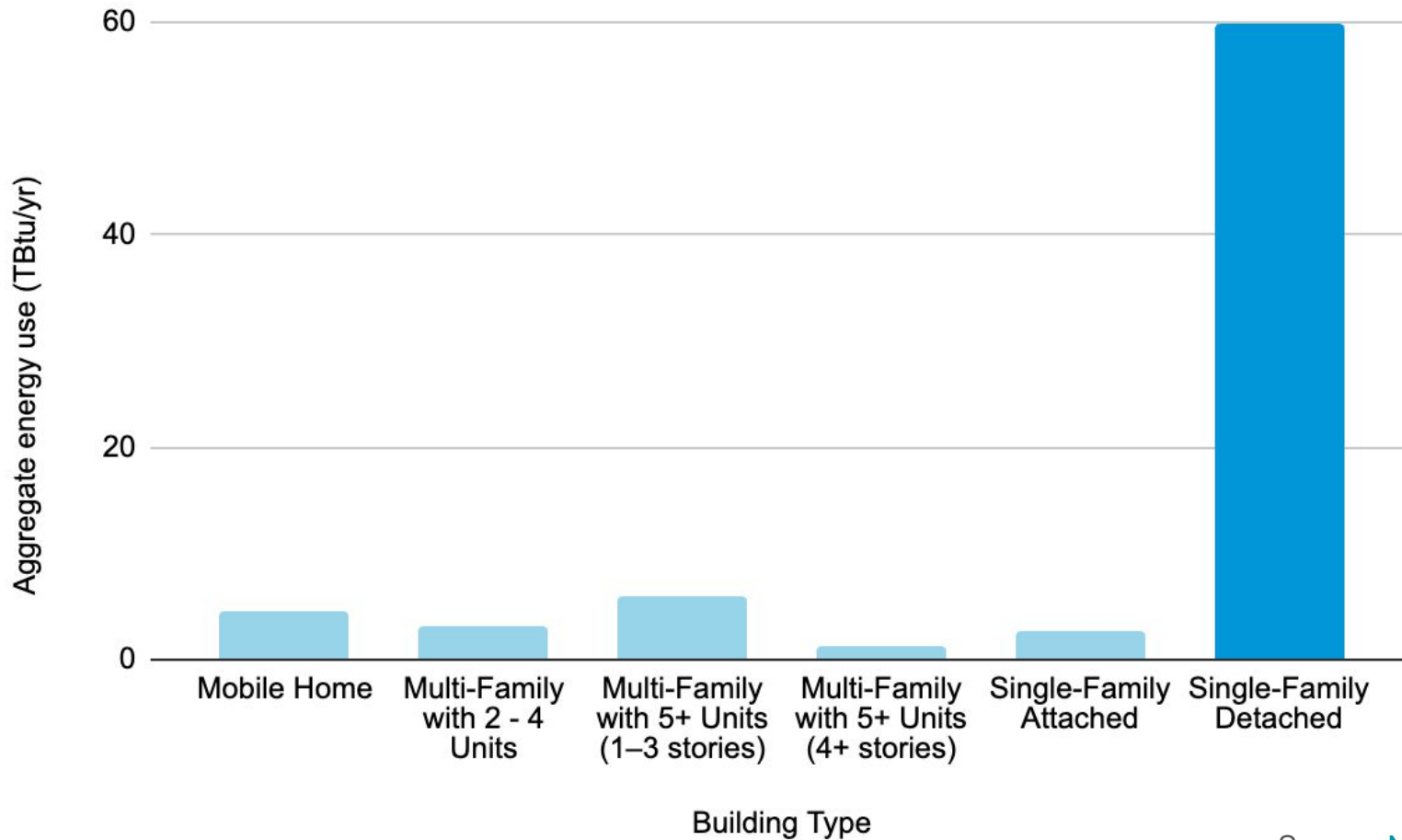
Approximately 20 minutes in breakout groups.

Use menti or chat or post-its in addition to speaking.

