



CLARK COUNTY, NEVADA

COMMUNITY SUSTAINABILITY & CLIMATE ACTION PLAN

APRIL 2023



CONTENTS

Acknowledgments	iv
Going <i>All-In</i>	1
Ensuring Equity	3
Climate Change in Clark County	6
Developing the Plan	13
Structure of the Plan	21
Navigating This Plan	22
Clean & Reliable Energy	23
Connected & Equitable Mobility	27
Diverse & Circular Economy	31
Resilient & Healthy Community	35
Smart Buildings & Development	39
Sustainable Water Systems	43
Going <i>All-In</i> : Implementing The Plan	47
<i>All-In</i> Regional Collaboration	49
County-Wide Climate Education Program	50
Energy “Program Stacking”	51
Glossary	55
Endnotes	57



This plan is a capstone to a process that was both fast-paced and thorough, featuring one of the most inclusive engagement efforts ever realized in our region.

150+

ORGANIZATIONS
PARTICIPATED

6,000+

SURVEY RESPONSES
FROM OUR COMMUNITY

Dear Fellow County Residents,

Major changes in Clark County's climate require a responsible and rapid response. Our region is particularly vulnerable to a changing climate, with projections showing ten times more days with temperatures above 115°F by the end of the century and extreme drought classifications becoming commonplace. It will have a significant impact on our residents, visitors, infrastructure, and economy. We are proud to respond to this critical risk with the ***All-In Clark County Community Sustainability and Climate Action Plan***. This plan is a capstone to a process that was both fast-paced and thorough, featuring one of the most inclusive engagement efforts ever realized in our region.

The *All-In Community Plan* is the continuation of our commitment to reduce our region's contribution to climate change (i.e., greenhouse gas emissions, or GHGs) and prepare for its impacts. In September 2019, the Clark County Board of Commissioners resolved to undertake a serious county-wide planning effort around climate and sustainability. The following month, the Board adopted a resolution to join the County Climate Coalition, "committing to the goals of the Paris Agreement to combat climate change and promote environmental sustainability." The *All-In Clark County Initiative* was launched shortly thereafter.

Evaluating County operations was a necessary first step for the County to lead in sustainability, resilience, and climate action. The Board approved the [*All-In Clark County Sustainability and Climate Action Plan for County Operations*](#) in early 2021. While the County Operations Plan was being finalized, the County had already begun analyzing data, evaluating the science, building the relationships, and developing the models that would serve as the foundation of a community-wide effort.

The *All-In Community Plan* is built on the results of our [*Climate Vulnerability Assessment*](#) and [*Regional Community Greenhouse Gas Inventory*](#). Since reducing emissions must be a global commitment, we ensured that our plan aligns with the Nevada Climate Initiative's GHG reduction targets, as well as national and international goals. It uplifts and supports regional plans from partners like the Regional Transportation Commission and Southern Nevada Water Authority. The plan also benefited from the community-based expertise of more than 150 organizations, including all six of Clark County's municipalities.

Community members contributed 6,000+ survey responses and provided input at dozens of events across the county and online. Many shared their stories, their concerns, their questions, and their expectations with us as we developed the *All-In Community Plan*, input that will guide implementation. Clark County, the Board of Commissioners, and our strategic partners are committed to executing this plan quickly and equitably. **With our shared future in mind, we hope each of you will join us in supporting the plan and taking action in your own lives.**

Sincerely,

James B. Gibson, Chairman
Clark County Board of County Commissioners



ACKNOWLEDGMENTS

This *All-In Community Plan* would not have been possible without the time, effort, and dedication of County leadership and staff, the Sustainability and Climate Advisory Group, outreach and engagement partners, and every resident and organization that provided feedback. The work of contributors to the *All-In Regional Greenhouse Gas Inventory*, *Climate Vulnerability Assessment*, and County Operations Plan also shaped the Community Plan.

The Department of Environment and Sustainability would like to thank the following individuals for their contributions to the development of this plan.

BOARD OF COUNTY COMMISSIONERS

James Gibson (Chairman)
Justin Jones (Vice Chairman)
Marilyn Kirkpatrick
Michael Naft
Ross Millier
William McCurdy II
Tick Segerblom

EXECUTIVE MANAGEMENT

Kevin Schiller, County Manager
Randall J. Tarr, Deputy County Manager
Jessica Colvin, Chief Financial Officer
Jennifer Cooper, Chief Communications and Strategy Officer

DEPARTMENT OF ENVIRONMENT AND SUSTAINABILITY

Marci Henson, Director
Jodi Bechtel, Deputy Director
Rina Taviv, Planning Manager for Air Quality and Climate
Rebecca Choi, Senior Planner
Sam Baker, Sustainability Program Administrator
Kevin MacDonald, Public Information Administrator
Ariel Choinard, Urban Heat Fellow
Nicole Wargo, Clean Cities Fellow
Olivia Burns, Employee Education and Engagement Fellow

COUNTY DEPARTMENTS

Aviation

Brad Tomm, Sustainability Manager

Building and Fire Prevention

James Gerren, Director

Comprehensive Planning

Nancy Amundsen, Director

Community and Economic Development

Shani Coleman, Director

Emergency Management

Misty Richardson, Assistant Emergency Manager

Intergovernmental Relations

Joanna Jacob, Government Affairs Manager

Parks and Recreation

Daniel Hernandez, Director

Social Services

Kristin Cooper, Assistant Director

MUNICIPALITIES

Boulder City

Claudia Bridges, Councilwoman
Taylour Tedder, City Manager
Michael Mays, Director of Community Development
Joseph Stubit, Utilities Director
Jim Keane, Acting Director of Public Works

City of Henderson

Debra March, Mayor
Richard A. Derrick, City Manager/CEO
Robert C. Herr, Chief Infrastructure Officer/
Assistant City Manager
Ed McGuire, Director of Public Works
Lisa Corrado, Director of Community Development
and Services
Priscila Howell, Director of Utility Services
Kyle Okamura, Deputy Director of Engineering
and Administrative Services - Utilities
Timothy Buchanan, Administrative Services Officer
Andrew Powell, Long Range Planning Manager
Edward Dichter, Assistant Director of Community
Development and Services
Lance Olson, Assistant Director of Public Works
Annamarie Smith, Principal Planner

City of Las Vegas

Seth Floyd, Director of Community Development
Bill Arent, Deputy Director of Economic
and Urban Development
Fred Solis, Planning Manager
Marco Velotta, Planning Project Manager
Mike Howe, Planning Manager
Joey Paskey, Transportation Manager
Rachel Lewison, Planner I

City of Mesquite

Martine Green, Deputy City Manager
Richard Secrist, Development Services Director
Dan Catron, Senior Planner
Jeff Schafer, Building Official

City of North Las Vegas

Alfredo Melesio, Assistant City Manager
Dale Daffern, Director of Public Works
Marc Jordan, Director of Land Development
and Community Services

ENGAGEMENT TEAM

Carlos Reynoso
David Stancil
Hieu Le
Isa Flores
Joe Berg
Jojami Tyler
Justin Mobley
Kaitlin Mote
Olivia Burns
Romelia Jackson
Shineka Foy-Olivas

CONSULTANT



SUSTAINABILITY AND CLIMATE ADVISORY GROUP

Name	Organization
Aaron Krolkowski	United Way of Southern Nevada
Aaron Leifheit	Get Outdoors Nevada
Amanda Moss	Southern Nevada Homebuilders Association
Angie Dykema	Southwest Energy Efficiency Project (SWEET)
Annamarie Smith	City of Henderson
Audrey Peral	Make the Road
Brad Tomm	Clark County Department of Aviation
Brenda Rodriguez	Battle Born Progress
Cayenne Engel	Nevada Division of Forestry
Chris Naylor	Nevada Governor's Office of Energy
Christopher Lynch	University of Nevada
Clifford Banuelos	Inter-Tribal Council of Nevada
Craig Galati	Las Vegas Chamber of Commerce
Dalisa Steward	Urban Chamber
Dan Catron	City of Mesquite
Daniel Hernandez	Clark County Parks and Recreation
Dave Colvin	Las Vegas Paiute Tribe
Dawn Christensen	Nevada Resort Association
Dawn Smith	Independent Living Committee
Deborah Reardon	Regional Transportation Commission of Southern Nevada (RTC)
Derek Kauneckis	Desert Research Institute
Doug Bennett	Las Vegas Valley Water District
Duy Nguyen	One APIA NV
Dwayne McClinton	Southwest Gas
Elsbeth Dimarzio	Sierra Club
Jeff Quinn	Southern Nevada Health District
Jennifer Taylor	Nevada Governor's Office of Energy
Jocelyn Torres	Conservation Lands Foundation
Joe Casola	NOAA
John Solvie	Clark County Water Reclamation District
Johnathan Lytle	Nevada Conservation League
Jollina Simpson	Make it Work Nevada
Jordan Krahenbuhl	Plumbing and Heating Cooling Contractors of Nevada
Joseph Ferreira	Nevada Division of Environmental Protection
Keely Brooks	Southern Nevada Water Authority
Ken Liu	Culinary Union Local 226
Ken Valihora	Republic Services

Name	Organization
Kristen Averyt	Nevada Department of Conservation and Natural Resources
Kristin Cooper	Clark County Department of Social Services
Lauren Boitel	Impact NV
Lisa Witherall	Las Vegas Convention and Visitor's Authority
Lisa Yee	Boys & Girls Club of Southern Nevada
Lorena Rodriguez	Guinn Center
Marco Velotta	City of Las Vegas
Mark Campbell	Clark County School District
Melissa Ramos	American Lung Association
Misty Richardson	Clark County Emergency Management
Nancy Amundsen	Clark County Comprehensive Planning
Noelani Derrikson	Tesla
Paul Selberg	Nevada Conservation League
Quentin Savvoir	Make it Work Nevada
Rae Lathrop	Regional Transportation Commission of Southern Nevada (RTC)
Randall J. Tarr	Clark County Executive Management
Rose McKinney James	Rose McKinney James
Rudy Zamora	CHISPA
Rulon Pete	Las Vegas Indian Center
Sam Palmer	Clark County Building and Fire
Sara Gedo	Clark County Water Reclamation District
Shani Coleman	Clark County Community and Economic Development
Sharon King-Savage	Las Vegas NAACP
Shonna Dooman	Bureau of Land Management
Stacey Montooth	Nevada Indian Commission
Starla Lacy	NV Energy
Steph McAfee	Nevada State Climate Office, Reno
Tamara Collins-Golden	Economic Opportunity Board
Tara Pike	University of Nevada, Las Vegas (UNLV)
Taylor Patterson	Native Voter Alliance of Nevada
Teresa Murphy	Station Resorts/Red Rock Casino
Tim Brown	Desert Research Institute
Todd Myers	Clark County Regional Flood Control District
Vince Saavedra	Southern Nevada Building Trades Unions
Virginia Valentine	Nevada Resort Association

GOING ALL-IN

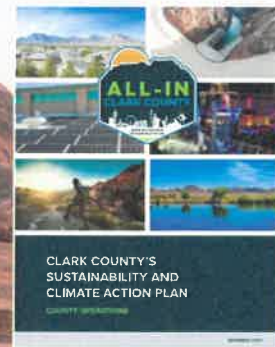


Over the last several years, Southern Nevada has experienced significant changes in its climate. Increases in high heat days, extreme precipitation events, wildfires, high winds, and mega drought conditions are impacting the health, economy, and safety of the region. These impacts coupled with a lingering global pandemic, a high rate of underemployment, and growing housing affordability challenges have only reinforced the need for the Southern Nevada community to come together to enhance overall [sustainability](#).

A sustainable Clark County includes much more than just clean air and water. It also includes affordable housing and clean energy, diverse and sustainable jobs, and a livable climate for the well-being and prosperity of all, today and for future generations.

This is where *All-In Clark County* comes in.

ALL-IN CLARK COUNTY MILESTONES



The *All-In Climate Vulnerability Assessment* process kicks off to assess how resilient Southern Nevada's people, natural resources, economy, and infrastructure are to climate change.

JUNE 2021

On behalf of all Southern Nevada, Clark County funds the update of the 2014 Regional Greenhouse Gas Emissions Inventory.

MARCH 2021

Clark County Board of Commissioners approves the *All-In Sustainability and Climate Action Plan for County Operations*.

FEBRUARY 2021

In an effort to lead by example, Clark County launches the *All-In Initiative* by first addressing County operations.

