

Washoe County
COUNTY OPERATIONS
Climate Action Plan
Net Zero Greenhouse Gas Emissions by 2050
Draft



September 2024

This draft plan is part of the larger Washoe County Climate Action Plan, which has the following sections:

- Introduction Letter from Board of County Commissioners Chair Alexis Hill
- Introduction (draft to come)
- Community Climate Action Plan, draft [here](#). Feedback survey [here](#).
- County Operations Climate Action Plan spreadsheet of actions [here](#). Feedback survey [here](#).

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Acknowledgements

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Introduction

Founded in 1861, the Washoe County government consists of [24 departments](#) that provide a range of services to nearly 500,000 residents. These services include administering and enforcing state and local laws and the county code; collecting taxes, assessing property; maintaining, recording and providing public records; conducting elections; issuing licenses; providing parks, libraries, emergency management, human and animal services, public assistance, public health, public safety, and judicial process; wastewater treatment; planning and permitting for development; and more.

Climate change is increasing the cost and disrupting the delivery of these services. Extreme heat, wildfires (and the smoke that chokes our communities), decreasing snowpack, atmospheric rivers, poor air quality and associated public health impacts, droughts, floods and weather-related black outs challenge our region's quality of life, economy and the County's ability to serve our residents (see **Appendix 3** – ALL APPENDIX NUMBERING TO BE FINALIZED) for a detailed discussion of local and regional climate impacts and costs).

In 2022, the County adopted a strategic goal to achieve net zero greenhouse gas emissions by 2050, with an interim 2030 goal of reducing emissions by 45% from 2021 baseline levels. [Greenhouse gas emissions \(GHGs\)](#) are gases that trap heat in the atmosphere. The County's net zero goal aligns with federal government and State of Nevada goals (see **Appendix 4** – regional climate commitments and plans). County leadership included this goal in its Fiscal Year 2024 Strategic Priorities under Goal 2: "Economic Impacts: Support a Thriving Community:" Plan interim steps to Net Zero greenhouse gas emissions by 2050. (See Figure 2 below).

The County has started working toward this goal in two ways. First, by creating a Community-Wide Climate Action Plan to reduce GHG emissions from the following sectors:

- The transportation we use to get around,
- The energy we use to power our lights and appliances in our buildings,
- The energy used to produce drinkable water and process wastewater, and
- The waste we throw in our trash and recycling bins.

Second, the County is leading by example by implementing this County Operations Climate Action Plan (COCAP) to reduce County operations emissions. The County operations roughly 400 different facilities and a fleet of roughly 650 vehicles, which cumulatively produced 23,867 metric tons of [carbon dioxide equivalent gases \(mtCO₂e\)](#) in 2021.

Benefits of Climate Action

Fortunately, we have the tools to reduce these emissions and make both county operations and the community at large more resilient in the face of greater uncertainty and extreme impacts in the future.

Many of these emissions-reduction solutions offer the immediate benefits of improved air quality and lower energy use in the short-term, combined with reduced operations and maintenance expenses over the long-term. However, these savings often require up-front investment that exceeds traditional, business-as-usual equipment replacement. The County is pursuing funding and technical support made available by the Bipartisan Infrastructure Law, the Inflation Reduction Act and other sources to reduce our energy use and emissions across all operations, facilities and fleets. These operational improvements can have many benefits:

- **Public health.** Reducing toxic emissions improves air quality and lowers the rates of asthma, cardiovascular disease and other pollution-related ailments for people in our community.
- **Taxpayer savings.** Lowering the County's energy bills and reducing operations and maintenance costs saves taxpayer dollars.
- **Economic development.** Shifting to energy efficiency upgrades supports the creation of new jobs and a stronger local economy powered by cleaner, more sustainable energy.
- **Equity.** Reducing County emissions brings the above benefits to communities that have been historically overburdened by environmental impacts and underserved by investment.

Achieving the County's Net Zero 2050 goal will also help achieve other County strategic objectives:

- Fiscal Sustainability
- Serving Vulnerable Populations

This plan includes the following:

- Calculation (inventory) of the County's GHG emissions in 2021
- Projections of future GHG emissions
- Emissions reduction strategies and actions in the following categories:
 - Alignment around Net Zero 2050 goal
 - Land-Use
 - Fleets
 - Facilities and Operations
 - Waste
 - Renewable Energy production

All of these efforts support Washoe County's mission to work together regionally to provide and sustain a safe, secure and healthy community.