# Buildings Action Planning

# BUILDINGS

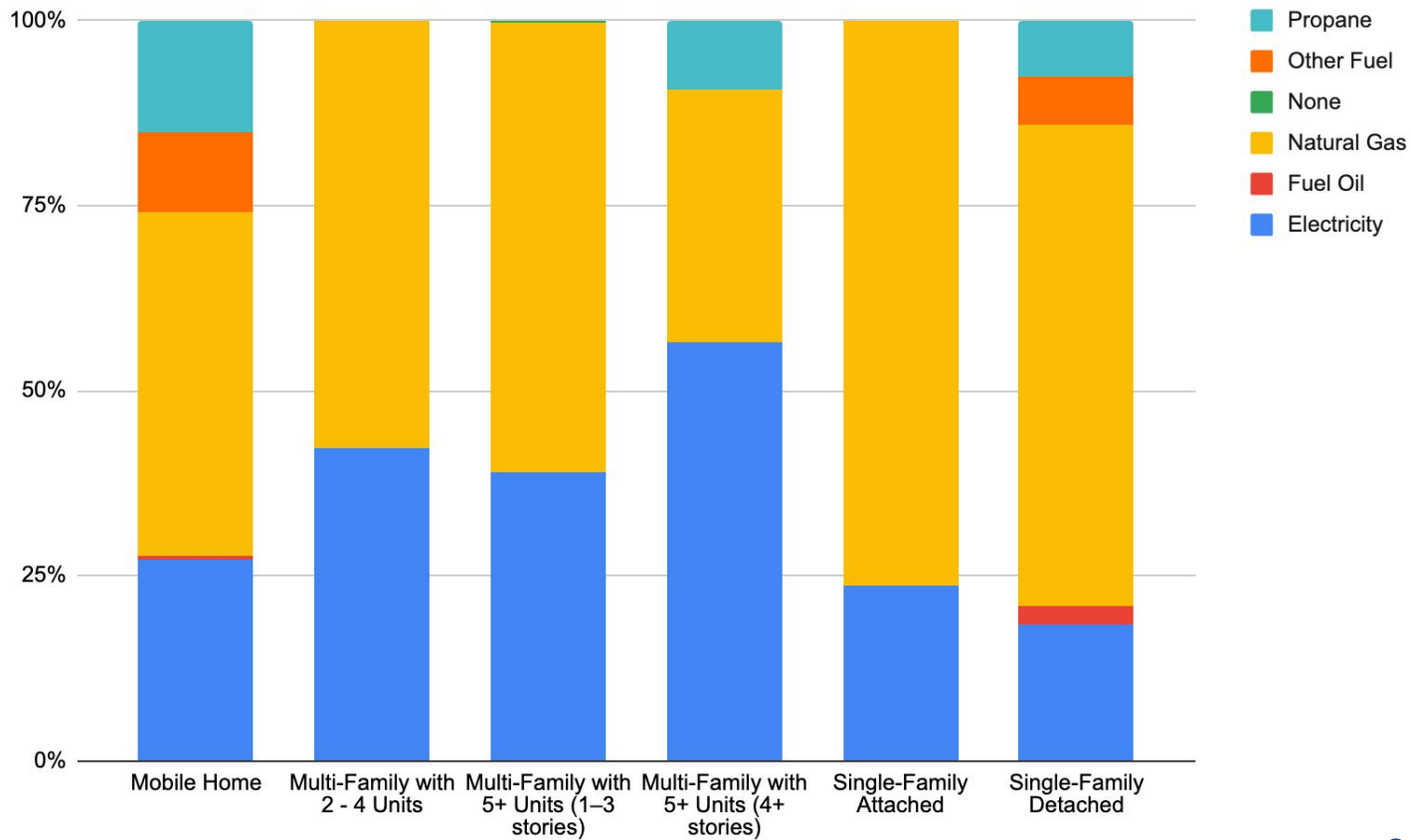
IN AGGREGATE, SINGLE FAMILY HOMES USE A LOT OF ENERGY



Source: [NREL, 2023](#)