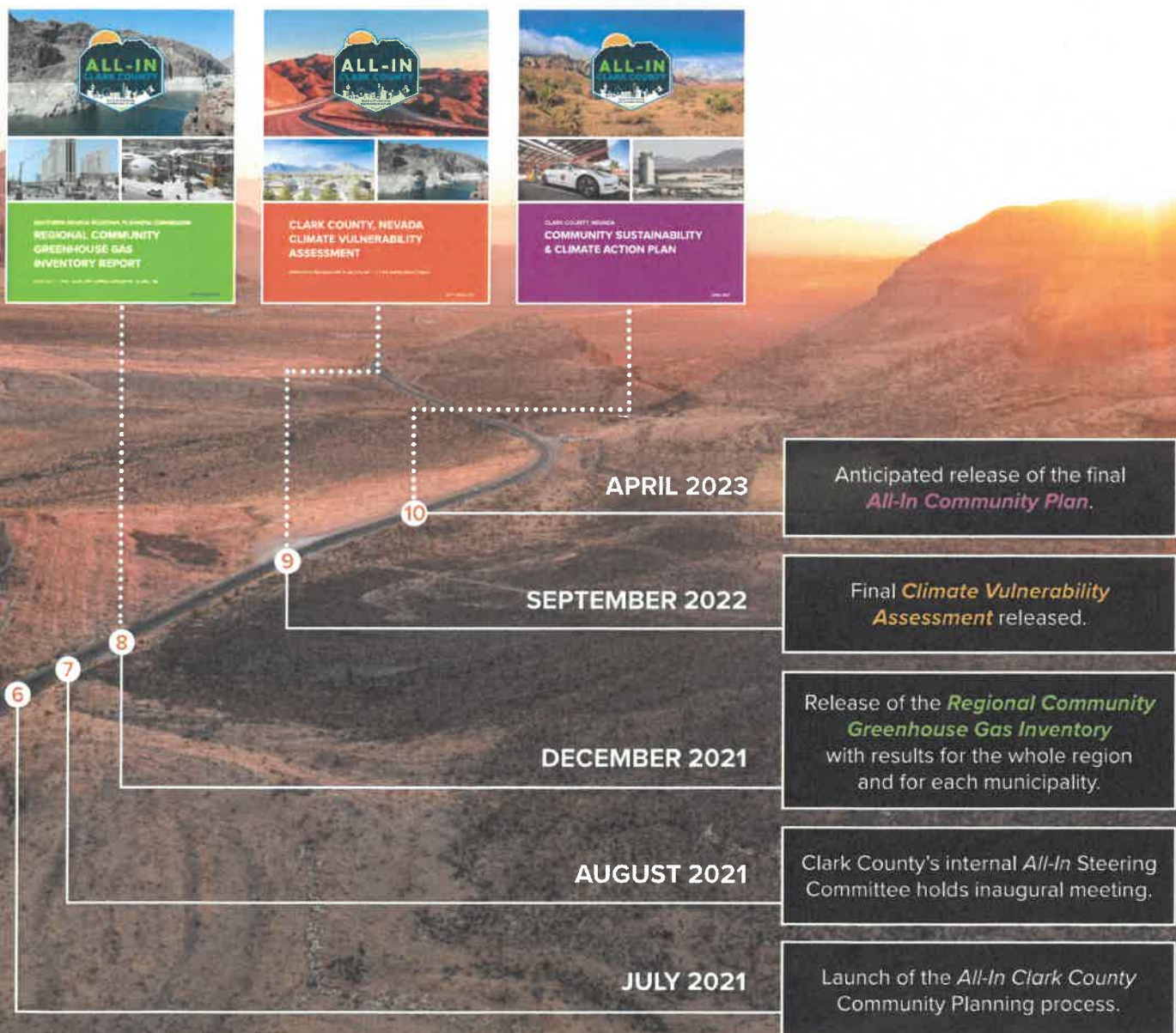
AUGUST 2020

Clark County Board of Commissioners sign on to the County Climate Coalition and the Paris Agreement.

OCTOBER 2019

The *All-In* name was selected for this initiative because of the many ways it represents the values of the region and the intent of this process.

<i>All-In:</i> The entire region must work together to address these growing challenges	<i>All-In:</i> The urgency of climate change requires the region move quickly and aggressively	<i>All-In:</i> All voices must have a platform to participate in the region's sustainable future	<i>All-In:</i> The initiative must reflect the unique context and needs of Clark County, Nevada
---	--	--	---



ENSURING EQUITY



The *All-In Clark County Initiative* takes a smart, bold, and inclusive approach to creating a sustainable community. *All-In's* Guiding Principles were selected to represent the intentions of the *All-In Clark County Initiative* while also reflecting the core values of the community. The four Guiding Principles are **Equity, Transparency, Greenhouse Gas Reduction, and Economic, Environmental, and Social Resilience**. While all four Guiding Principles are essential priorities, the County understands the only way to achieve its vision for a more resilient and sustainable future is to lead with [equity](#). Acknowledging historic and current institutional and structural discrimination and injustices, the County focused extensively on removing barriers to engagement and education by proactively engaging groups and organizations that represent marginalized communities early in the process.

To achieve equitable outcomes, the County conducted an extensive [stakeholder](#) mapping process which initially identified 120 organizations, including 30 departments within state and local government agencies in Southern Nevada. The County invited these organizations to participate in one or more advisory groups for any of the three *All-In Clark County* efforts, including the *All-In Community Plan*, *Regional Community Greenhouse Gas Inventory* and the *Climate Vulnerability Assessment*. These organizations represent tribes, regional agencies, utilities, community-based organizations, environmental groups, trade unions, developers, the business community, and students. This initial engagement with organizations, helped identify another 37 community-based groups, bringing the partner total to 157. Representatives from these organizations were invited to play a supporting role in the process as a roundtable participant, outreach partner, interviewee, or survey respondent. The diverse community perspectives yielded a more equitable and accessible set of final actions. Additionally, community engagement efforts prioritized reaching communities often left out of planning processes. While the process did not achieve every engagement goal identified, it did exceed engagement goals with some groups, including Black, Native American, and Pacific Islander communities. These efforts yielded one of Clark County's most inclusive planning processes.

SUSTAINABILITY AND CLIMATE ADVISORY GROUP INVITATIONS



GUIDING PRINCIPLES

In addition to Equity, three other guiding principles are at the core of *All-In Clark County*.



EQUITY



TRANSPARENCY



GREENHOUSE GAS
EMISSIONS REDUCTIONS



ECONOMIC, ENVIRONMENTAL,
AND SOCIAL RESILIENCE

The results of the [Regional Community Greenhouse Gas Inventory](#) and the [Climate Vulnerability Assessment](#) provided valuable data to align the goals, strategies, actions, and metrics of the *All-In Community Plan* with GHG Emissions Reductions and Economic, Environmental, and Social [Resilience](#).

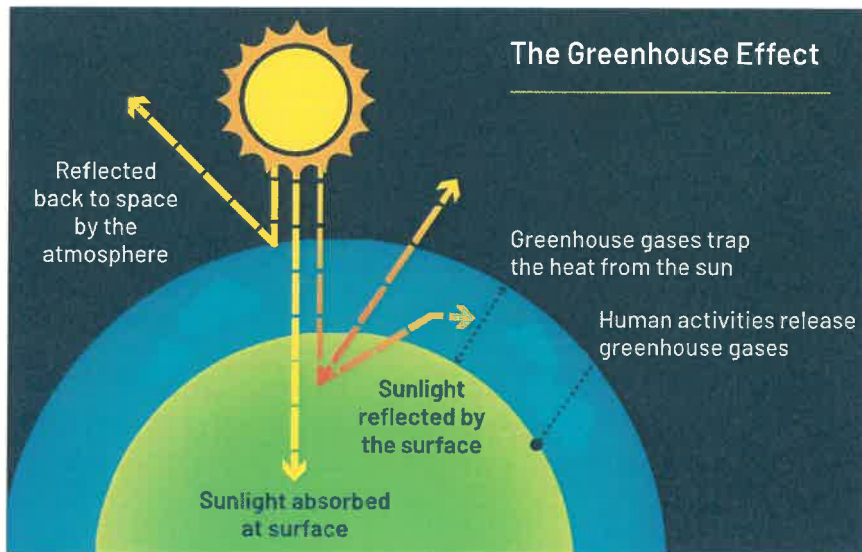
The County's commitment to [transparency](#) has been reflected throughout its engagement with the community by ensuring availability and accessibility of all reports, plans, and materials developed in both digital and printed forms in multiple languages.



HOME OF HOOVERDALE

CLIMATE CHANGE IN CLARK COUNTY

Southern Nevada is a dynamic and vibrant community that is quickly growing—expecting another one million residents by 2060.¹ At the same time, the region faces unprecedented challenges, like extreme heat and drought, due to [climate change](#). In order to address these climate risks facing the community, Clark County must reduce [greenhouse gas emissions](#) (GHGs) and prepare for the impacts of climate change.



What's Causing Climate Change?

Science has shown that there is an indisputable link between human activity and the changes in the [climate](#). When fossil fuels like coal, natural gas and gasoline are burned to power homes, businesses and vehicles—and when waste is buried in a landfill—GHGs are released into the atmosphere. These emissions—primarily carbon dioxide (CO₂), methane

(CH₄), and nitrous oxide (N₂O)—create a thick “blanket” in the atmosphere, trapping heat and leading to disruptions in the Earth’s climate. These disruptions lead to changes in temperature and precipitation, resulting in the extreme weather events already experienced around the globe, including here in Southern Nevada.

A Rapidly Warming Region

Between 1970 and 2018, Las Vegas was the fastest warming city in the country, and extreme heat events are projected to worsen.² Some regional projections indicate that the number of days over 115 °F in Clark County could increase by 10 times by the end of the century.³ The temperature increases that Clark County is experiencing today are the result of GHG emissions that were released into the atmosphere over multiple decades; the region will continue to experience warming for years to come even if no more emissions were ever released into the atmosphere. Therefore, it is critical to address the region’s vulnerability to heat and other climate hazards even while the region commits to rapidly reducing emissions.

Between 1970 and 2018, Las Vegas was the fastest warming city in the country.

Days over 115° F could increase by 10 times by the end of the century.



Number of people who get drinking water from Lake Mead,
which is fed by the Colorado River

2.3 million

Nevada residents

45.6 million

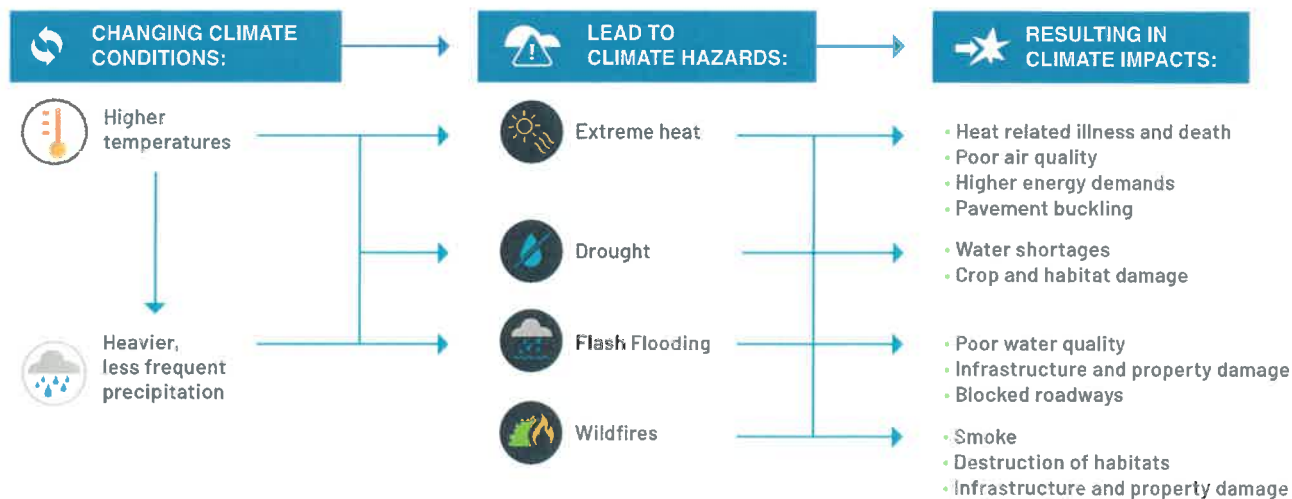
Nevada visitors

Drought in the Colorado River Basin

Clark County's largest water source, Lake Mead, provides drinking water for more than 2.3 million Nevada residents and over 45.6 million visitors per year.⁴ Lake Mead, which is part of the Colorado River Basin and fed by the Colorado River, receives the majority of its water from snowmelt from the Rocky Mountains of Colorado and Wyoming. Climate change is projected to continue reducing snowpack, runoff, and rainfall in this region, which could lead to more extreme, long-term droughts.^{5,6}

Changing Climate Trends and Vulnerabilities

Increasing GHG emissions yield two major changes in the climate: higher temperatures and more extreme (in both directions) precipitation events. Although Clark County experiences a variety of [hazards](#) (including extreme winds), there are four main hazards currently linked to climate change that are already affecting the County: extreme heat, [drought](#), [flash flooding](#), and wildfires. In turn, these hazards can negatively impact public health, infrastructure, and quality of life.



Climate change is a threat multiplier, which means that it will directly and indirectly impact people, infrastructure, natural systems, and the economy in important and compounding ways. As climate hazards increase in frequency and intensity, communities may have less time to recover between them. It is also more likely that multiple hazards will impact communities at once. For example, a wildfire during a drought would result in compounding risks to human health and safety.

Climate Vulnerability:

The degree to which a system is susceptible to and unable to cope with adverse effects of extreme weather events like drought or wildfire.

To better understand the risks of climate change, Clark County conducted a *Climate Vulnerability Assessment*. The [All-In Climate Vulnerability Assessment](#) identified the most significant climate impacts facing the region's people, services, and infrastructure. The Assessment also identified opportunities to increase [resilience](#) in the region, from water management to expanding natural habitats.

FOUR MAIN CLIMATE HAZARDS



EXTREME HEAT

The 2.3 million people living in Clark County are highly vulnerable to extreme heat. In 2022, Clark County experienced 147 days above 90° F.⁷



DROUGHT

With Lake Mead levels at record low levels, drought is continuing to impact the region's water supply, which may result in increasing restrictions for indoor and outdoor water consumption.