[Explore Washoe County's mission, vision, guiding principles and strategic objectives here.](#)

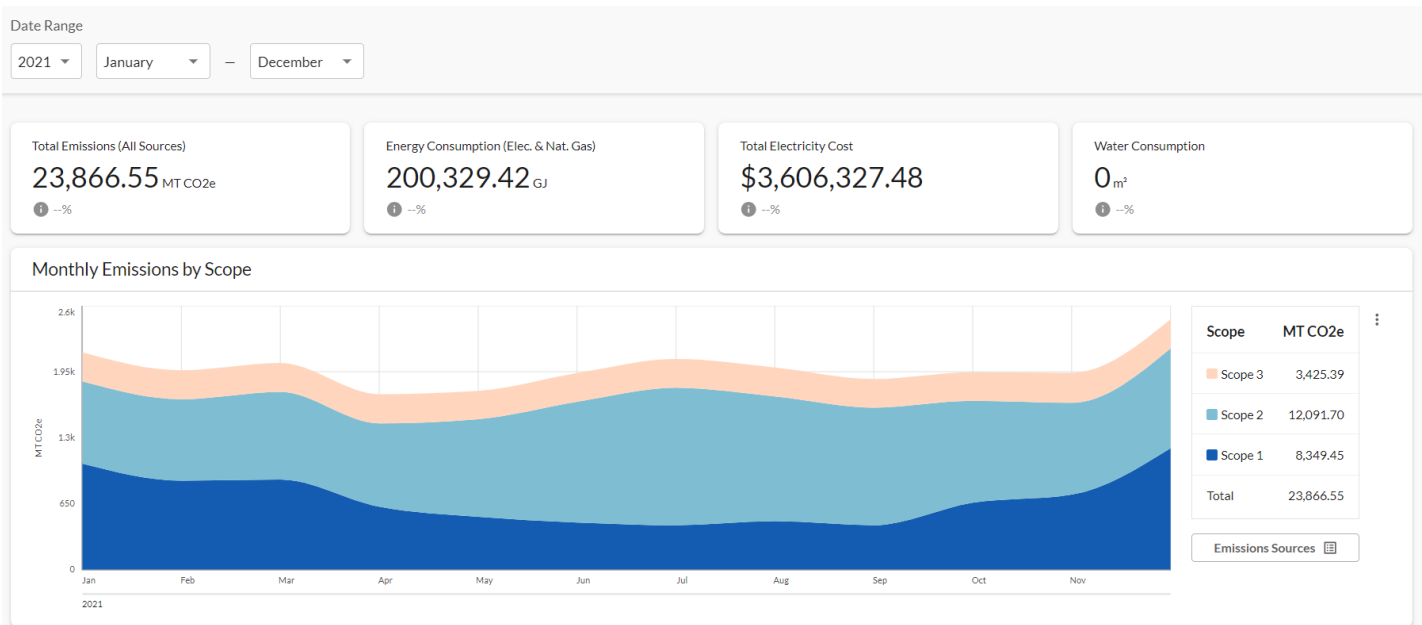


Figure 1: Washoe County emissions (Source Washoe County nZero dashboard)

Although the County has a goal to reduce GHGs to net zero by 2050, we also have an obligation to provide reliable, and sometimes life-saving services to the community. With every decision to decarbonize our facilities and operations, we must also consider the ability to provide essential services. Sometimes this may require us to choose reliable service delivery over energy efficiency. With every decision, we consider the maximum benefit to the people of Washoe County.

Washoe County Operations Greenhouse Gas Emissions Inventory

In 2021, Washoe County contracted Ledger8760 (now [nZero](#)) to track all energy use and emissions from County operations. nZero measures facility energy-use and cost data using data from the County’s electricity and gas meters. Fleet data industry best practices to calculate emissions, All GHG inventory and emissions calculations follow the internationally recognized [GHG Protocol](#). See [Appendix X](#) (still to come) for methodology details.

Washoe County selected 2021 as its baseline year for emissions calculations. Emissions reduction goals, e.g. “45% emissions reduction by 2030,” will be measured against 2021 emissions numbers. In 2021, Washoe County measured 23,866 metric tons (MT) of greenhouse gas (GHG) emissions. 8,349 (35%) of emissions were Scope 1, 12,091 (51%) were Scope 2, and 3,425 (14%) were Scope 3. As Figure 1 demonstrates, the County measures different categories of emissions, called Scopes:

Scope 1 – Direct Emissions

- Stationary Combustion (Natural gas)
- Mobile Combustion (Vehicle fleet)
- Fugitive Emissions (Refrigeration / AC)

The dark blue in Figure 4 depicts all emissions from natural gas boilers and internal combustion engine (ICE)-powered fleet vehicles. Natural gas use is measured by natural gas meter readings using Washoe County’s Energy Manager software. Fleet fuel, mileage and utilization data are tracked using Flagship Fleet Management software.

Table 1: Scope 1 emissions from building heat and fleets

2021 Washoe County Scope 1 Emissions	
Fuel Type	Emissions (MT CO2e)
Natural gas (buildings)	4,054
Fleet gasoline	2,848
Fleet diesel	1,403

The County has not yet inventoried emissions from fugitive refrigerants. The County will develop an inventory protocol for these emissions in FY25 and develop a reduction plan by 2028.