# BUILDINGS

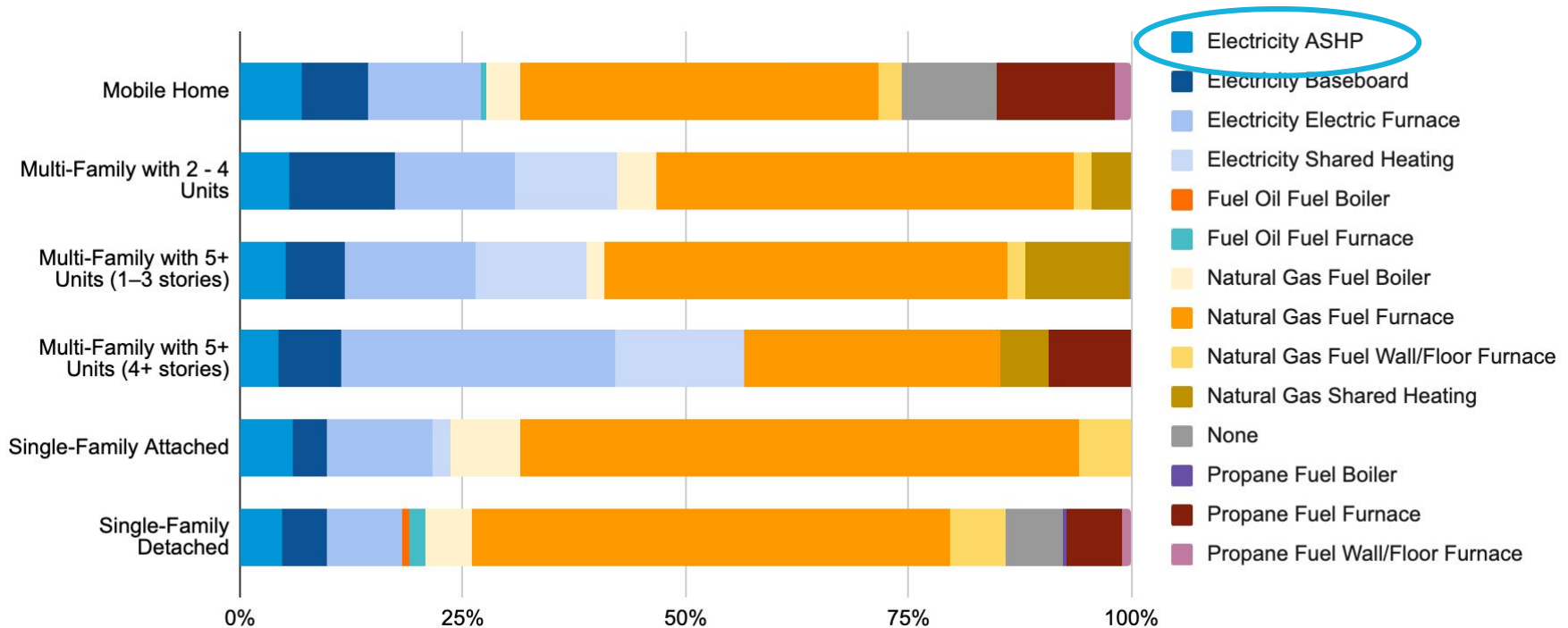
**MOST RESIDENCES ARE HEATED WITH NATURAL GAS.**



Source: [NREL, 2023](#)