FLASH FLOODING

Southern Nevada is no stranger to monsoonal rain and flash floods. During the summer of 2022, Clark County experienced record flash flooding. As the climate changes, rainfall is expected to be less frequent, but heavier, leading to more flash flooding events.



WILDFIRES

Clark County is seeing an increase in smoke events from wildfires in other states as well as local wildfires. In 2021, there were 18 smoke advisories and in 2022, the County issued a blanket advisory for the entire season.



EXTREME WINDS

The science on how climate change affects extreme wind is still evolving. At the same time, the County has experienced an increase in extreme wind events in recent years. These events have led to poor air quality, damages to buildings and infrastructure, and disruptions in power, air travel, and economic activity.

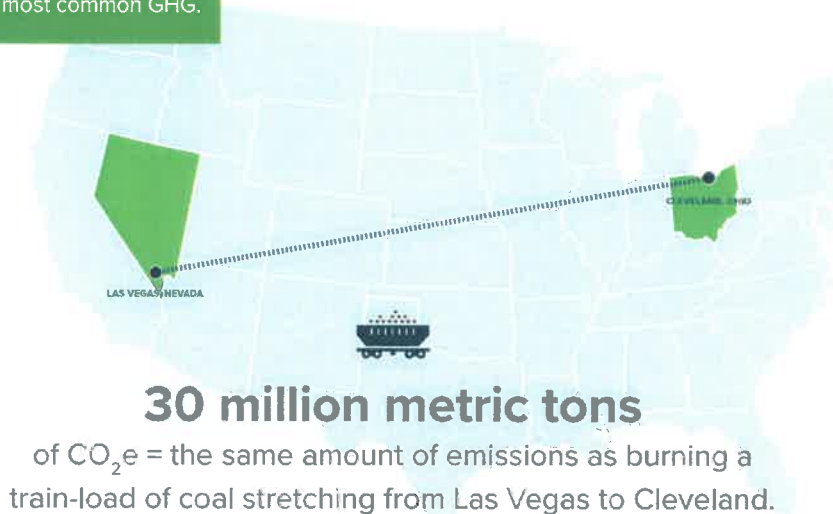


CO₂e or carbon dioxide equivalent

is a metric that is used to compare different types of greenhouse gas emissions (e.g., methane, nitrous oxide) by converting them to an equivalent amount of carbon dioxide, the most common GHG.

Clark County's Contribution to Climate Change: Greenhouse Gas Emissions Inventory

In addition to assessing climate vulnerabilities, Clark County conducted an [inventory of greenhouse gas \(GHG\) emissions](#) from calendar year 2019 to better understand how activities in communities across the County contribute to the region's emissions. This inventory, along with the [Climate Vulnerability Assessment](#) was then used as a foundation to develop strategies and actions to address climate change throughout Southern Nevada.



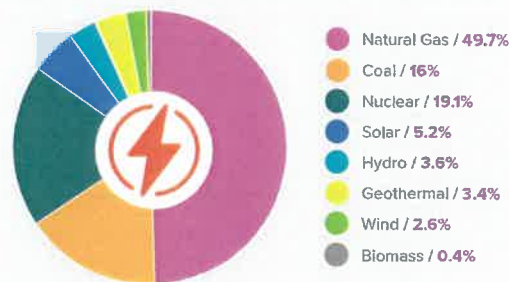
The Southern Nevada region was responsible for about 30 million [metric tons of carbon dioxide equivalent \(CO₂e\)](#) in 2019. This is approximately the same amount of emissions as burning a train-load of coal stretching from Las Vegas to Cleveland. Avoiding the most serious climate change impacts will require significant emissions reductions over the coming decades, in Clark County and globally.

GHG Sectors

BUILDINGS & ENERGY

Electricity used in buildings was responsible for the largest share of GHGs (33.2%). These emissions are decreasing as renewable energy replaces fossil fuel generation on the electricity grid. Natural gas use in buildings for cooking, hot water, and space heating in homes and small commercial buildings accounted for to 8.1% of total emissions. Natural gas use from very large consumers including resorts and industrial processes is responsible for 6% of total emissions.

REGIONAL ELECTRICITY GRID*



While coal-fired electricity has been phased out in Clark County, the County remains connected to many different sources of electricity through the regional electricity grid, including coal.

* Southern NV is part of the U.S. Environmental Protection Agency's [eGRID subregion AZNM](#). Sources of electricity and associated emissions factors are pulled from that database

TRANSPORTATION

On-road transportation was the secondhighest contributing sector at 23% with emissions coming primarily from passenger vehicles (19.6%) and truck transport (3.1%). Off-road transportation, which is predominantly the use of construction equipment (8.6%) and aviation within our local airspace (5.5%) contributes to just over 14% of the area's GHG emissions.

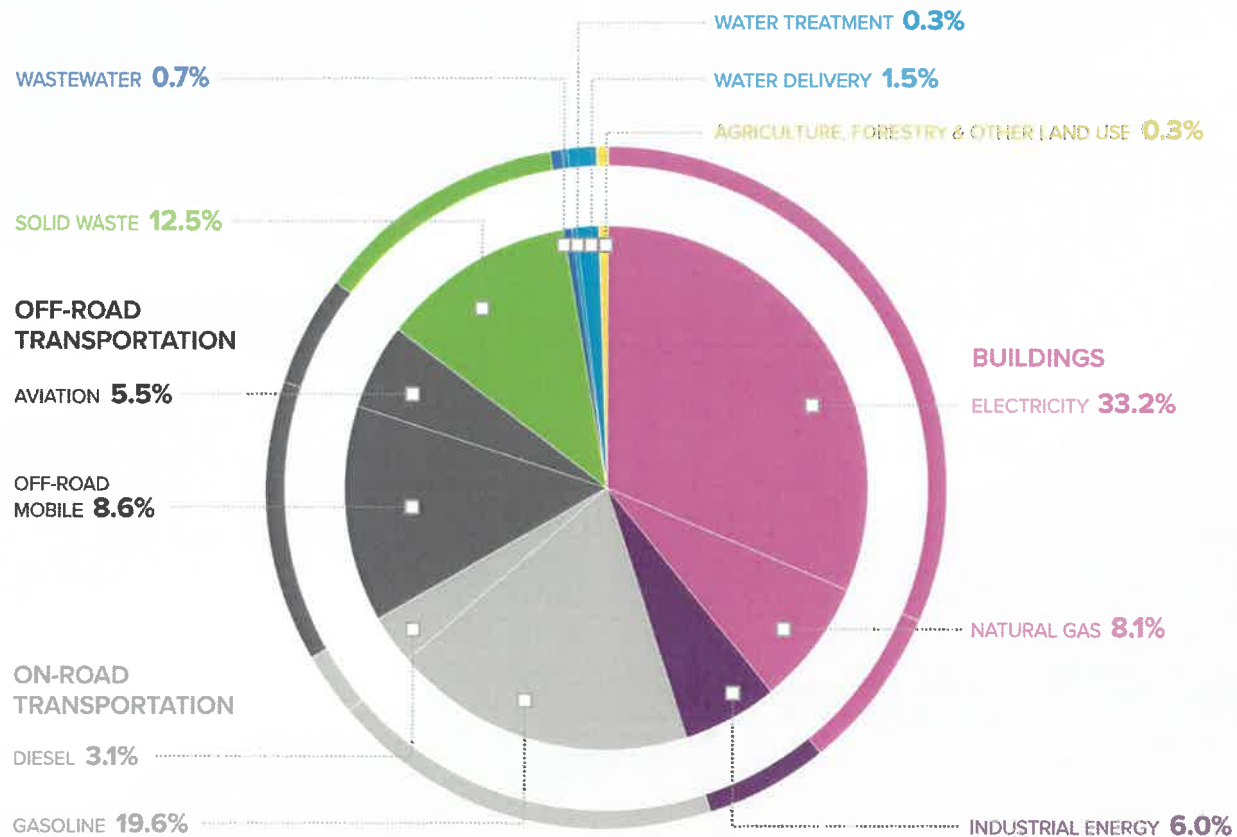
SOLID WASTE

Solid waste generated within Clark County represented the third largest emissions sector. When deposited in a landfill, the waste we create generates emissions that add up to 12.5% of the County's GHG emissions.

WASTEWATER; WATER TREATMENT & DELIVERY; AGRICULTURE, FORESTRY, & OTHER LAND USE

These sources, when aggregated, accounted for 3% of Clark County's GHG emissions.

CLARK COUNTY'S 2019 PRIMARY GHG EMISSION SOURCES BY SECTOR



CLARK COUNTY'S 2019 GHG EMISSION SOURCES BY SECTOR

SOURCE	MTCO ₂ e	% OF TOTAL	SOURCE	MTCO ₂ e	% OF TOTAL
Buildings	12,164,255	41.5%	Off-Road Transportation	4,145,745	14.2%
Electricity	9,727,978	33.2%	Off-Road Mobile	2,511,500	8.6%
Natural Gas	2,384,012	8.1%	Aviation	1,608,713	5.5%
Fugitive Natural Gas	30,851	0.1%	Waterborne Navigation	17,589	0.1%
Propane	19,567	0.1%	Railways	7,944	0.0%
Heating Fuels	1,710	0.0%	Solid Waste	3,675,785	12.5%
Wood	136	0.0%	Landfilled Waste	3,643,275	12.4%
Industrial Energy	1,768,645	6.0%	Composted Waste	32,510	0.1%
On-Road Transportation	6,734,219	23.0%	Wastewater	195,127	0.7%
Gasoline	5,747,487	19.6%	Process and Fugitive	195,127	0.7%
Diesel	904,285	3.1%	Water Treatment & Delivery	523,621	1.8%
Transit Compressed Natural Gas (CNG)	51,029	0.2%	Water Treatment	81,855	0.3%
Transit Biodiesel	16,230	0.1%	Water Delivery	441,767	1.5%
CNG	6,483	0.0%	Agriculture, Forestry & Other Land Use	92,398	0.3%
Electric	8,705	0.0%	Total	29,299,795	100.0%

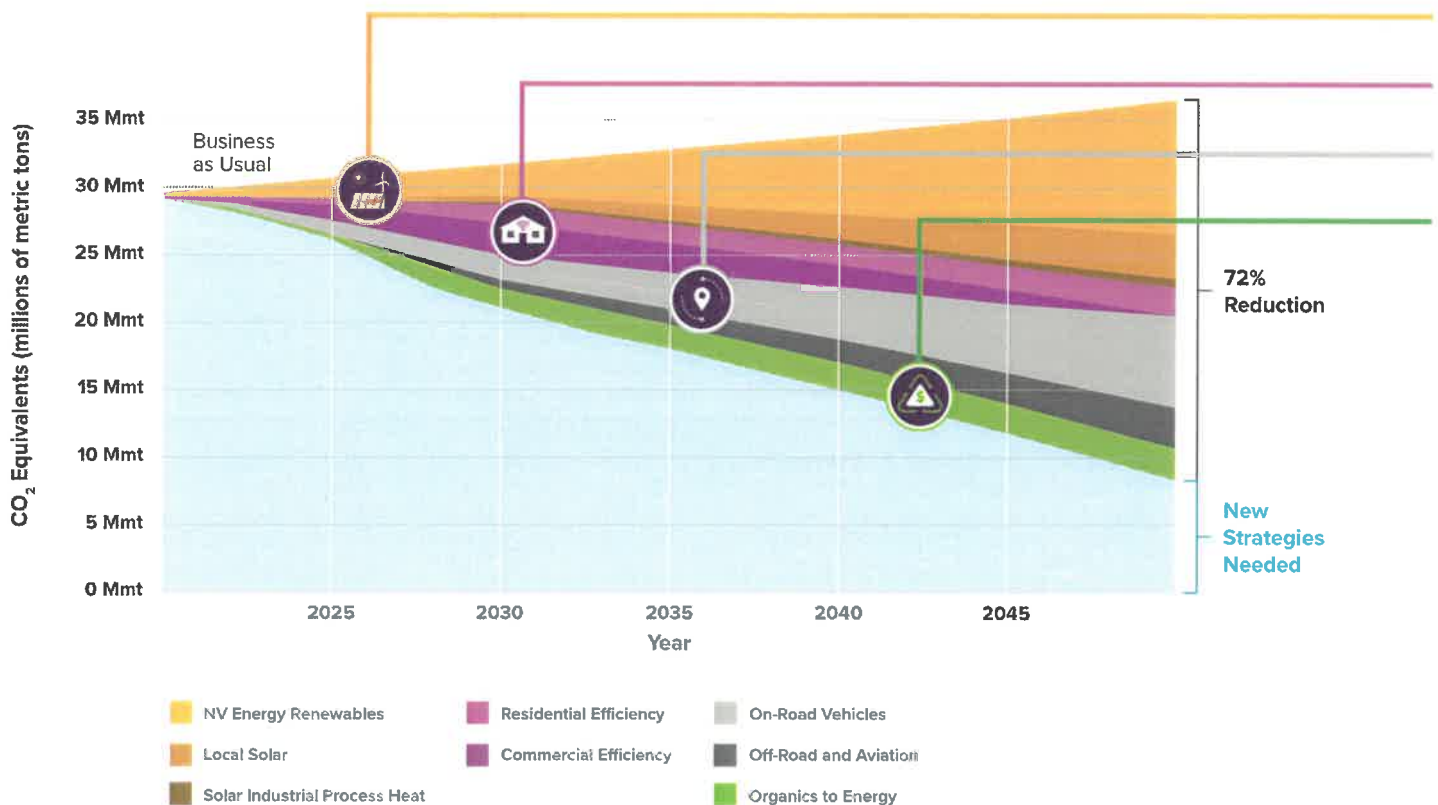


Pathways to Reducing Emissions

The key to preventing the worst scenario of projected climate impacts is to reduce the amount of greenhouse gas (GHG) emissions generated. Clark County conducted a [GHG Pathways Analysis](#) to identify a portfolio of strategies that are most likely to reduce emissions to as close to zero as possible, based on existing data and technology, by 2050. This analysis also allowed the County to establish an appropriate reduction target of **32% by 2030**. These strategies and their associated actions for 2030 are what the *All-In Community Plan* focuses on as we risk coming short on the 2050 target if we cannot meet the 2030 target. These high-impact strategies were prioritized due to their potential to deliver the greatest and fastest emissions reductions for the region.