Scope 2 – Indirect Emissions

- Purchased electricity, heat, steam, or cooling

The light blue in Figure 4 depicts all electricity sold by Nevada Energy (NVE) to power the County’s buildings, streetlights and other facilities. These data are based on metered electricity use as tracked by Energy Master software and confirmed by nZero.

Although the County manages more than 400 buildings and facilities, more than 90% of the County’s Scope 2 emissions come from 25 buildings and facilities:

Table 2: Scope 1 & 2 emissions for Washoe County facilities

2021 Washoe County Facilities Scope 1 & 2 Greenhouse Gas Emissions (GHGs) Metric Tons (MT)					
Site Name	Electricity Emissions (MT)	Natural Gas Emissions (MT)	Total Emissions (MT)	Percent of Emissions	Cumulative Total Emissions
911 Parr - Consolidated Detention Facility	1,969.96	1,393.98	3,363.94	21.36%	21.4%
STMWRF unit @Mira Loma	2,944.72	0.14	2,944.86	18.70%	40.1%
Courts Bldg North Tower	1,128.65	250.97	1,379.62	8.76%	48.8%
Admin Complex (9th St. Bldg A-D)	731.35	267.15	998.50	6.34%	55.2%
Jan Evans Juvenile Center	423.90	386.92	810.81	5.15%	60.3%
Liberty Center	283.56	199.36	482.93	3.07%	63.4%
Courts Main - Old Jail - 75 Court	298.40	113.44	411.84	2.62%	66.0%

Fieldcreek Pump Station	384.65	0.00	384.65	2.44%	68.4%
REOC Emergency Ops Ctr	347.71	31.69	379.40	2.41%	70.8%
Our Place	177.85	168.81	346.66	2.20%	73.0%
Longley Complex	155.73	190.12	345.85	2.20%	75.2%
Medical Examiner (9th St. Bldg F)	227.84	60.38	288.22	1.83%	77.1%
Regional Animal Services - RAS	0.04	268.01	268.05	1.70%	78.8%
Downtown Reno Library	177.76	80.91	258.67	1.64%	80.4%
Rancho San Rafael Regional Park	122.66	102.20	224.86	1.43%	81.8%
Cold Springs WRF	220.48	0.00	220.48	1.40%	83.2%
Street Lights	205.72	0.00	205.72	1.31%	84.6%
Regional Public Safety Training Center	182.87	8.94	191.81	1.22%	85.8%
Reno Senior Center (9th St. Bldg E)	125.38	65.39	190.77	1.21%	87.0%
Sierra View Library	114.93	0.00	114.93	0.73%	87.7%
Tech Services - Edison	81.48	17.64	99.12	0.63%	88.3%
North Valleys Regional Park	73.22	21.92	95.14	0.60%	88.9%
Sparks Justice Court	66.32	25.18	91.50	0.58%	89.5%
Spanish Springs Library	63.95	20.49	84.44	0.54%	90.1%
All other facilities	1,185.5	379.9	1,565.4	9.9%	9.9%
Total emissions	11,694.6	4,053.5	15,748.2		

Methodology note: For NVE-supplied energy, the annual average emission factor for 2021 is: 811.17 lbs/MWh (or 0.000368 MT CO₂e/kWh). However, we are using a slightly lower emission factor that considers the time-of-use for most County operations (mainly during the day, when more solar production contributes to the grid) and the grid's carbon intensity for 2021. The emissions factor used for this inventory is: 803.74 lbs CO₂e/MWh (or 0.000365 MT CO₂e/kWh).

Scope 3 – Indirect Emissions

- Travel
- Commuting

- Purchased goods
- Waste

The Scope 3 emissions depicted in peach in Figure 4 are incomplete. Scope 3 emissions are varied and diverse, and Washoe County has only recently begun to account for them. They include emissions associated with everything the County buys and throws away, as well as service contracts and employee business travel and commuting expenses. The full extent of Scope 3 emissions is still to be determined. To date, the County has addressed Scope 3 emissions in the following ways:

- Washoe County conducted an **employee commuting** survey during the summer of 2023. With 1,040 responses out of ~3,000 employees, here are some notable results:
 - The average employee commute is 23 miles.
 - Commuting employees produced 2.8 mtCO₂e, for a total of 8,400 mtCO₂e for 2023.
 - 10.3% of employees commuted using alternative methods (bicycles, carpooling, public transit).

Scope 3 reduction strategies are discussed in our Facility Decarbonization Plan below.