# BUILDINGS

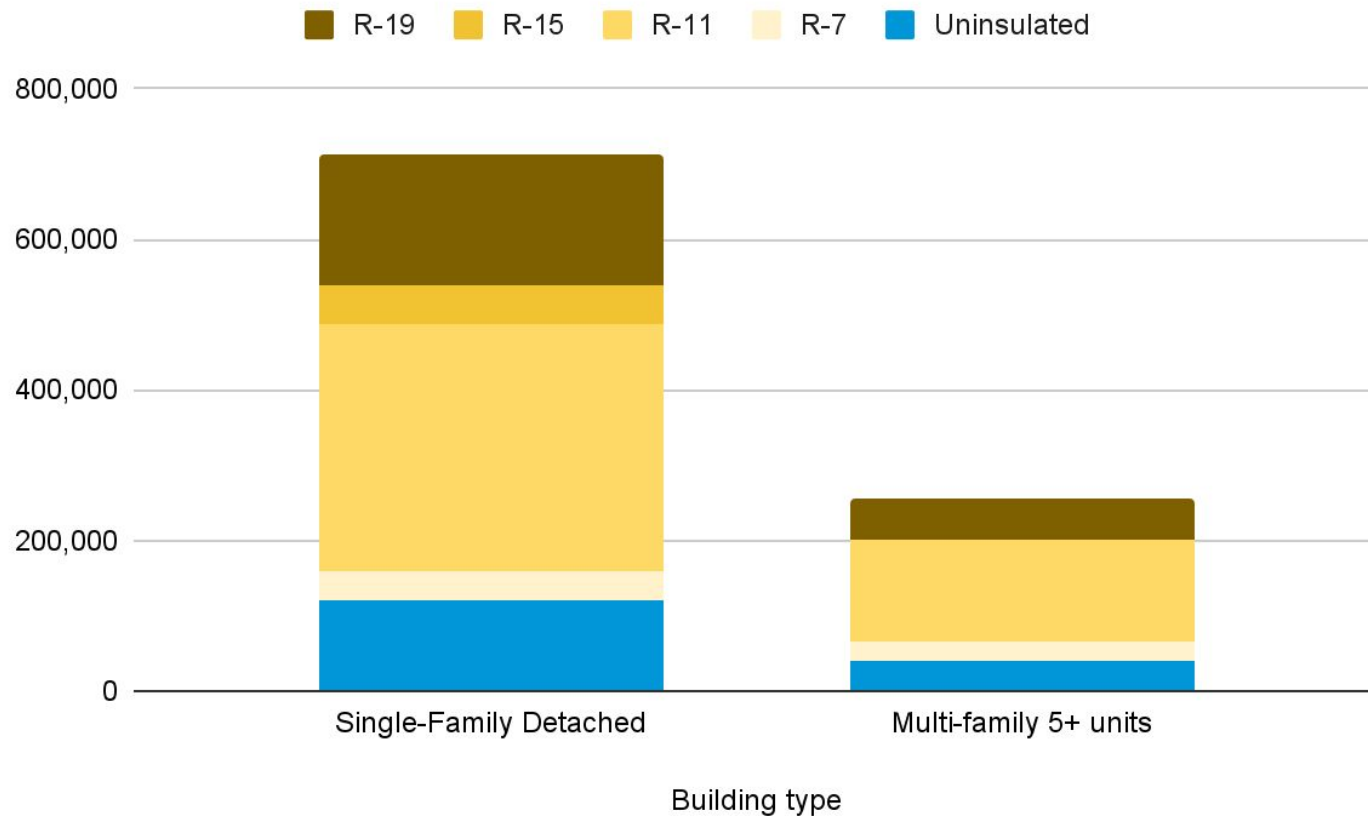
## HEAT PUMP HEATING IS LOW ACROSS ALL HOUSING TYPES.



# BUILDINGS

**MORE THAN A QUARTER OF RESIDENCES ARE POORLY INSULATED OR UNINSULATED.**

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Residential Building Stock in Nevada

Source: [NREL, 2023](#)

# BUILDINGS

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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**Existing areas of interest from state, local, and other entities from prepared submissions and questionnaire results:**

- Nevada Resilient Homes Program (Residential)
- Transform an Entire Neighborhood or Community
- Smart Energy Nevada Program (Commercial)
- Building Decarbonization Financing Mechanisms



# BUILDINGS

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Nevada Resilient Homes Program (Residential)**

Launch a state-wide residential building efficiency program, prioritizing low-income neighborhoods and/or disadvantaged communities. The program would expand pre-weatherization programs, provide incentives to promote energy retrofits in existing buildings, reduce emissions in new construction, and incentivize full electrification in new buildings, as well as and on-site renewable energy generation for existing buildings.

# BUILDINGS

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Transform an Entire Neighborhood or Community**

Support the development of a holistic emissions-free and energy-affordable community, including adding key services within walking/biking distance; developing transit infrastructure; housing retrofits; solar generation; and a district energy system.

# BUILDINGS

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### Smart Energy Nevada Program (Commercial)

Launch a state-wide commercial building efficiency program. Expand non-residential building retrofits program and net zero new construction programs, including shifting to airsource or geothermal heat pumps for heating and cooling; incentivizing urban infill, supporting the use of low-carbon materials in new constructions, and expanding energy saving performance contracting.

# BUILDINGS

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Building Decarbonization Financing Mechanisms**

Use and expand existing financing mechanisms to support building energy retrofits, including the NV Clean Energy Fund. Additionally, explore other financing mechanisms to accelerate adoption of clean energy building programs, including the development of a CPRG Revolving Loan Fund; expanding and supporting community land trusts; on-bill financing; direct residential lending; and enabling Residential-PACE (R-PACE).

# DISCUSSION

## BREAKOUT GROUPS

---

**What's working already and is an opportunity to build on?**

**What actions would lead to a dramatic reduction in GHG emissions from buildings?**

**What would it take to make that transformation?**

Approximately 20 minutes in breakout groups.