The Pathways Analysis summarizes the potential outcome of each high-impact strategy alongside the pace, scale of activity, and investment needed to achieve those outcomes. The wedge graph below and the boxes on the next page provide more details on each of the high impact strategy opportunities.

IMPACT OF STRATEGIES



These pathways create a 72% reduction in GHGs by 2050, using well-developed technologies and policies. The remaining 28% of emissions in 2050 will likely come from improvements and efficiencies in heavy-duty vehicles, large industry, aviation and off-road equipment, sectors where emissions solutions are not yet feasible. Future iterations of *All-In Clark County* will take on these challenging sectors as new strategies become available.



Clean and Reliable Energy

The switch to clean electricity will have the biggest single impact on GHGs over the long term as we transition to power everything with zero carbon energy. In the short term **renewable energy strategies will supply 28% of the 2030 target reduction.**



Smart Buildings and Development

Unlike the other sectors with greater dependence on deploying new technology, there is a large potential for GHG savings from new and existing buildings utilizing existing technologies. In fact, significantly **scaling up existing efficiency programs by a factor of six will yield the greatest short-term emissions reductions at 35% by 2030.** Tackling new construction through high performance building standards will ensure these reductions are maintained as the region grows.



Connected and Equitable Mobility

Transitioning vehicles to electric and zero emission fuels will deliver the second largest share of reductions in the long-term. Additional **investments in transit and bicycling** could help minimize the impact of additional electricity demand on the grid. Reductions from these strategies follow the anticipated pace of regional transit and mobility investments and expected market growth of electric vehicles, and together **deliver 18% of the 2030 reduction target.**



Diverse and Circular Economy

By cutting recyclable and organic material from the waste stream, decades of locked in future emissions can be avoided. Recyclables can be used to create new markets in a **circular economy**. Organic materials can be used beneficially in waste-to-energy systems to generate clean electricity and for local applications that are difficult to electrify, such as aviation fuels and industrial energy needs. **Removing organics from the waste stream will provide 11% of the 2030 emissions reductions.**

Note: The remaining 8% of the 2030 reductions are expected to come from strategies addressing off-road and aviation equipment.

Using well-developed technologies and policies,
these pathways could create a

32%

reduction in GHGs by 2030

72%

reduction in GHGs by 2050

Engagement Highlights

6,000+
SURVEY
RESPONSES

220,000+ People

GOALS FOR EQUITABLE ENGAGEMENT



ENGAGE A WIDE &
DIVERSE AUDIENCE



GROW CLIMATE
LITERACY

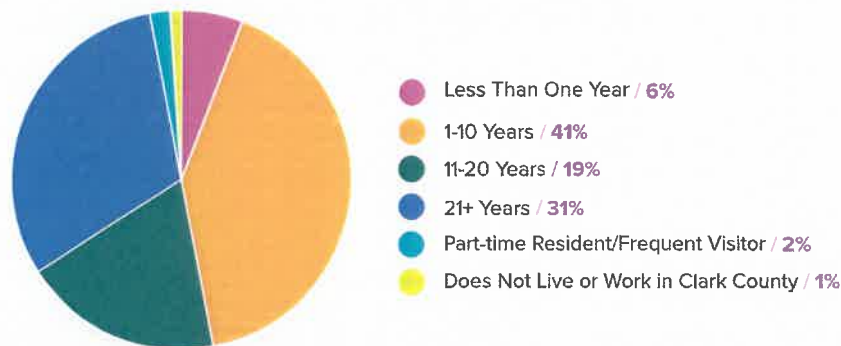


BUILD CAPACITY
TO TAKE ACTION

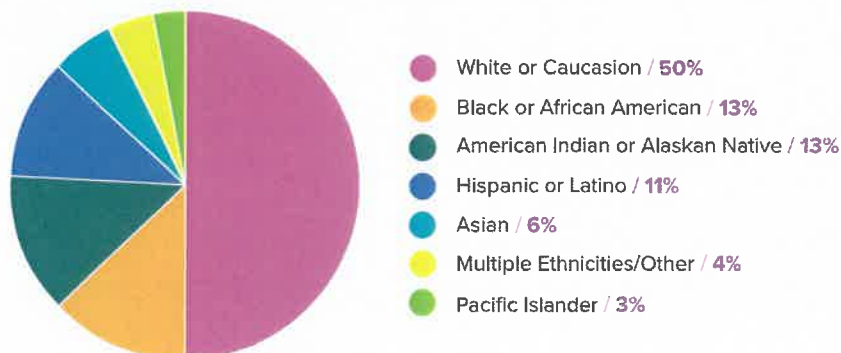


Through two community surveys offered in three languages; dozens of in-person and online events, meetings, and presentations; extensive digital outreach; and building meaningful community partnerships, Clark County engaged a wide and diverse audience over the course of 15 months.

HOW LONG SURVEY RESPONDENTS HAVE LIVED IN CLARK COUNTY



RACE/ETHNICITY DISTRIBUTION*



* Demographic information was only collected through the survey and residency length and race/ethnicity was provided by only about 58% of respondents, respectively across two surveys. Length of Residency Respondents=3,534 Race/Ethnicity Respondents=3,521



A County-Wide Effort

The County sought to reach a diverse set of stakeholders from every corner of the county to represent unique lived experiences and areas of technical expertise. A particular focus was placed on ensuring members of marginalized communities were represented alongside the economic, energy, development, public health, water, and waste experts in the region.

The County engaged with elected officials, municipal leadership, County staff and a diverse group of businesses, nonprofits, utilities, trades organizations, and regional agencies. With a goal of equitable

engagement, the County partnered with key organizations that reflect the diversity of the community to understand their unique experiences, needs, and priorities. These organizations then assisted the County with recruiting people who represent this diversity, ethnically as well as geographically. The resulting Engagement Team included members who spoke a variety of languages. They were paid a living wage for their time training for and delivering various outreach activities and were instrumental in creating a safe platform for all community voices to be heard.

OUTREACH PARTNERS



Clark County worked with existing organizations that have strong networks among diverse populations.

SUSTAINABILITY & CLIMATE ADVISORY GROUP



4
MEETINGS

64
PARTICIPATING ORGANIZATIONS*

* Not all invited organizations participated in the Advisory Group, but most engaged in some fashion.

ENGAGEMENT TEAM



38
IN-PERSON* ENGAGEMENT TEAM
EVENTS & PRESENTATIONS

* Conducted when public health guidelines allowed during the COVID-19 pandemic.

Key Partners Involved in the All-In Process





County staff **met with local agencies and stakeholders** like the Regional Transportation Commission (RTC), the Las Vegas Convention and Visitors Authority, Allegiant Stadium, and Republic Services to align *All-In* with existing sustainability initiatives and plans.



The Clark County Engagement Team got **people of all ages** thinking about climate and sustainability through **short, creative activities** at engagement events.



ALL-IN CLARK COUNTY VIRTUAL FORUM SERIES

The County **hosted seven virtual forums** to help community members **deepen their knowledge** of climate and sustainability issues and opportunities.

SECTOR SPECIFIC ROUNDTABLES



5

INDUSTRY-SPECIFIC ROUNDTABLES
WITH DEVELOPERS, UTILITIES, AND
ENVIRONMENTAL ADVOCATES

MUNICIPAL COUNTY, & AGENCY LEADERS



15

ROUNDTABLES

9

ELECTED OFFICIALS BRIEFED

COMMUNITY SURVEYS



2

SURVEYS

3

LANGUAGES

6,000+

SURVEY RESPONSES



ALL-IN CLARK

COMMUNITY VOICES



“

Climate change affects everyone no matter your race, color, or creed. It is up to all of us to do our part to make our communities more livable.”

LISA ORTEGA
NEVADA PLANTS



“

I make sure to throw all containers that can be recycled in the recycling bin with no food or water in them. And I use my metal straw.”

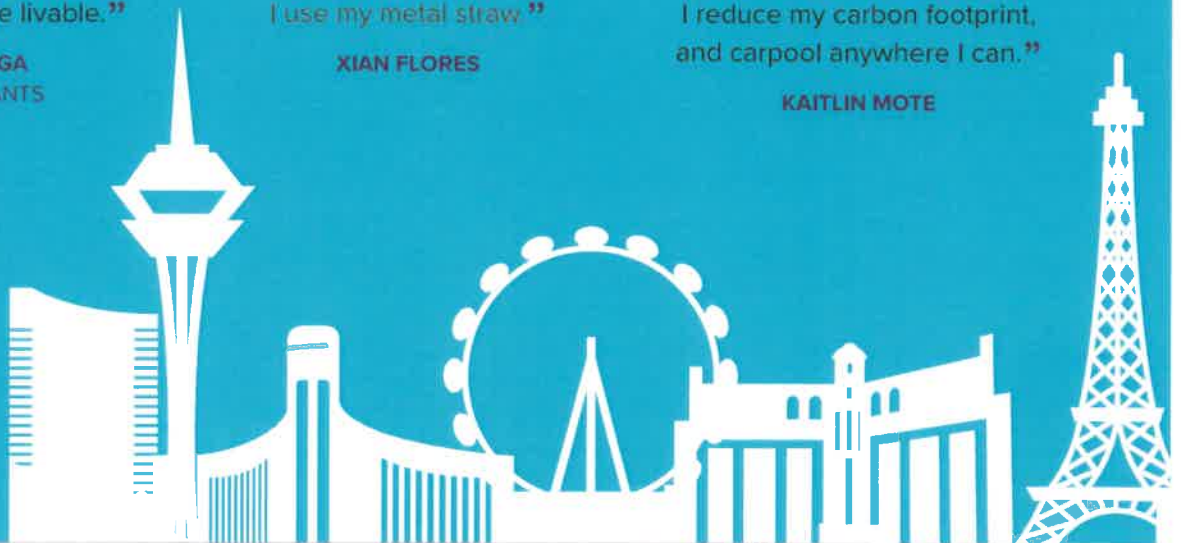
XIAN FLORES



“

I make sure to use sustainable products like reusable water bottles, and I watch my plastic waste. I also make sure that I reduce my carbon footprint, and carpool anywhere I can.”

KAITLIN MOTE



COUNTY



“

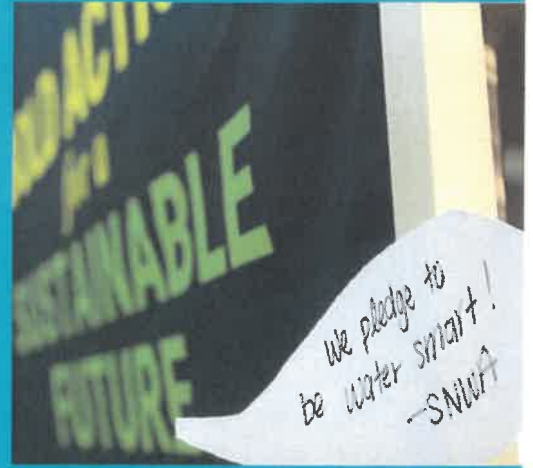
Practicing sustainability is immensely satisfying, knowing that I strive for a healthy and happy community for people and the planet.”

OLIVIA BURNS

“

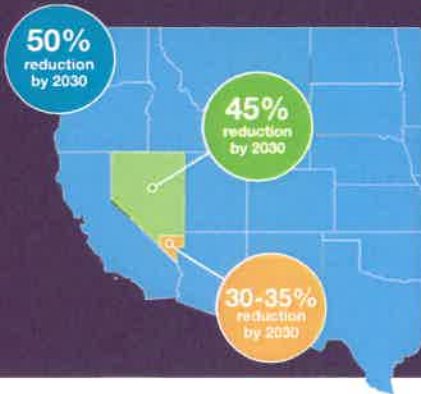
We know that if we don't play our part to curb climate change, the people who live and serve in our predominantly Black community will be impacted first and hardest.”

TENILLE FATIMAH FOREMAN



Connected Efforts

The *All-In Community Plan* acknowledges that the County cannot accomplish *All-In*'s goals alone and must rely on other organizations with the technical expertise and legal authority to champion the actions in this Plan. Several Southern Nevada agencies and County departments have already addressed climate and sustainability in some of their own planning processes. The *All-In* planning team evaluated the goals, strategies, and actions of each relevant regional plan to build off them and create as much alignment and synergy as possible.