County Operations Climate Action Plan

In pursuit of Washoe County’s Vision to be the social, economic and policy leadership force in Nevada and the western United States, the County will lead our region by example, reducing operational Greenhouse Gas (GHG) emissions by 45% from 2021 levels by 2030 across all sectors – buildings and other facilities, fleets, waste, lands and other operations:

Toward Net Zero: 5 Strategies and 47 Actions to Reduce Emissions

Strategy 1: County Adopts Net Zero Goals Across Departments

Meeting the County’s goal of net zero GHG emissions by 2050 will take coordinated effort among all County departments and staff. The following actions will integrate the County’s net zero goal into the regular work and planning for all departments:

1. Adopt County Operations Climate Action Plan*
 - The coordination between Washoe County’s Sustainability Program and all other departments captures emissions-reductions actions and best practices to guide our work toward net zero emissions. This draft plan must be adopted by the Board of County Commissioners to be a formal County plan. Expected date of Board consideration is early 2025.
2. Adopt Community Wide Climate Action Plan*
 - Informed by a community-wide greenhouse gas inventory of all emissions in Washoe County (based on 2021 levels), the Community Wide Climate Action Plan guides emissions-reductions strategies and actions across all sectors: Land Use, Buildings, Transportation and Renewable Energy. This Plan will also be considered for adoptions the Board of County Commissioners, expected in early 2025
3. Measure Community GHG emissions every 5 years*

- Regular measurement and monitoring will make sure our community is on track for climate resilience.

Adopt a Facility Decarbonization Plan (not numbered because it's included below in Facility Decarbonization Plan).

- Sustainability, Facilities, Operations and related departments are coordinating to develop formalized best practices into building analysis and maintenance to improve the energy efficiency of all County buildings and facilities.
5. Annual review process and metrics for all measures in all departments
 - Climate Action Planning is a process, not a product. The County will incorporate energy efficiency and sustainability reviews into all departmental, building and operational planning processes to continually evolve better practices toward the County's net zero goal.
 6. Adopt Sustainable Procurement Policy
 - The County has a responsibility for the indirect emissions we create with everything we buy, every service we contract and everything we throw away. The County will draft and adopt guidelines to reduce the emissions from these purchases.
 7. Develop Financial Strategy for Implementation
 - The many efficiencies and cost savings available through energy efficiency best practices often require up-front capital investment. The County is researching the various financing strategies available to reach our net zero goals while ensuring our financial sustainability as well. Read more here [\[anchor link to Financial section below\]](#).

Inform, Educate and Engage Staff Around Net Zero Goals

It's one thing to have policies and goals articulated in planning documents and procedural guidance for departments, but it's individual staff members pursuing these goals in their daily activities that will help the County meet our goals. Trainings, webinars, lunch 'n' learns and other activities can inform employees and engage them to make a difference.

8. Launch Energy-Efficiency Education campaign for all staff
 - The County will enlist, educate, celebrate and reward employees to help us reduce our energy use and GHG emissions. Simple, conscious acts like powering down work stations at the end of the day can reduce building energy use by 10%. In Fiscal Year 2025, the County will launch Energy Efficiency training for all employees.
9. Activate sector teams (gardens, recycling, bikes, zero waste, Meatless Mondays)
 - Washoe County's Green Team is perfectly suited to engage employees to self-organize to advance these and other sustainability projects. Investing in their success will advance emissions reductions across all departments.
10. Offer Webinars & Events on sustainability topics.

- Formal and informal trainings and presentations will offer opportunities for all staff to learn and take part in various sustainability topics and projects
11. Launch public dashboard to track County Sustainability Goals and progress
 - Publicly accessible dashboards allow both County leaders and members of the public to track the County’s progress toward the various goals listed in these actions and elsewhere.
 12. Launch sustainability communications plans to advance Net Zero and Sustainability Goals for County. This will overlap with Community CAP Communications Plan*
 - Conversations and feedback sessions with both County employees and community members identified education and awareness as needs to help people make better choices to reduce emissions in their departments and personal lives.

Sidebar: The Washoe County Green Team

Washoe County's Green Team is a virtual department made up of volunteer County employees from various departments interested in and committed to contributing to make the County operations more sustainable. All employees are welcome. Our monthly virtual meetings include interesting discussions about various sustainability topics. Projects the Green Team pursues include gardens at County facilities, recycling projects, installing water stations, encouraging more bicycle commuting among employees, Meatless Mondays, volunteering in the community, and topical Lunch 'n' Learns about favorite topics.

Strategy 2: Reduce Emissions from Land-Use

How we use our lands can contribute emissions or reduce them. The County has opportunities to improve carbon sequestration and ecological health on all County-managed lands (regional parks and open space, facilities grounds). To help community-wide emissions reductions, the County can implement GHG-reduction measures in Envision Washoe 2040. The County will maximize emissions-reductions from land use in the following ways:

Implement Envision Washoe 2040 (EW2040) elements that maximize GHG reductions

13. Hire Planning Manager to implement EW2040
 - Envision Washoe 2040 contains numerous recommendations and requirements regarding land use and development in our community. Achieving these recommendations will be most successful when there is a dedicated staff person to focus on implementing them.
14. Create dashboard to track implementation of EW2040
 - A dashboard will help both County employees and members of the public understand and track the County’s progress in implementing our master plan.