Use menti or chat or post-its in addition to speaking.

# Other Sectors in Action Planning

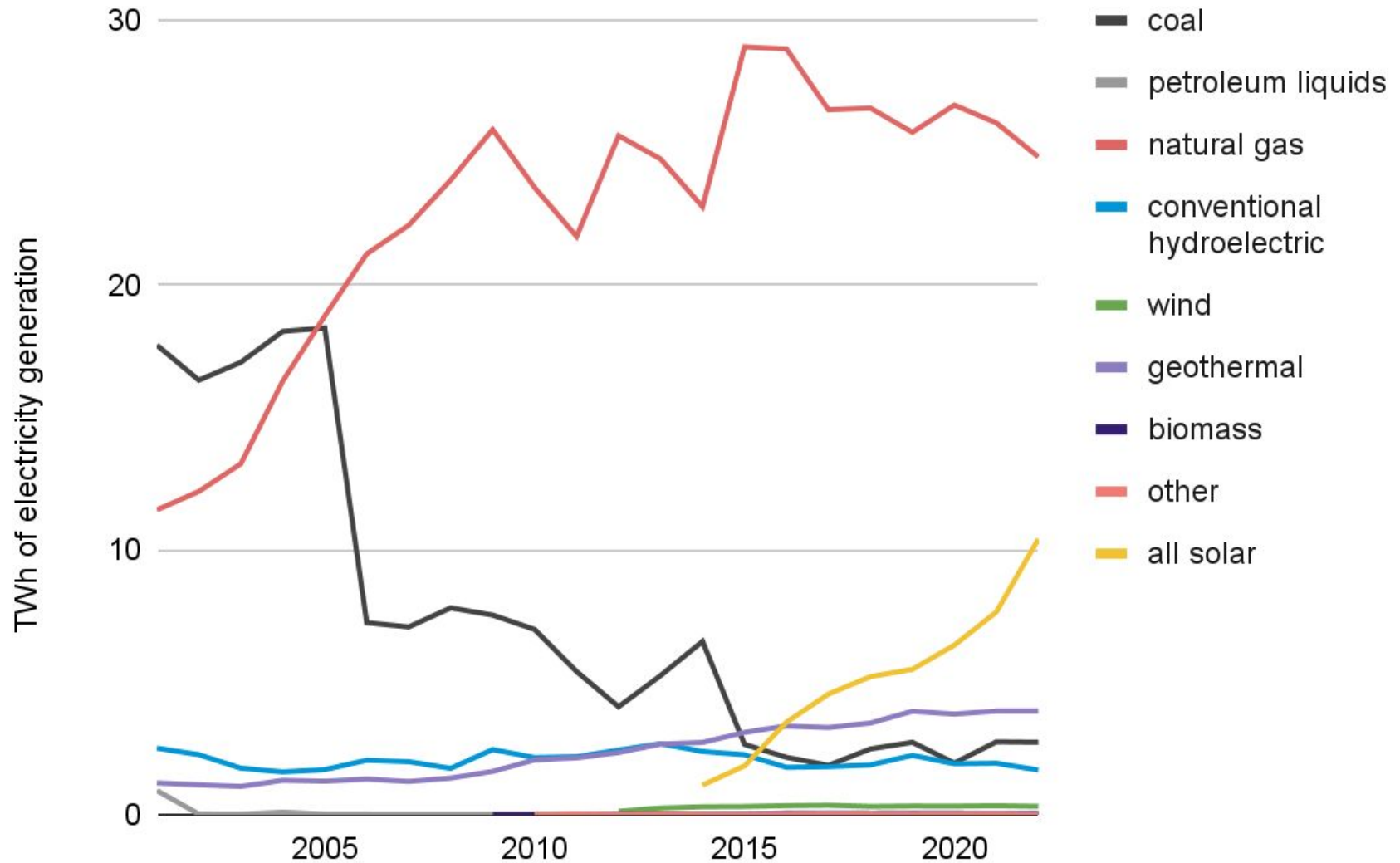
## OTHER SECTORS

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- Energy Generation
- Waste
- Industry
- Carbon Sequestration