Aligning Climate Ambition through Greenhouse Gas Reduction Goals

When we all row together, the journey is easier. Governments at all levels are setting aggressive near-term targets to put us on a pathway towards zero emissions by 2050. National targets and state targets set by the Nevada Climate Initiative have different baseline years compared to the County's most recent inventory of 2019 emissions. Clark County chose to align with the annual rate of reduction from the Nevada Climate Initiative which translates to a 32% reduction in GHG emissions by 2030 from a 2019 baseline.

Other Foundational Plans

In addition to Transform Clark County, several state and regional initiatives have provided vision, goals, and actions. These **six plans** particularly influenced the development of the *All-In Community Plan*.

2020 State Climate Strategy

An integrated, economy-wide roadmap to accelerate climate action necessary to achieve Nevada's climate goals.

All-In Alignment with Key Priorities

- Annual rate of reductions in GHGs to meet net-zero by 2050
- Maximize economic opportunity when evaluating actions
- Prioritize [climate justice](#) when evaluating actions

Prepared by the Nevada Climate Initiative, established by Governor Sisolak.

Access 2050

The comprehensive plan for maintaining and improving Southern Nevada's transportation system. Identifies main strategies that local transportation agencies will follow.

All-In Alignment with Key Priorities

- Develop connected, [multimodal transportation](#) options
- Increase capacity and reach of transit
- Promote alternatives to single occupancy vehicle trips

Prepared by the Regional Transportation Commission of Southern Nevada (RTC).

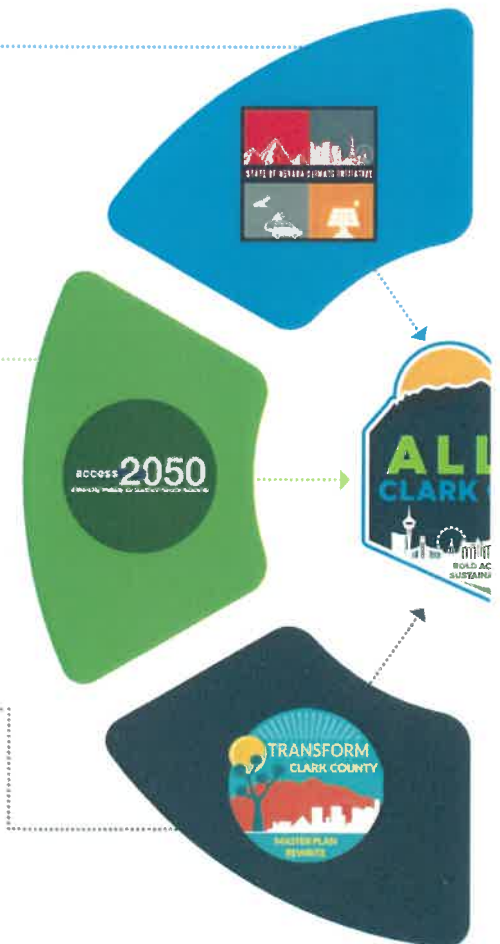
Transform Clark County

The County's key policy and regulatory documents: the Master Plan and Development Code.

All-In Alignment with Key Priorities

- Facilitate access to alternative mobility options for all community members
- Increase community and economic resilience to climate change
- Equitable engagement and implementation as a core tenet

Prepared by Clark County Comprehensive Planning Department.



Clark County should aim to cut emissions by 32% from its 2019 baseline by 2030 to match the pace of reduction that the Nevada Climate Initiative aims to achieve statewide.

This aggressive short-term goal requires this first *All-In Community Plan* to focus resources on a portfolio of high-impact strategies, those that can produce the largest and fastest emissions reductions. The County analyzed pathways to the 2030 goal and an eventual 2050 net zero-emissions goal, summarizing potential contributions of each of these high-impact strategies to the overall targets and the pace, scale of activity, and investment needed to achieve those contributions. These strategies are outlined in the Climate Change in Clark County section and described in the Plan Focus Areas section.

All-In County Operations Plan

A climate and sustainability plan for Clark County's government operations.

All-In Alignment with Key Priorities

- Lead by example with local government action
- Subscribe to transparency, resilience, equity, and GHG reductions as guiding principles
- Focus on implementation

Prepared by Clark County Department of Environment and Sustainability (DES).

Southern Nevada Strong

The first federally recognized comprehensive regional plan in Southern Nevada.

All-In Alignment with Key Priorities

- Diversify economy and develop workforce
- Increase housing options
- Create safe, desirable and engaged communities

Prepared by a coalition of agencies and administered by RTC.

2021 Water Resource Plan

Overview of water resources, demands, and factors that influence resource availability and use over a 50-year planning horizon. Provides strategies for meeting future water demand and protecting the environment.

All-In Alignment with Key Priorities

- Ensure a sustainable water supply
- Lead on water conservation
- Create resilient water infrastructure

Prepared by Southern Nevada Water Authority (SNWA).

STRUCTURE OF THE PLAN

The *All-In Community Plan* has **six focus areas**. Each focus area represents an important aspect of the community that needs to be addressed to reach the County's sustainability and resilience goals.



CLEAN & RELIABLE ENERGY

Implementing policies, programs, and projects that support the generation and delivery of clean and reliable energy to all.



CONNECTED & EQUITABLE MOBILITY

Developing a safe, connected, and accessible transportation system that prioritizes low-carbon mobility, public transportation, and active lifestyles.



DIVERSE & CIRCULAR ECONOMY

Creating a robust and diversified economy that reimagines waste and resource use while investing in human capital.



RESILIENT & HEALTHY COMMUNITY

Preparing the community for climate-driven emergencies through strengthened natural and social systems.



SMART BUILDINGS & DEVELOPMENT

Driving the transition to smart and carbon neutral buildings that are healthy, efficient, and affordable.



SUSTAINABLE WATER SYSTEMS

Conserving and protecting water resources while developing sustainable systems for water delivery, stormwater management, and wastewater treatment.

NAVIGATING THIS PLAN

For each focus area, the planning process identified goals, strategies, actions, and metrics as well as existing best practices in the region. The chapters ahead explore these components in the following format:

CONNECTIONS TO CLIMATE CHANGE

How each focus area contributes to and is also impacted by climate change

BY THE NUMBERS

Key baseline data and highlighted accomplishments

THE ALL-IN VISION

The vision for implementing and achieving the goals for each focus area

LEADING BY EXAMPLE

Initiatives currently underway by the County, local governments, and regional agencies

ACTION PLAN

Summary table of goals, strategies, and actions, along with strategy-level indications of alignment with other regional and state plans

Goal 1		Alignment
1.1	Strategy	
1.1.A	Action	

Ex: Strategy aligns with Nevada State Climate Strategy



PATHWAY TO ACTION

High-impact strategies that will reduce greenhouse gas emissions and strengthen community and environmental resilience to climate hazards

TRACKING PROGRESS

Key metrics, baseline data, and 2030/2040 targets that will demonstrate progress on the goals, strategies, and actions

METRIC	BASELINE	YEAR	2030 TARGET	2040 TARGET
--------	----------	------	-------------	-------------

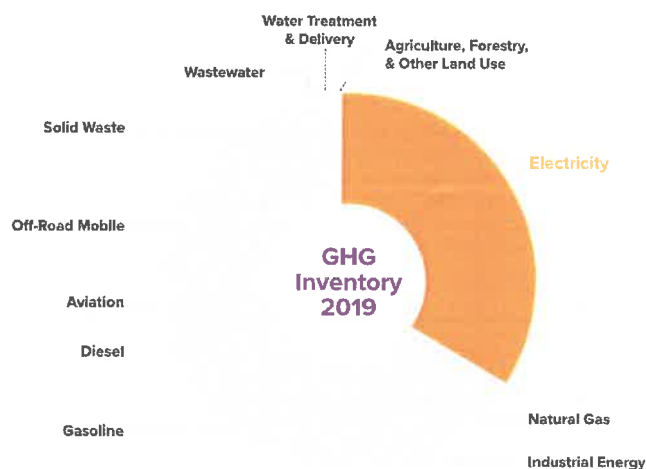


Clean & Reliable Energy

Scaling up [renewable energy](#) is Clark County's greatest opportunity to reduce greenhouse gases (GHGs) and other air pollution. There are vast renewable energy resources available in Southern Nevada to provide clean electricity and heat. By embracing innovative and clean energy technology, Clark County can drive local workforce development and strengthen the local economy by keeping energy production in Nevada, all while preparing for the extremes of climate change.

33.2%

of County-wide emissions are from the electricity used in buildings. Those emissions are also a result of the generation sources (i.e., natural gas, solar, wind, geothermal, etc.) that create the energy we use.



Connections to Climate Change

Investing in and producing more renewable energy will reduce GHG emissions. At the same time, we need to strengthen the electric grid against the impacts of climate change which threaten to disrupt energy delivery and increase energy bills. Extreme weather events, particularly heat waves, stress the electricity grid and elevate the risk of [brownouts](#). Flash flooding and high wind also pose risks to power lines and other energy infrastructure. These issues can be addressed through strategies that include creating more connections to regional clean energy supplies, making the grid "smarter," and leveraging energy storage opportunities.

BY THE NUMBERS



71,400

rooftop solar panel systems installed in Southern Nevada⁸



25.8%

of energy on the grid in 2022 was from renewable sources.⁹



51%

of Nevada's utility-scale renewable energy generation is in Clark County¹⁰

THE ALL-IN VISION

Implementing policies, programs, and projects that support the generation and delivery of clean and reliable energy to all.



NV Energy

NV Energy's pilot project—a carport facility at Mojave High School in North Las Vegas—includes 1,012 solar panels that can generate at least 773 [megawatt](#) hours per year.

Leading by Example

Community-Based Solar Projects

In 2019, the Nevada Legislature passed a law to expand solar energy to low-income customers without requiring them to install their own solar systems. In response, **NV Energy** recently launched the *Expanded Solar Access Program* to support community-based solar projects. At the Program's full capacity, the Expanded Solar Access Program has the potential to serve more than 8,700 low-income households and more than 15,000 households that would otherwise be unable to install solar panels due to rental agreements or space constraints.

Simplifying Solar for Homes and Businesses

Both the **City of Las Vegas** and **Clark County** received [SolSmart](#) designation (Gold level and Bronze level, respectively) for their efforts to decrease barriers facing building owners who want to install solar. Both governments created an online permitting checklist, increasing transparency for community members and solar installers, and audited local zoning codes for restrictions that intentionally or unintentionally prohibit [solar photovoltaic \(PV\)](#) development. The City of Las Vegas also updated its zoning code to allow solar by right in all zones (so solar installations do not require special permits or hearings), cross-trained inspection and permitting staff, and provided a streamlined permitting pathway for small PV systems.



ACTION PLAN

Clean and Reliable Energy

The *All-In Community Plan* establishes goals, strategies, and actions for each focus area. These are highlighted in the summary matrix, along with indications of alignment with other regional and state plans.

Goal 1: Local, renewable energy is maximized and accessible to all within our communities.

Alignment

1.1 Develop renewable energy sources to meet a significant share of energy demand (electric and thermal) by 2030.



- 1.1.A Advocate to increase the State [Renewable Portfolio Standard](#) to attain 100% renewable electricity by 2050.
- 1.1.B Accelerate development of medium, neighborhood-scale solar through model projects, tools, and design standards.
- 1.1.C Support legislation allowing more utility collaboration for research and development of renewable fuels in Nevada.

1.2 Eliminate financial and property barriers to participating in a renewable energy transition.

- 1.2.A Expand Community Solar programs to deliver shade and other resilience benefits equitably across communities in Clark County.
- 1.2.B Pursue finance mechanisms in a "[program stacking](#)" model to reduce costs for households and new commercial and residential developments.
- 1.2.C Advocate for utility regulation that aligns incentives with the accurate value of grid services provided by distributed solar and storage.

Goal 2: Energy supply is reliable, efficient, safe, and resilient to climate-related disruptions.

2.1 Enhance collaboration and transparency between energy utilities and critical agencies whose operations rely on consistent power.

- 2.1.A Support and expand the NV Energy advanced notification system for outages to include agencies managing critical assets.
- 2.1.B Review and regularly communicate status, impact, and cost of disruptions to critical assets.

2.2 Advance [microgrid](#) and smart grid solutions for [load balancing](#) and resilience benefits.

- 2.2.A Engage regulators to expedite research, assessment, and approval of new storage and integration technologies.
- 2.2.B Create and maintain standards for new development to facilitate more grid-interactive buildings.



Aligns with [Nevada State Climate Strategy](#).



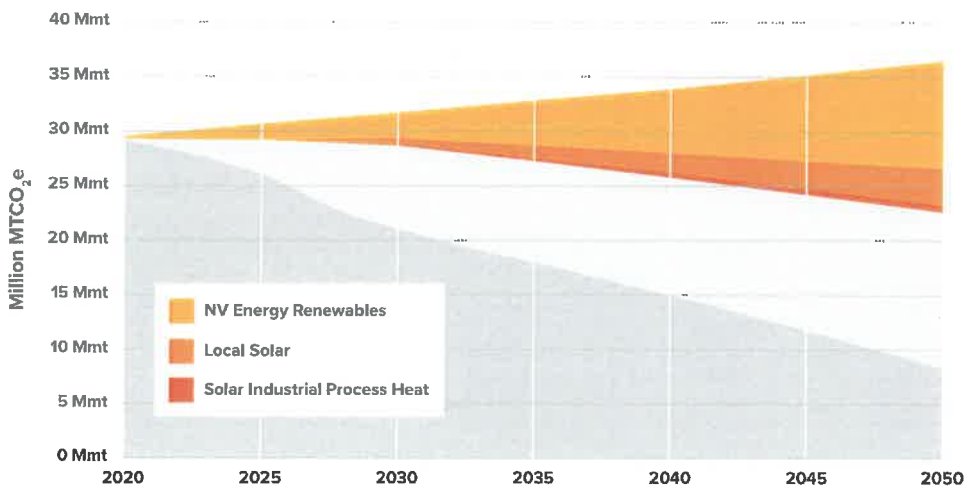
Lisa Ortega

"We imagine a solar- and wind-powered electrical grid that powers the homes here, which are owned by residents whose families have lived on the historical Westside for generations."