Launch a Community Forestry Program

Washoe County is home to [the fastest-warming metropolitan area in the country](#), and our [air quality can create dangerous public health outcomes](#) for our community. These impacts are too-often concentrated in low-income and disadvantaged communities. In the County’s outreach and feedback sessions in the development of our Climate Action Plan, planting trees stood out as the single-most popular solution to

improve these outcomes. Washoe County is launching a Community Forestry Program to plant more trees and to improve the management of our community forests.

15. Hire Forester

- Washoe County received grant funding from the U.S. Department of Agriculture and the Nevada Division of Forestry to hire a Community Forester to build the County’s Community Forestry Program and to work with County departments and community partners to accomplish the actions below.

16. Update GIS Inventory and Tree Canopy layers*

- This action will update the County’s GIS inventory of trees we manage and improve our understanding of the health and actions needed to keep these trees healthy.

17. Adopt Forest Management Plan*

- The 2024 Davis Fire was a tragic reminder that our forests need better management to reduce the threats they face from future fires and pests. Our Community Forester will lead the development of a Forest Management Plan to help our forested parks at Galena, Davis Creek and Bowers Mansion receive the management and restoration attention they need.

18. Plant trees at County Lands, Facilities, Community-Wide*

Update Natural Resource/Lands Conservation Plan

19. The County will coordinate with the Truckee Meadows Regional Planning agency and other stakeholders to update [the Regional Open Space & Natural Resource Management Plan](#) to maximize ecological health, reduce pesticide and water use, reduce emissions on County’s managed lands.

Sequester carbon through land-use

Healthy plant communities and soils provide numerous services, such as sequestering carbon, absorbing heavy rainfalls to prevent floods, and providing food and habitat for native wildlife, and beauty for people.

20. ID lands and develop plans for restoration and other needed actions.

- The County will review all County-managed lands for ecological health and carbon sequestration potential.

Strategy 3: Reduce Emissions from Fleets

Washoe County has more than 700 vehicles in our fleet, which contributed 4,251 mtCO₂e of GHGs in 2021. As part of our commitment to net-zero GHG emissions by 2050, Washoe County is pursuing the transition of all appropriate internal combustion engine (ICE) fleet vehicles to electric and other zero-emission vehicles (ZEVs). We have identified more than 200 light-duty vehicles that would be well-suited for the transition. Although all the data are not in (because EVs have not been in municipal service long enough to generate full lifetime operations costs), our estimates and [external research demonstrate](#) that transitioning from Internal Combustion Engine (ICE) vehicles will both reduce GHG emissions and lower long-term costs for the County.

As with other energy-efficiency upgrades, the higher up-front costs of EVs challenge the County's budgeting and planning processes. This transition is also dependent on our ability to pay for and install charging and fueling infrastructure needed for low- and zero-emissions vehicles. And this transition has been impacted by global supply chain issues, the availability of such vehicles, and the allocation of such vehicles by dealerships and the Nevada State Motor Pool to Washoe County.

The County is interested in considering other low- and zero-emission fuels like hydrogen and renewable diesel. However, such fuels are not currently available at the scale needed to supply relevant Washoe County vehicles. To consider adoptions of any alternatives to our current assets, we would need to confirm they would be reliable and scalable in addition to promising lower emissions.

Currently, Washoe County is not aware of any reliable, scalable, affordable or available low- or zero-emissions alternatives to our utility trucks, dump trucks, animal service trucks, graders and other heavy-duty vehicles. For this reason, we currently have no plans to transition away from these ICE vehicles until alternatives are available. We welcome practical opportunities to reduce fleet emissions. Washoe County will reduce emissions from our fleets in the following ways:

21. Incorporate net-zero goals into Fleet Sustainability Plan ([Link to Plan](#))
22. Join Clean Cities & Communities Coalition*
 - The County will join other regional jurisdictions, agencies and business in the U.S. Department of Energy's voluntary, locally based partnership to advance affordable, efficient, and clean transportation fuels and technologies.

Strategy 4: Reduce Emissions from Facilities & Operations

Washoe County's buildings and other facilities (including wastewater treatment facilities, streetlights and other installations) contributed 16,198 mtCO₂e of GHGs in 2021. Washoe County is committed to reducing these emissions by 45% by 2030. The County will reduce our emissions with the following strategies:

23. Facility Decarbonization Plan

For all County buildings and facilities, Facilities, Operations, Finance, Budget and Sustainability staff will identify energy-efficiency strategies when planning for all energy-related improvements, remodels and repairs. We will incorporate energy-efficiency and emissions reductions evaluation criteria into our Capital Improvement Planning, asset risk-assessment processes. These planning processes will focus on the following elements of buildings and facilities:

- **Envelope.** When remodeling buildings, we will emphasize passive conservation systems to increase the insulative values of walls, windows, roofs and other aspects of building envelopes. Efficiency improvements: 15-20%
- **Energy Management Systems.** Strategic deployment of BAS, MTFS, programmable thermostats, internal light sensors, and other energy management systems can reduce energy consumption in buildings by up to 30%.