# ELECTRICITY

## KEY TAKEAWAYS ABOUT POWER GENERATION IN NEVADA



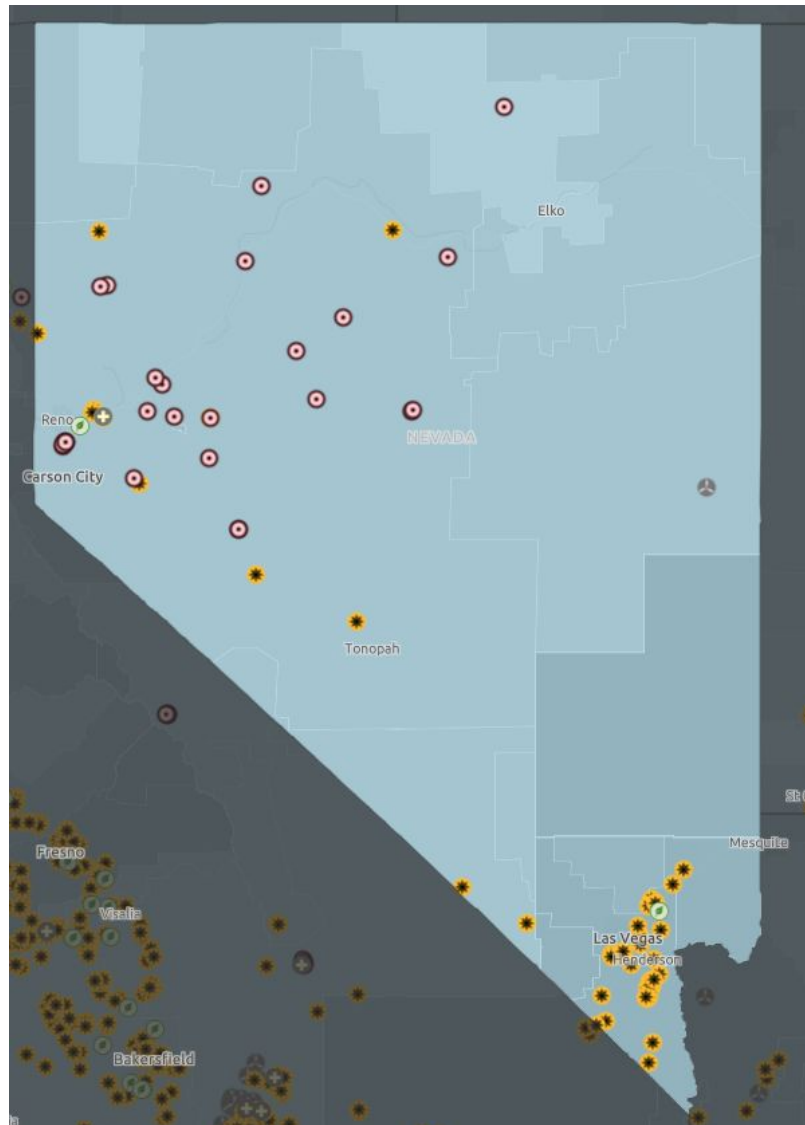


## And the transition to renewable energy is underway

- Nevada has more than tripled its renewable energy production since 2011, while maintaining energy reliability through a diverse energy portfolio
  - 2010 renewable generation: 4.44 TWh
  - 2021 renewable generation: 12.786 TWh
- SB 359 (2019) modified Nevada's Renewable Portfolio Standard (RPS) by increasing the percentage of renewable electricity sold each year to Nevadans to 50% by 2030
- Nevada is one of seven states with utility-scale electricity generation from geothermal energy, and the state is second only to California in geothermal-sourced power production