STAFF FROM AL MA'UN NEIGHBORLY NEEDS DESCRIBING THEIR VISION FOR A RESILIENT CLARK COUNTY

Pathway to Action

Clark County's sustainable future is powered by renewable energy. This includes capitalizing on our abundant solar resources by installing extensive solar photovoltaic (PV) systems in residential, commercial, and industrial applications, as well as solar thermal for process heating applications. Fully realizing the benefits of local solar production will require 15,000 homes to go solar each year between now and 2050. Utilizing the full capacity of local solar and transitioning the electricity grid to renewables will cut GHG emissions from building energy use by over 13.4 million MTCO₂e per year. A quarter of that impact could be delivered through rooftop projects within the urban areas of Clark County.¹⁵



IMPACT OF ROOFTOP SOLAR

The Pathways Analysis illustrates the potential for reducing emissions through high-impact strategies – in this case, transitioning the grid to renewables, expanding local rooftop solar, and utilizing solar industrial process heat. See [Pathways to Reducing Emissions](#) for more information.

TRACKING PROGRESS

Monitoring these fundamental numbers will help demonstrate progress towards the goals.

METRIC	BASELINE	YEAR	2030 TARGET	2040 TARGET
Share of Renewable Energy in Grid Electricity Mix	25.8% ¹¹	2022	50%	75%
Distributed Renewable Energy Capacity	553 MW ¹²	2022	2,600 MW	5,500 MW
Industrial Process Heat Supplied by Solar Thermal	Unknown, presumed 0 MMBtu	2022	2,500,000 MMBtu	7,700,000 MMBtu
Distributed Battery Storage Capacity	5.8 MW ¹³	2021	750 MW [*]	1,500 MW [*]
Average Duration of Outages	120 minutes ¹⁴	2021	78 minutes ^{**}	Steady or Improving

* 2030 target aligns with Clark County fulfilling 75% of the Statewide 2030 storage target.

** 2030 target set to match outage duration performance with NV Energy's leadership position in total number of outages relative to the national average.

Improved Tracking

Some actions in this plan cannot be monitored by metrics currently being tracked. Developing and monitoring additional metrics will improve knowledge of how actions are progressing.



Number of public properties with backup power or battery storage.



Total [kW](#) of distributed solar capacity within each jurisdiction.



Number of participants in Community Solar programs.

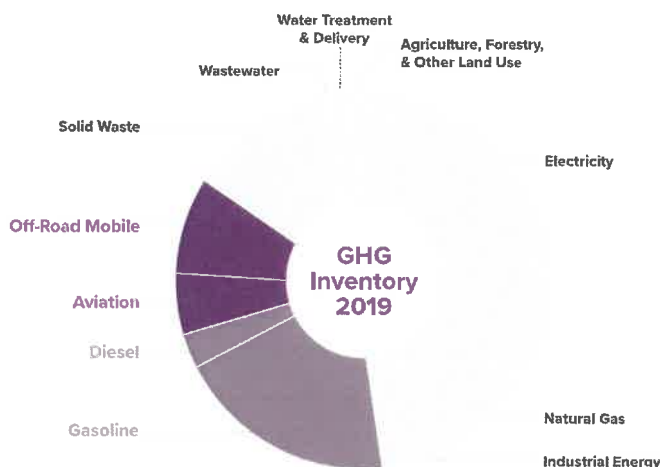


Connected & Equitable Mobility

As Clark County's population increases, traffic is also increasing, especially due to people driving alone. More cars on the road means more pollution, congestion, and health impacts. Promoting reliable, accessible, and emissions-free transportation options will reduce our emissions, improve air quality, and make it easier for residents and visitors to get around. Improving mobility also helps ensure access for people of all ages, abilities, and income levels to the community resources they need to thrive.

36%

of greenhouse gas (GHG) emissions in Clark County come from transportation, the region's second largest sector of emissions.



Connections to Climate Change

Just as emissions from the transportation section exacerbate climate change, climate hazards can negatively impact transportation systems and the people who utilize them:

- Extreme heat, wildfires, and flooding can disrupt transportation systems (e.g., closures of roads, highways, and trails due to flooding) and damage infrastructure.
- Community members who rely on transit and bike/pedestrian infrastructure to commute to work or access other critical services may be particularly impacted.

BY THE NUMBERS



5,600

annual EV registrations in 2019 in Clark County, a **68%** increase from the previous year¹⁶



78.2%

of residents commute in personal vehicles, creating **50%** of transportation-related GHGs



550+ miles

of bike lanes in Clark County, with plans to expand to over **2,000** miles of bike lanes and walking paths

THE ALL-IN VISION

Develop a safe, connected, and accessible transportation system that prioritizes low-carbon mobility, public transportation, and active lifestyles.

Leading by Example

Complete Streets Initiative

The **Regional Transportation Commission of Southern Nevada (RTC)** is launching a regional Complete Streets Initiative to promote safer streets and make walking, biking, and transit riding more attractive and accessible. This will include the implementation of new policies and infrastructure upgrades such as protected bike lanes, wider sidewalks, bus shelters with more shade, and dedicated transit lanes.



Boulder City's Police Department is piloting an EV program to replace older patrol vehicles with electric models.

Alternative Fuel Vehicles

The **All-In Clark County Transportation Electrification Working Group (TEWG)** develops, coordinates and implements programs and strategies to support equitable transition to EVs across the region. Municipalities have also taken steps to electrify their fleets: **Boulder City's Police Department** is piloting an EV program to replace older patrol vehicles with electric models. The **City of Mesquite** is working to provide EV charging stations at local casinos, truck stops, and City properties along the highway to support the development of Interstate 15 as an Electric Vehicle Corridor.



ACTION PLAN

Connected and Equitable Mobility

The *All-In Community Plan* establishes goals, strategies, and actions for each focus area. These are highlighted in the summary matrix, along with indications of alignment with other regional and state plans.

Goal 1: Southern Nevada offers safe and equitable access to connected, multimodal transportation options.

Alignment

1.1 Reduce transportation demand by increasing capacity and reach of transit system.



- 1.1.A Fund and construct high-capacity transit (BRT/LRT) and fixed route RTC transit.
- 1.1.B Ensure transit access for seniors, veterans, youth, low-income populations, and people with disabilities.

1.2 Promote safe and accessible alternatives to single occupancy vehicle trips.



- 1.2.A Create public-private partnerships to develop "hubs" where docked micromobility options are strategically placed near highly trafficked locations.
- 1.2.B Identify areas to install high level-of-comfort bike infrastructure in high traffic corridors.
- 1.2.C Ensure new and replacement infrastructure provides for pedestrian safety, health, accessibility, and connectivity.

Goal 2: The transportation system minimizes energy use and eliminates fossil fuels.

2.1 Transition passenger and light-duty vehicles to zero emission vehicles.



- 2.1.A Establish incentives for electric vehicle upgrades for low-income drivers and people interested in used electric vehicles.
- 2.1.B Establish incentives to encourage installation of electric vehicle charging infrastructure at residential and commercial locations, including a pilot program for multi-family residential properties and underserved communities.
- 2.1.C Incentivize tourism-supporting fleets to drive and promote zero emission vehicles.
- 2.1.D Accelerate the electrification of ground support equipment at Harry Reid International Airport.
- 2.1.E Transition public light-duty fleet to alternative fuel vehicles.

2.2 Advocate for equitable access to fossil-fuel-free transportation resources.

- 2.2.A Prioritize fossil-free transportation resources in underserved areas.
- 2.2.B Establish a program to convert all school buses to electric.
- 2.2.C Prioritize charging infrastructure for medium and heavy-duty trucking at intermodal facilities in high exposure communities.
- 2.2.D Re-establish a Clean Cities Coalition for Southern Nevada.



Aligns with RTC's [On Board Mobility Plan](#) and/or [Access 2050: Regional Transportation Plan](#).



Aligns with [Nevada State Climate Strategy](#).

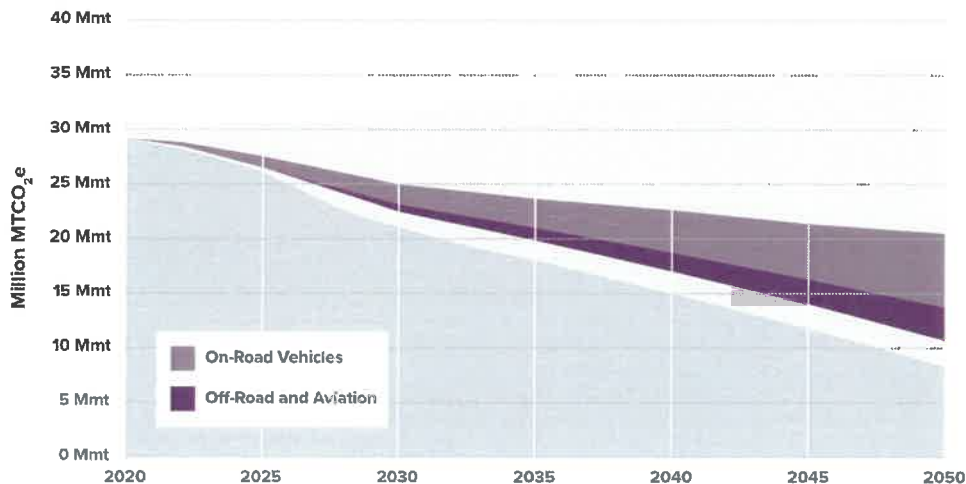


"I reduce emissions by limiting my vehicle usage. For most of college, I relied on walking and public transportation for travel."

CLARK COUNTY RESIDENT
WESLEY BELL DESCRIBING
HOW HE'S GOING "ALL-IN"

Pathway to Action

To reduce GHG emissions, the Clark County community must dramatically reduce the use of gasoline and diesel. On-road transportation, mostly personal cars, is the County's second-largest sector of GHG emissions (27%). Alongside investments in public transit and infrastructure for bicyclists and pedestrians, fast-tracking the transition to electric vehicles (EVs) will be key to reducing transportation emissions. Through a combination of regulations¹⁷ and industry commitments¹⁸, new car sales are projected to be fossil-fuel-free no later than 2040. Clark County will need to be prepared for transitions across the transportation sector which will collectively reduce over 8.6 million MTCO₂e by 2050.¹⁹



IMPACT OF ELECTRIC VEHICLES

The Pathways Analysis illustrates the potential for reducing emissions through high-impact strategies—in this case, electrifying on-road and off-road vehicles and aviation. See [Pathways to Reducing Emissions](#) for more information.

TRACKING PROGRESS

Monitoring these fundamental numbers will help demonstrate progress towards the goals.

In 2019, an average of 75.9% of U.S. workers drove alone in SOVs.²⁴

METRIC	BASELINE	YEAR	2030 TARGET	2040 TARGET
Residents Commuting in Single Occupancy Vehicles (SOVs)	78.2% County-wide ²⁰	2019	74%	71%
Annual EV Registrations	5,598 County-wide ²¹	2019	50,000	100,000
Average Monthly Transit Ridership	5.4 million ²²	2018-2019	7.9 million	9.9 million
Total Bicycle and Pedestrian Network Length	1,520 miles ²³	2017	1,700 miles	2,020 miles

Targets are derived from RTC's [On Board Mobility Plan](#) and the [Regional Bicycle and Pedestrian Plan for Southern Nevada](#)

Improved Tracking

Some actions in this plan cannot be monitored by metrics currently being tracked. Developing and monitoring additional metrics will improve knowledge of how actions are progressing.



Number of EV charging stations per capita.



Percent of school bus fleet converted to electricity per year.



Miles of road with sidewalk.

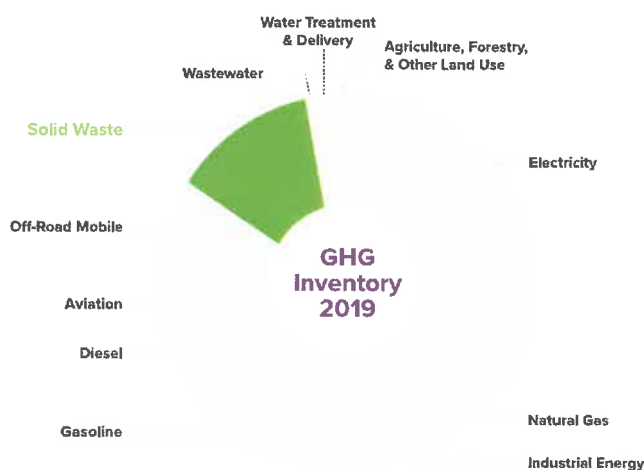


Diverse & Circular Economy

In our current, linear economy, we use energy to take resources from the Earth, make products from them, and then they eventually become waste. Designing products to be single-use and over consuming these resources is creating a waste issue that recycling alone cannot solve. Increasing resource efficiency and promoting circular business models offer an opportunity to reverse those trends while diversifying our economy.