- **Energy-efficient devices.** Replacing aging appliances (air conditioners, chillers, boilers, hot water heaters, refrigerators, etc. with high-efficiency alternatives can reduce energy consumption and emissions for those services by up to 30%. Converting all lights in buildings to LEDs can reduce building energy use and emissions by 15%.
- **Space utilization.** The more efficiently the County uses the square footage of our buildings, the less energy will be required per-employee and per-service. The County’s Future Of Work program is working to maximize the physical space used by employees through a variety of strategies, including flexible and hybrid work schedules, which also reduce emissions by reducing vehicle miles traveled by employees. Facilities and Operations staff are working to design power, heat and cooling work spaces to reduce energy use to only those parts of buildings being used by present staff.

The County will also pursue facility emissions reductions with these additional strategies:

24. Adopt sustainability indicators/metrics into Capital Improvement Plan (CIP) review checklist to make sustainability and emissions-reductions a quantifiable metric when evaluating and ranking capital improvements (all capital projects costing \$100,000 or more).
25. Incorporate energy efficiency and emissions-reduction metrics in Facilities’ project management software
 - This will allow the County’s Facilities project managers to track the costs and benefits of energy efficiency when planning upgrades to facilities.
26. Improve Public dashboard of County’s energy and emissions data for public review.
 - Currently, the County provides [this public dashboard](#) of emissions and energy use. However, more detailed information is possible. This action will improve the County’s transparency in how we’re working to reduce emissions for the community.
27. Adopt Building Performance Standards* to guide emissions reductions through standard building management.
 - The key to reducing emissions in our current building stock is a systematic approach to evaluating buildings’ envelopes, heating, cooling and lighting systems. Washoe County will work with partner jurisdictions and agencies to develop standards to improve building efficiency over time.
28. Switch all County-owned streetlights to LEDs.
 - Washoe County will work with NV Energy for a rapid switchout of energy-intensive halide bulbs to more efficient LEDs.
29. Replace fossil fuels-powered heating with electric.
 - Wherever possible, the County will replace outdated boilers and furnaces with more energy efficient models.
30. Adopt Net Zero building standards for new government buildings.
 - As the County plans new building construction, we will incorporate the energy efficiency standards that advance our net zero goals.
31. Adopt Climate Action Plan-aligned Building Energy Codes*

- Applying energy efficiency standards to all building codes will improve the energy efficiency of all buildings constructed for decades to come.
32. Conduct Energy Efficiency Audit of key buildings and facilities.
- The County will evaluate all our buildings and facilities, starting with the biggest emitters in Table 2 above, to prioritize the most effective emissions-reducing upgrades.
33. Adopt Fugitive Refrigerant Emissions Reduction Plan
- In general, [fluorinated gases](#) are the most potent and longest lasting type of greenhouse gases emitted by human activities. The County will develop best practices to stop refrigerant leaks and replace old refrigerants with less damaging refrigerants.
34. Adopt Future of Work (FOW) policies to provide hybrid schedules and more efficient use of offices for staff.
- Allowing hybrid schedules for employees and more efficient use of office space can save both energy used in buildings, and emissions generated by employee commutes.
35. Adjust set points for all buildings to reduce energy use during off-hours.
- The County’s Facilities team will evaluate and adjust the minimum systems necessary to heat, cool and illuminate

Reduce Water Waste

36. Develop & Adopt Water Conservation Plan

In the driest state in the Union, water availability and quality should not be taken for granted. The County will evaluate the water used in all our facilities and operations, and develop a plan to use water in ways that help ensure its continued availability in the region.

Reduce Scope 3 Emissions: Commuting, Travel, Waste, Goods & Services

37. Adopt Scope 3 Reduction Plan

- The County will inventory the emissions that come from employee travel, employee commutes, purchased goods and services, and waste, then develop a plan to reduce those emissions to achieve our net zero emissions goal.

38. Negotiate Waste Management Franchise Agreement to Maximize Climate Goals

- Roughly 10% of GHGs in our community come from waste [\[link\]](#). When the County’s Franchise Agreement with Waste Management ends in 2030, we will seek a new contract with the best provider to minimize unnecessary emissions from the County’s and community’s waste stream. This may include incentives to divert more organic waste to compost programs and improve cardboard, glass, aluminum and plastic recycling rates.

39. Pilot Green- and Food-Waste Compost Pilots*

- Reducing GHGs and improving our region’s climate resiliency will require soil to expand local agricultural production and to support our expanding tree canopies. Diverting green- and food-waste from the landfill to effective composting programs not only reduces the methane emissions from our landfill; it also produces the life-giving humus that supports these efforts. The County will support local pilot composting efforts to develop this supply chain to improve our local soils.