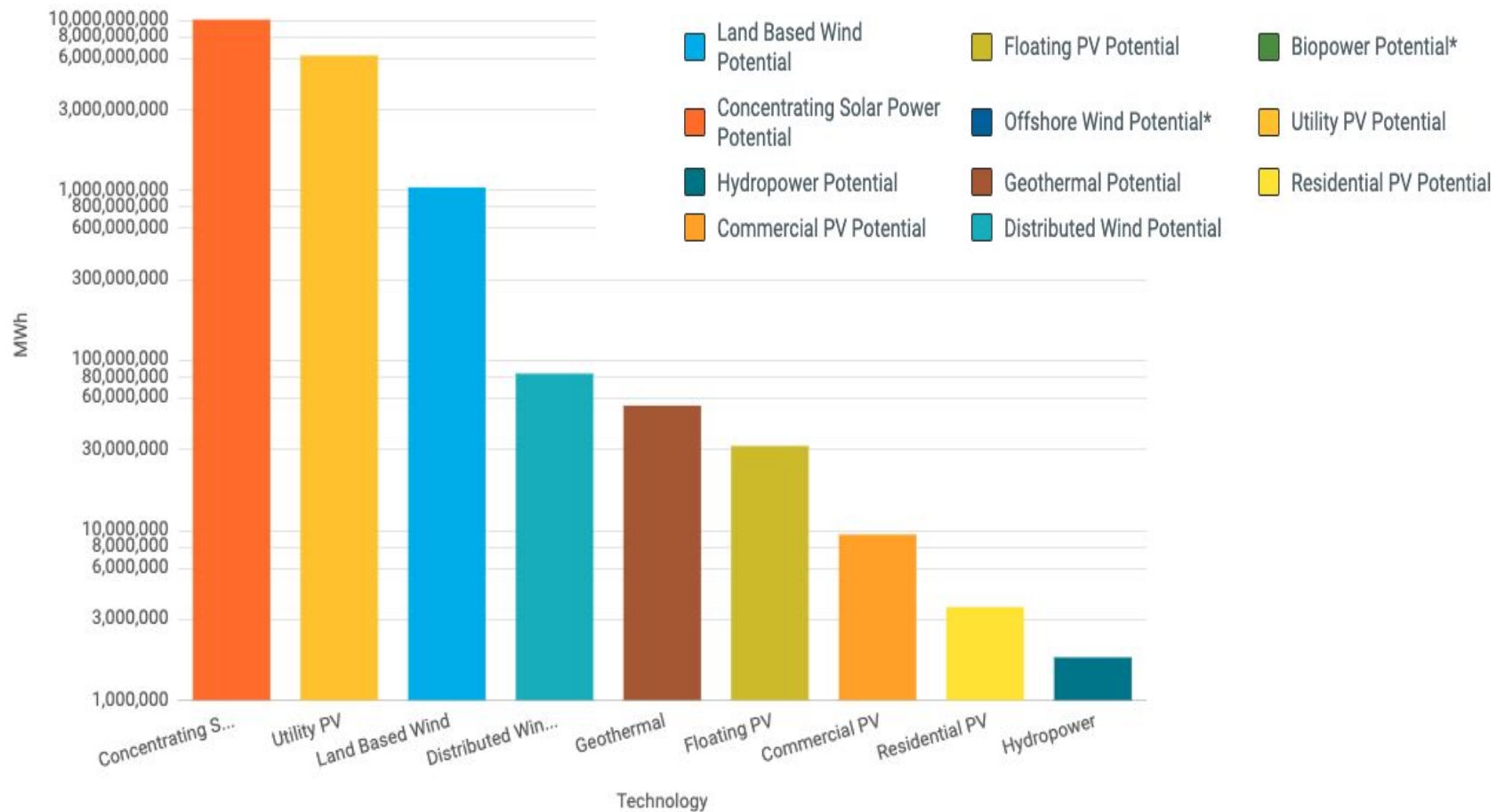


## More and more renewables have recently come online.



- 82 renewable power plants across the state
- 6,100 MW nameplate capacity

# Nevada has the potential to tap into significant renewable energy resources



Source: NREL SLOPE (State and Local Planning for Energy)

# ENERGY GENERATION

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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**Existing areas of interest from state, local, and other entities from prepared submissions and questionnaire results:**

- Solar Gardens/Community Renewable Empowerment Plan
- Community-Centered Renewable Empowerment Plan
- Fund and Support a Tribal Climate Coalition
- Modernize Nevada's Transmission Network Program
- Retrofitting Thermal Power Plants

# ENERGY GENERATION

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Solar Gardens/Community Renewable Empowerment Plan**

Support the development of community energy plans by providing state-backed loans and grants for community-scale renewable projects. Support the creation of “Solar Gardens” and/or solar cooperatives to help generate electricity for rural and smaller communities.

# ENERGY GENERATION

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Community-Centered Renewable Empowerment Plan**

Accelerate the state's transition to a renewable energy future by developing incentives and measures to streamline permitting for renewable energy projects; developing training programs for local officials on renewable project approval processes; and incentivizing projects with the highest level of community benefits.