Illustration 107451878 © Peter Varga | Dreamstime.com



Downstream emissions from solid waste disposal account for

12.5%

of all County-wide GHGs.²⁵

Connections to Climate Change

Although we may not see our trash again after we throw it away, the impacts of our waste are long-lasting. When waste, particularly organic waste, decomposes in a landfill, it produces methane, a greenhouse gas that is more potent and stays in the atmosphere longer than carbon dioxide. Thinking differently about our resources—expanding composting for food waste and incentivizing green jobs, for example—can lower emissions and benefit our economy in multiple ways.

BY THE NUMBERS



19.7%

Recycling and compost diversion rate in 2019, up from 8% in 2009²⁸



2,677,304 tons

of waste generated in Clark County sent to landfill in 2019, enough to fill Allegiant Stadium more than 33x²⁹



15,826

Clean energy jobs in Clark County as of 2019³⁰

Includes solar, wind, clean vehicles, battery storage, advanced biofuels, low-impact hydro, and other clean energy job areas.

THE ALL-IN VISION

Creating a robust and diversified economy that reimagines waste and resource use while investing in our human capital.

Leading by Example

Clark County's Technical Assistance Program

Clark County's Office of Community and Economic Development (OCED) is developing an economic assistance program (a financial award paired with technical assistance) to support long-term business recovery, resiliency, and capacity-building. This program will provide up to 12 months of business assistance services with capital funding to disadvantaged small businesses and nonprofit organizations in the wake of the Covid-19 pandemic.

Republic Services Recycling Operations

The Vegas Recycling Center, operated by **Republic Services**, can process more than 2 million pounds of material every day; it is the largest recycling facility in North America.²⁶ Republic Services is also opening a Polymer Center in 2023, which will be the first single-source facility for plastics recycling in the nation. The more we recycle, and recycle correctly, the less energy and raw materials are needed to produce the goods we use. In 2019, Clark County residents kept over 355,000 tons of solid waste out of the landfill, avoiding an estimated 878,000 MTCO₂e.²⁷





ACTION PLAN

Diverse and Circular Economy

The *All-In Community Plan* establishes goals, strategies, and actions for each focus area. These are highlighted in the summary matrix, along with indications of alignment with other regional and state plans.

Goal 1: Southern Nevada maximizes utilization of waste resources.		Alignment
1.1	Minimize waste generation throughout Clark County.	
1.1.A	Identify opportunities and create local legislation to replace single use plastics and polystyrene.	
1.1.B	Support the growth of zero-waste and refill shops and incentivize businesses to offer consumer goods without individual packaging.	
1.1.C	Develop Zero-Waste Toolkits for Residents and Small Businesses.	
1.2	Divert all possible reusable, recyclable, and organic materials from the landfill.	
1.2.A	Identify resources and implement tactics that remove organic waste from the landfill.	
1.2.B	Expand food diversion programs in coordination with the resort corridor, convention center, and other food industry sources.	
1.2.	Create a Sustainable Materials Management task force to assess opportunities to reduce waste from construction, major renovations, and demolition projects.	
Goal 2: The region's economy is diverse and in alignment with innovation and sustainability.		
2.1	Foster innovation and sustainability in existing businesses.	
2.1.A	Build partnerships with existing Green Business Programs that provide education, training, financial and technical assistance.	
2.2	Promote the region as a hub of innovation and sustainability to encourage economic growth.	
2.2.A	Establish incentives to build a sustainable technology industry, such as solar manufacturing, solar process heat, and battery recycling.	
2.2.B	Create a Sustainable Innovation Incubator focused on recruiting and growing businesses that drive innovative climate solutions.	
2.2.C	Design and promote a travel offset program for tourists and conventions to fund local sustainability programs.	
Goal 3: Workforce development opportunities are abundant and accessible to all.		
3.1	Develop and ensure access to training and education on skills needed for the innovation economy, particularly among the region's underserved communities.	
3.1.A	Partner with trade unions to provide worker incentives and host trainings on skills needed for an innovation economy.	



Aligns with [Nevada State Climate Strategy](#).

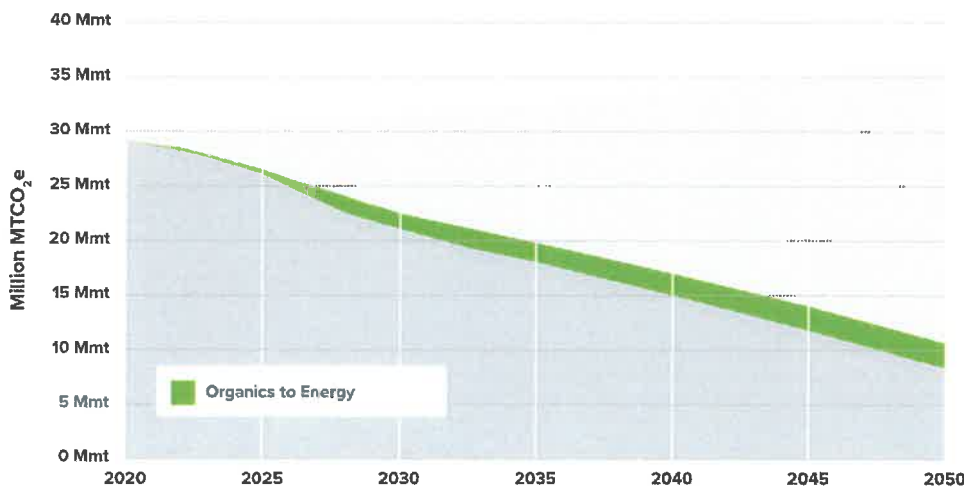
"I use reusable shopping bags and reusable water containers whenever possible. When my family and I go hiking, we do our part to protect the environment by cleaning up after ourselves and not leaving trash and other debris behind."

CLARK COUNTY RESIDENT YOLANDA FLORES
DESCRIBING HOW SHE'S GOING "ALL-IN"



Pathway to Action

The decay of organic matter, like food scraps or yard waste, in a landfill generates methane gas, some of which leaks from even the most sophisticated gas collection systems. The best way to eliminate leaks completely is to avoid sending organic matter to the landfill and instead capture all the methane generated in a controlled environment, like an anaerobic digester, where we can also maximize the clean-energy potential of this resource. This double-acting strategy creates a big win for the climate by focusing on the largest source of methane in the County (12.5% of overall GHG emissions) while creating a fossil free fuel source that can be used in a range of applications. Implementing a system to divert organic waste away from landfills will enable Clark County to avoid up to 1.3 million MTCO₂e per year by mid-century.³⁴



IMPACT OF ORGANICS TO ENERGY

The Pathways Analysis illustrates the potential for reducing emissions through high-impact strategies—in this case, implementing an organic waste to energy system. See [Pathways to Reducing Emissions](#) for more information.

TRACKING PROGRESS

National average household diversion rate is 32.1%³⁵

Monitoring these fundamental numbers will help demonstrate progress towards the goals.

METRIC	BASELINE	YEAR	2030 TARGET	2040 TARGET
Household Diversion Rate County-wide	19.7% ³¹	2019	40%	70%
Tons of Organic Waste Diverted from Landfill County-wide	166,560 tons ³²	2019	720,000 tons	1,600,000 tons
Energy Efficiency Jobs in Clark County	8,400 jobs ³³	2019	10,000 jobs	12,000 jobs

Targets are derived from Nevada Recycling and Waste Reduction Report (2019) and the [Nevada State Climate Strategy](#).

Improved Tracking

Some actions in this plan cannot be monitored by metrics currently being tracked. Developing and monitoring additional metrics will improve knowledge of how actions are progressing.



Number of individuals trained in green industries, for example via incubator or skilled trades partnership.



Tons of waste generated by sector.



Full characterization of the mix and resource potential of materials generated by each sector.



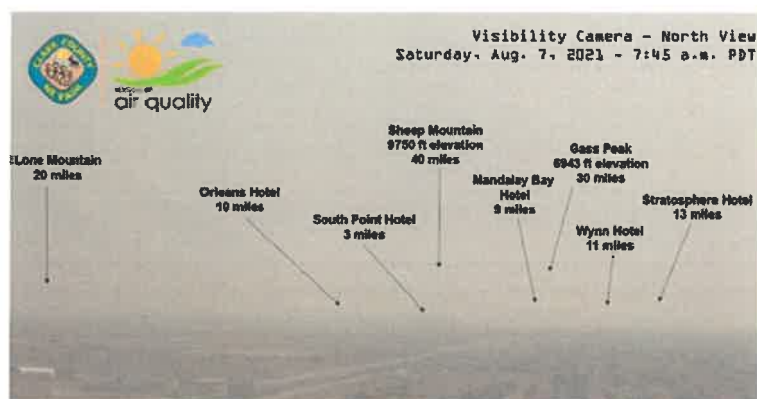
Resilient & Healthy Community

Climate change is already impacting Clark County through more extreme heat days, more pervasive drought, and increasingly intense storms. These climate hazards create public safety threats for residents and businesses and have significant implications for the local economy, infrastructure, human health, and well-being. A healthier, better connected, and more prepared community will be better able to adapt to changing climate conditions. Through the *All-In Community Plan*, Clark County has made a commitment to investing in natural resources that improve human health and reduce heat vulnerability, as well as social systems that enhance community resiliency.

Connections to Climate Change

While Clark County residents are familiar with hot temperatures, extreme heat events continue to increase in severity and frequency, causing significant stress to people and ecosystems. As temperatures increase, drought conditions are expected to worsen, which has significant implications for water access for people, businesses, and our natural resources.

Wildfires significantly impact air quality for Clark County residents, too. Between 2017 and 2021, about 73% of the ozone exceedance of the Environmental Protection Agency's ambient air quality standard was attributed at least in part to smoke from local or regional wildfires. Wildfire smoke has become so common that in 2022 Clark County issued its first seasonal smoke advisory, lasting the duration of the summer.³⁶



Low visibility and poor air quality conditions due to wildfire smoke in August 2021.

Image source: Clark County Department of Environment & Sustainability

BY THE NUMBERS



2-6%

tree coverage in areas recording high urban heat compared to 10-20% in neighborhoods recording lower temperatures³⁷



11

smoke advisory events in 2021³⁸



HEAT-RELATED DEATHS
IN CLARK COUNTY

284 between 2012-2016³⁹

833 between 2017-2021⁴⁰

THE ALL-IN VISION

Preparing our community for climate-driven emergencies through strengthened natural and social systems.

Leading by Example

Southern Nevada Extreme Heat Vulnerability Analysis

[Southern Nevada Extreme Heat Vulnerability Analysis](#), led by the **RTC** and **Southern Nevada Strong**, identified communities and locations where residents are most vulnerable to extreme heat. While everyone in Clark County is exposed to extreme temperatures, heat is not experienced equally. Low-income people, people with pre-existing health conditions, seniors and youth, and people living in [urban heat island](#) communities are especially vulnerable when it gets hot. The study features an [interactive map](#) of heat exposure and other variables that residents can use to explore their neighborhoods.

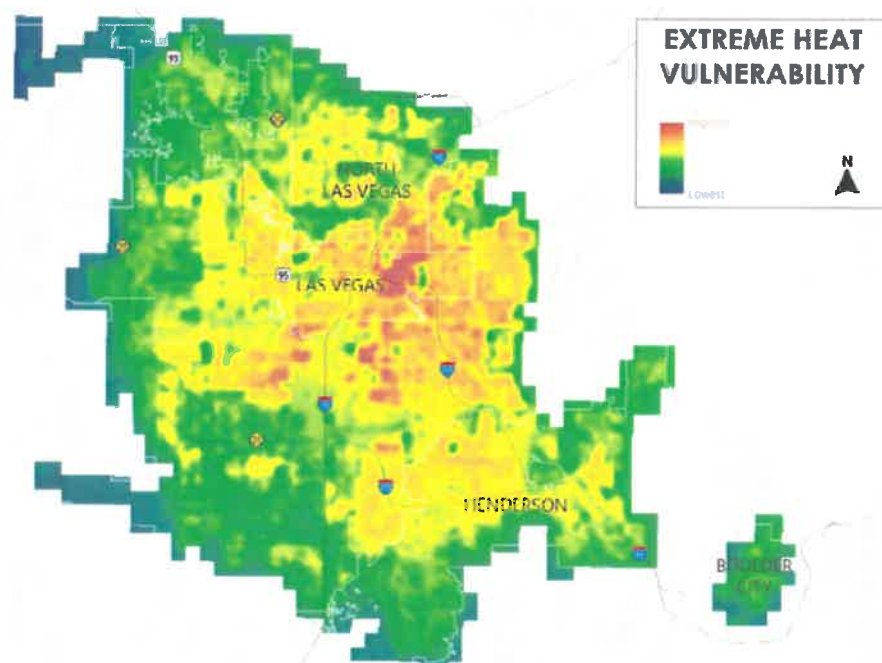


Image Source: RTC, Southern Nevada Strong



ACTION PLAN

Resilient and Healthy Community

The *All-In Community Plan* establishes goals, strategies, and actions for each focus area. These are highlighted in the summary matrix, along with indications of alignment with other regional and state plans.