40. Improve facility recycling programs

- The County will improve coordinated recycling efforts at our facilities to improve overall recycling rates.

41. Improve battery recycling programs

- As home to Nevada's [Tech Hub](#) and [Lithium Loop](#), the County has a role to play to the emerging circular battery economy. The County can play an important part in these efforts by working with our internal facilities teams and regional partners to improve battery recycling rates as part of this regional effort.

Strategy 5: Expand Renewable Energy Generation on County Lands & Facilities

The County will augment our efforts to eliminate GHG emissions by installing renewable energy generation systems (solar, geothermal and wind) on appropriate County facilities and lands.

The County will pursue financial support for these upgrades using Inflation Reduction Act programs such as the Production Tax Credit (PTC-\$45) and the EPA Greenhouse Gas Reduction Act's Solar For All program can provide financial support to help the County with the up-front costs to install these systems.

42. Deploy anemometers and analyze data for possible wind generation at facilities

- Although wind in Washoe County is not as constant as it is in the Great Plains, some places in the County are notoriously windy and may offer excellent opportunities to generate renewable energy. Deploying test anemometers at various sites and collecting a year's worth of data will allow the County to evaluate whether, how, and where it's worth investing to deploy small wind turbines to generate electricity for specific facilities.

43. Expand wind generation on County Lands and Facilities

- This action will be determined by analysis of the data gathered from the action above.

44. Expand solar arrays on County Lands and Facilities

- With more than 300 days of sunshine each year and federal funding available to support the deployment of solar energy-generating systems, the County will maximize our opportunities to deploy photovoltaic systems that reduce emissions while providing cost-effective energy savings.

45. Expand Geothermal Systems on County Lands and Facilities

- Nevada has been ranked as the best state for geothermal energy development. The County will explore opportunities to deploy both deep (hot) and shallow (cooler) geothermal systems to provide energy systems for County facilities.

46. Identify key facilities as climate-resilient hubs

- In cooperation with Washoe County's Emergency Management Department, Facilities team, and the community, we will evaluate opportunities to provide reliable power and refuge during extreme weather events and other emergencies.

47. Deploy Battery Energy Storage Systems

- By incorporating Battery Energy Storage Systems (BESS) to key facilities, we can provide renewably sourced energy at night after the sun goes down, and during power outages. During times of energy emergencies such as extreme storms, heat or cold events, these community-based microgrids can improve community resilience and survival.

Implementation: How we will get there

With so many actions enumerated in this plan, the County will prioritize them in the following ways:

Reduce Fossil Fuels First

Reducing the County's use of Scope 1 fuels (natural gas in buildings and fleet internal-combustion engines) will reduce emissions faster than reducing electricity use. As of March, 2024, 42.3% of grid-supplied electricity (Scope 2) from NV Energy [came from renewable sources](#) (a share that is projected to increase as NV Energy pursues net zero emissions as mandated by the Nevada Legislature (see [Appendix 4](#)). The County can maximize emissions reductions by prioritizing projects that reduce the use of natural gas and other fossil fuels. The closer NV Energy gets to their 2050 goal of net-zero carbon emissions from energy production, the more the County's investments in electricity efficiency will result in diminishing emissions reductions.

In many cases, the County will switch from appliances and vehicles powered by fossil fuels to those powered by electricity or other carbon-free power sources. Examples include switching from natural gas boilers to electric heat pumps, and from Internal-Combustion Engine (ICE) vehicles to low- and zero-emissions vehicles. Regarding refrigerants for chillers, air-conditioning units and other HVAC systems, the County is researching reliable alternatives with lower Global Warming Potential (GWP) and will replace our current refrigerants with these alternatives whenever possible and practicable.

Energy Efficiency and Conservation

Low-tech, passive energy retrofits, such as better-insulated walls, roofs and windows reduce energy demand, which in turn requires smaller, less-expensive heating and cooling systems. Passive systems are often more cost-effective than high-tech solutions like heat pumps. They also increase comfort levels for people in the buildings and [can save lives when the power goes out during extreme heat and cold events](#) (See also [Appendix 3](#)).

Significant reductions in building energy demand are also possible by installing energy-efficient technologies such as Energy Management Systems (EMS), Building Automation Systems (BAS), Maximum Power Transfer Solutions (MPTS), high-efficiency air-source heat pumps and water heaters, and Light-Emitting Diode (LED) lights.

Demand-reduction and conservation strategies also apply to vehicle use and procurement: avoiding vehicle miles traveled is far more resource- and energy-efficient than driving a zero-emissions vehicle. Similarly, finding ways to do without – not purchasing a piece of equipment – is cleaner and more efficient than purchasing a sustainably made or energy-efficient one.