# ENERGY GENERATION

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Fund and Support a Tribal Climate Coalition**

Support and finance a network of Nevada tribal communities that can help advance climate projects, set priorities, and identify direct impact of projects on tribal communities within and outside of tribal lands. Expand solar projects on tribal lands, capitalizing on existing and ongoing projects.

# ENERGY GENERATION

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Modernize Nevada's Transmission Network Program**

Provide financial and technical support to modernize Nevada's grid for future energy demands, including upgrading grid infrastructure and development of high-capacity transmission lines for renewable integration. Capitalize on the Transmission Facilitation Program (TFP) (\$2.5 billion revolving fund) for development of new transmission lines; require that utilities develop comprehensive grid modernization plans; and develop programs to support smart-grid and/or behind-the-meter technologies.



# ENERGY GENERATION

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Retrofitting Thermal Power Plants**

Transforming existing fossil fuel-based thermal power plants offers two sustainable options: (1) Retrofitting to run on green hydrogen, significantly reducing emissions, and (2) Modifying them into Carnot batteries for efficient energy storage and discharge, utilizing surplus green electricity. This dual approach promotes eco-friendly operations and enhances grid stability.

# INDUSTRY

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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**Existing areas of interest from state, local, and other entities from prepared submissions and questionnaire results:**

- Clean Energy Hubs Program
- Holistic, Site-Specific Transform an Industrial Area
- Clean Mining Program
- Industrial Sector Emission Reduction Incentives

# INDUSTRY

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### Clean Energy Hubs Program

Expand existing initiatives and programs to repurpose former mine lands into clean energy hubs.

# INDUSTRY

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Transform an Industrial Area**

Develop a holistic strategy to transform an industrial site towards greater energy integration and self-sufficiency. Efforts may include creating a smart grid to alternate between using, generating and storing energy in the area; replacing vehicle fleets with EVs; using waste and waste water to produce RNG; using wastewater heat and/or industrial heat to heat spaces and domestic water; piping CO2 to stimulate plant growth; improving process efficiencies; and using thermal energy storage powered by renewables for industrial heat and power.

# INDUSTRY

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Clean Mining Program**

Capitalize on IRA's financial incentives for renewable energy and Green H2 to increase development and implementation of clean technologies including energy efficiency and electrification of mining processes; heating batteries; and promoting H2-fueled or electric mining trucks and vehicles.

# INDUSTRY

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Industrial Sector Emission Reduction Incentives**

Incentivize changes to activities with high carbon intensity, including routine natural gas flaring and venting, and fugitive methane emissions from new and existing facilities.

# WASTE

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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**Existing areas of interest from state, local, and other entities from prepared submissions and questionnaire results:**

### **Organic Waste Diversion Programs**

Incentivize waste diversion and composting (such as in Washoe County's Green Recovery Plan) which includes piloting and evaluating the feasibility of scaling up curbside green waste collection and composting.

# CARBON SEQUESTRATION

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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**Existing areas of interest from state, local, and other entities from prepared submissions and questionnaire results:**

- Support community-centered restoration and carbon sequestration projects.
- Repurpose brownfields and mines for carbon capture.



# CARBON SEQUESTRATION

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Community-centered restoration and carbon sequestration projects**

Support existing state land conservation goals and ecological restoration programs, and develop new programs on healthy soils, urban forestry, and green infrastructure/adaptive reuse, linking these efforts with active transportation and renewable energy projects where possible.

# CARBON SEQUESTRATION

## EXISTING AREAS OF INTEREST FOR POTENTIAL PCAP PROJECTS

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### **Repurpose brownfields and mines for carbon capture.**

Build on NDEP's existing Brownfields Program to incentivize the use of former mines and brownfield sites for CO<sub>2</sub> storage and Incentivize or require ecological restoration or green infrastructure/adaptive reuse of these sites wherever possible.

# DISCUSSION

## BREAKOUT GROUPS

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**What's working already and is an opportunity to build on?**

**What actions would lead to a dramatic reduction in GHG emissions?**

**What would it take to make that transformation?**

Approximately 20 minutes in breakout groups.

Use menti or chat or post-its in addition to speaking.

# Questions?



## Contact

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<https://ndep.nv.gov/air/climate-pollution-reduction-grant>

Email: [ndep.cprg@ndep.nv.gov](mailto:ndep.cprg@ndep.nv.gov)