Maximize Impact

When evaluating what strategies to pursue first, the County will pursue whenever possible those interventions that deliver maximum emissions reductions as measurable by tangible metrics.

Additionally, strategies that help the County mitigate carbon emissions, adapt to our changing climate and become more resilient in the face of uncertain future conditions will – all else being equal – be preferred over those strategies that provide only one benefit. (See the Climate Action Plan - Introduction for a detailed discussion of adaptation, mitigation and resilience.)

Equity

Many of the impacts of pollution and climate change are borne first and worst by people who contributed least to the problems, and who can least afford to adapt to the impact. Often, these are low-income people and communities of color, defined by the Environmental Protection Agency as [Low-Income Disadvantaged Communities \(LIDACs\)](#), and by the Biden Administration as [Justice40 Communities](#). Because many Washoe County facilities and operations are in these frontline communities, the County will prioritize emissions-reductions efforts for facilities and fleets to provide immediate and direct benefits to people living in these communities whenever possible. Learn more about the County's commitment to Equity here [Link to come].

Financial Strategies

Washoe County intends to undertake financial planning to make progress toward the County's net zero goals by leveraging available financing opportunities that align with the County's budget, capacity and commitment to service.

Some energy-efficiency strategies clearly demonstrate long-term value in energy savings and reduced operations and maintenance costs. Others have not been in service anywhere long enough to provide long-term cost-benefit data. Washoe County is developing lifecycle cost and return-on-investment values for many of the strategies discussed in this plan, where data are available. The biggest barrier to implementing many of these strategies is the up-front capital investment required to produce long-term gains. The County is willing to consider investment strategies that demonstrably improve public health, environmental and financial benefits over polluting fossil fuel-powered technologies, even when up-front expenses are higher than lowest-cost, more polluting alternatives.

Luckily, there are numerous financial incentives that place these better technologies within reach. Washoe County intends to explore the potential of various federal, state, and third-party funds and incentives, such as grants, rebates and tax credits, available utility rebates and programs, revolving loans, and other affordable financing options. When pursuing renewable energy investments, the County will seek to take maximum advantage of investment and production direct-pay credits, as well as off-take agreements, net-metering and other arrangements to maximize triple bottom-line returns for the people of Washoe County.

Where possible, the County will strive to minimize the time, cost, and effort required for implementation. Project configurations will consider factors such as ease of contractor identification and engagement for both initial installation and ongoing O&M, ease of financing, and low-cost or low-burden measurement, evaluation, and reporting.

Numerous grants and other financial incentives coming from the Inflation Reduction Act (IRA) and other sources are helping the County offset these initial up-front expenses. The County has applied for the following grants:

- **Community Forestry Grant.** \$275,000 from the US Department of Agriculture (pass through the Nevada Division of Forestry) to launch a Community Forestry Program. Status: Approved.

- **Energy Efficiency Conservation Block Grant.** \$78,680 from the Department of Energy for various facilities energy efficiency upgrades. Status: Approved.

Other IRA incentives are available to help the County recover up-front costs for the acquisition and installation of various technologies:

- **Energy Efficient Commercial Buildings (179D).** For projects that improve building energy efficiency by at least 25%
- **Qualified Commercial Clean Vehicles - §45W.** For the purchase of EVs or other low- and zero-emission vehicles.
- **Alternative Fuel Refueling Property - §30C.** For the purchase of alternative fueling infrastructure.
- **Production Tax Credit (PTC) - §45.** For the purchase of photovoltaic solar systems and other renewable energy-generating systems.

These grants and programs, as well as the beneficial return on investment from many energy-saving technologies and strategies, are encouraging the County to shift from previous lowest-cost construction and procurement policies and practices wherever possible. The County is incorporating these strategies and efficiencies to achieve our net-zero emissions goals and ensure the long-term fiscal sustainability of the County.

Teamwork

Each of Washoe County’s 3,000 employees plays a role in shaping the future of our community’s health, economy and quality of life. This plan is an invitation to each of us to find our role in helping the County achieve a healthier, safer future for all of our kids, families, friends and neighbors.

This plan is the result of significant input from Washoe County’s Facilities, Operations, Capital Improvement Project, Budget, Finance, Fleets, Executive Team, and the Green Team. To reach the County’s net zero goal, all employees will need to do their part by supporting efforts and providing feedback and recommendations for improvement. This emissions reduction plan will be most successful if we enlist, empower, and incentivize all staff to contribute to its success.

Although Washoe County cannot address climate change by itself, government policies and practices can dramatically reduce GHG emissions from a range of sources and lead our region toward strategies to mitigate emissions and adapt to the impacts of climate change. In doing so, we can help our communities become more resilient in the face of an unknown future, while reaping the benefits of healthier air, savings on energy costs, improved government services, and quality of life for everyone who lives, works and plays in Washoe County.