Goal 1: All residents are prepared for the impacts of climate hazards.		Alignment
1.1 Prepare for and reduce the impacts of climate hazards on Clark County residents and visitors.		
1.1.A	Protect workers from heat, toxins, and other dangerous work conditions through advocating for and educating about safety standards.	
1.1.B	Expand Community Emergency Response Team (CERT) programs.	
1.1.C	Offer financial assistance for low-income populations and small businesses to install weatherization and cooling measures.	
1.1.D	Establish a network of Resilience Hubs	
1.2 Enhance emergency preparedness and response resources for all residents.		
1.2.A	Evaluate effectiveness and accessibility of existing emergency preparedness communications materials.	
1.2.B	Partner with transportation providers to provide accessible transportation to cooling centers, shelters, and resilience hubs.	
1.2.C	Establish a neighborhood outreach program to disseminate preparedness kits to residents and small businesses.	
Goal 2: Equitable access to resources and services for physical and mental health are provided to all community members.		
2.1 Incorporate health and wellness into residents' everyday activities across the County.		
2.1.A	Implement design standards to mitigate heat exposure.	
2.1.B	Integrate mobile crisis intervention and outreach into the "continuum of care."	
Goal 3: Natural spaces are protected, enhanced, and expanded to address the effects from a changing climate.		
3.1 Maintain and expand healthy vegetation that protects natural habitats and mitigates the impacts of climate change.		
3.1.A	Enhance, protect, and maintain drought-tolerant plantings in heat vulnerable neighborhoods.	
3.1.B	Enhance existing parks and open spaces to increase adaptive capacity in underserved communities.	
3.1.C	Review and enforce design standards to reduce impacts on natural habitats.	
	Aligns with 2022 Clark County Climate Vulnerability Assessment: Resilience Recommendations .	



"My vision would be very diverse and interconnected communities with access to clean water and fresh produce."

CLARK COUNTY RESIDENT MARIO GUTIERREZ SHARING HIS VISION FOR RESILIENT COMMUNITIES

Pathway to Action

The *All-In Climate Vulnerability Assessment* identified opportunities for Clark County to strengthen its social and natural systems, including:

- Expanding resources for addressing extreme heat (e.g., cooling centers) and poor air quality (e.g., masks) in communities that have higher sensitivity to these conditions;
- Coordinating with community organizations and service providers to share information with residents;
- Investing in Resilience Hubs to enhance community resilience and quality of life;
- Implementing heat reduction strategies (e.g., shade structures, cool materials, expanding tree canopy; and)
- Protecting workers from extreme heat events.



Resilience Hub

support and resources that increase community and personal adaptive capacity, strengthening resilience before, during, and after natural or human-made disasters.⁴¹

TRACKING PROGRESS

Monitoring these fundamental numbers will help demonstrate progress towards the goals.

The national median energy burden is 31%.⁴⁴

METRIC	BASELINE	YEAR	2030 TARGET	2040 TARGET
Share of Households with a High Energy Burden >6%	18%	2020	10%	5%
Transit Stops with Shade Structures	43% ⁴²	2022	75%	100%
People Living in Areas With High Heat Vulnerability	115,000 people ⁴³	2022	86,250 people	28,750 people

Improved Tracking

Some actions in this plan cannot be monitored by metrics currently being tracked. Developing and monitoring additional metrics will improve knowledge of how actions are progressing.



Percent of vulnerable populations with access to cooling center or Resilience Hub.



Number of households receiving direct outreach or communications.

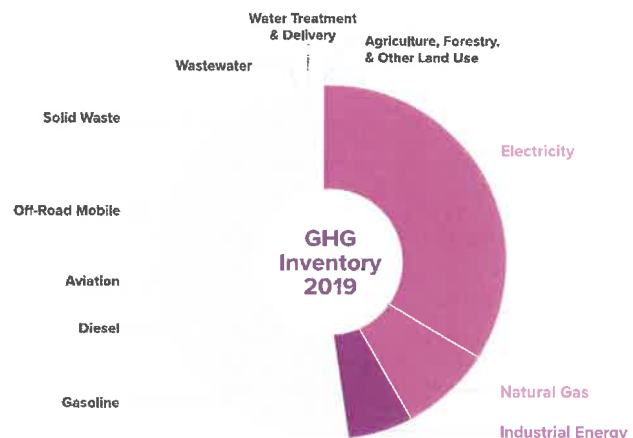


Smart Buildings & Development

Buildings contribute half of County-wide greenhouse gas (GHG) emissions. As Clark County continues to grow, where and how we develop will significantly influence the cost of infrastructure, the need for transportation, the financial burden to residents, and the resilience of neighborhoods and businesses. Together, we can guide development to prioritize safe, connected, and affordable neighborhoods and transition all our homes and businesses to be carbon neutral through efficiency and renewable energy.

47.3%

of County-wide GHG emissions come from electricity and natural gas use in buildings and industry.



Connections to Climate Change

Buildings are the largest source of GHG emissions in Clark County. As the frequency and intensity of extreme weather and temperatures increase due to climate change, demand will also increase for cool and safe spaces to protect people from the elements. For example:

- Under extreme heat conditions, there is an increased energy and utility cost burden on the housing system due to demand for cooling.
- Neighborhoods with older homes and mobile homes are more likely to have lower energy efficiency or no air conditioning.

BY THE NUMBERS



348

buildings that have earned LEED certification in the County since 2009⁴⁵

Leadership in Energy & Environmental Design (LEED) is a common green building standard



6x

increase in efficiency program uptake is needed in Clark County to meet GHG reduction targets⁴⁶



70%

of homes use natural gas as the primary heating fuel, with 90% using natural gas in some way⁴⁷

THE ALL-IN VISION

Driving the transition to smart and carbon neutral buildings that are healthy, efficient, and affordable.

Leading by Example

Property Assessed Clean Energy (PACE) Financing

The **Cities of Las Vegas and Henderson** created Energy Improvement Districts to allow commercial, industrial, and multifamily building owners to pay for energy efficiency and renewable energy through a Property Assessed Clean Energy (PACE) program. PACE allows building owners to make energy upgrades without big up-front costs or loans and pay for the upgrades over a long period of time. **Clark County** is also developing a PACE program. These programs can serve as a model for other jurisdictions looking to promote creative financing mechanisms for energy projects.

Building Energy Management

In 2021, **Clark County** started using a platform called EnergyCAP, a comprehensive energy management system that gives the County insight into its buildings' energy use. Dashboards display energy use by location to help staff track and conserve energy and reduce emissions.

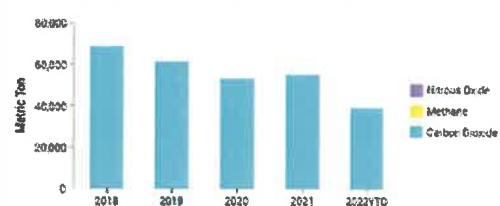


Annual Energy Use (kBtu)



Filter by Building & Building Group

Annual Greenhouse Gas Emissions from Energy Use (MT)





ACTION PLAN

Smart Buildings and Development

The *All-In Community Plan* establishes goals, strategies, and actions for each focus area. These are highlighted in the summary matrix, along with indications of alignment with other regional and state plans.

Goal 1: Buildings in Clark County are efficient and model net zero energy best practices.

Alignment

1.1 Reduce energy use and GHG emissions from existing buildings.



- 1.1.A Establish and provide technical assistance for a commercial and public building benchmarking and disclosure ordinance for buildings 100,000 sq ft and larger.
- 1.1.B Establish a residential home labeling program.
- 1.1.C Launch a County-wide [deep energy retrofit](#) program leveraging a stacking funding mechanism, prioritizing inefficient and low-income neighborhoods.

1.2 Establish uniform regional requirements that reduce emissions in new buildings.

- 1.2.A Advocate for legislation to establish automatic adoption of updated IECC codes and create an enforceable time limit for subsequent local adoption.
- 1.2.B Establish readiness building code requirements to allow for rooftop solar, energy storage, electric HVAC and appliances, and electric vehicle charging at commercial and residential buildings.

Goal 2: Neighborhoods throughout Clark County are livable, resilient, and provide diverse housing options.

2.1 Minimize the impact of development on Clark County's community assets and resources.

- 2.1.A Create zoning and incentives to prioritize infill, mixed use, higher-density, and transit-oriented development.
- 2.1.B Pilot alternative development demonstration projects that showcase diverse uses and housing types as well as best practices in efficiency and resilience.



Aligns with [Nevada State Climate Strategy](#).

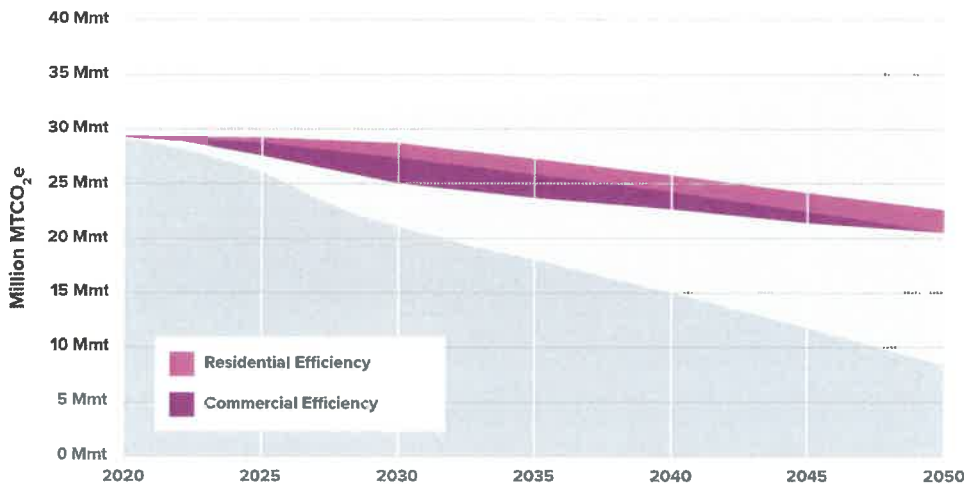
"My kids motivate me to take climate action, so I just purchased solar for my home. I hope one day that they take over my house and benefit from my actions I take today!"

CLARK COUNTY RESIDENT
DIANA OSBORN DESCRIBING
WHY SHE'S "ALL-IN"



Pathway to Action

Achieving a completely renewable electricity grid requires lowering demand to meet the supply. Electricity and natural gas use in building and industry currently contributes almost half (47.3%) of all emissions in the County. Immediate and aggressive (six times what the current programs are delivering) action on efficiency is necessary to succeed in this energy transition. By 2050, all existing 715,000 detached residential structures and 406 million sq ft of commercial space will need to undergo deep efficiency measures. Achieving this target will enable Clark County to reduce emissions by 2.1 million MTCO₂e.⁴⁹



IMPACT OF DEEP ENERGY RETROFITS

The Pathways Analysis illustrates the potential for reducing emissions through high-impact strategies—in this case, improving energy efficiency in residential and commercial buildings. See [Pathways to Reducing Emissions](#) for more information.

TRACKING PROGRESS

Monitoring these fundamental numbers will help demonstrate progress towards the goals.

METRIC	BASELINE	YEAR	2030 TARGET	2040 TARGET
Average Residential Energy Use Intensity (EUI)	88 MMBtu/household ⁴⁸	2019	77 MMBtu/household	64 MMBtu/household
GHGs Attributable to Buildings in Clark County	14,511,000 MTCO ₂ e	2019	9,043,000 MTCO ₂ e	5,884,000 MTCO ₂ e
Commercial Square Footage with Publicly Disclosed Energy & Water Use	0%	2022	60%*	85%*

* Targets represent implementation of the benchmarking and disclosure of commercial buildings that are 100,000+ sq. ft. through 2030 and 20,000+ sq. ft. by 2040.

Average EUI for a single family home in the Western US is 74.1 MMBtu/Household.⁵⁰

Improved Tracking

Some actions in this plan cannot be monitored by metrics currently being tracked. Developing and monitoring additional metrics will improve knowledge of how actions are progressing.



Number of fully electric buildings.



Reported Building Energy Use Intensity (EUI).



Number of households/commercial entities participating in energy efficiency programs.



Total building-energy grant and incentive dollars invested in Clark County.



Sustainable Water Systems

Drought, evaporation, pollution, and land use choices impact the quantity and quality of our water supply from the Colorado River and Lake Mead. Current and projected drought will limit the availability of safe drinking water, threatening public health, our economy, and the many systems that depend on water to operate. To ensure a sufficient water supply for our growing region, we must invest in and maintain efficient water systems, prevent pollution, and conserve water resources.

Connections to Climate Change

Research suggests that the Southern Nevada region will continue to experience more intense and longer drought conditions, fueled by hotter temperatures and a reduction in snowpack in states within the Colorado River Basin due to climate change. Lake Mead's water level has declined steadily since the early 2000s. As of June 2022, water levels were at 28% of normal capacity, the lowest since it was filled in the 1930s. Drought worsens water quality issues due to higher concentrations of nutrients or contaminants, which has implications for water treatment and natural ecosystems.



BY THE NUMBERS



52%

decrease in water use per person between 2002 and 2019, even while population has grown by 48%.⁵¹



under 5 inches

of precipitation on average in 2021 in Clark County.⁵²

The state of Nevada's average is 10 inches per year, which earns Nevada the designation of driest state in the country.⁵³



197 million

square feet of lawn converted to water smart landscapes with Southern Nevada Water Authority rebates since 1999.⁵⁴

THE ALL-IN VISION

Conserving and protecting our water resources while developing sustainable systems for water delivery, stormwater management, and wastewater treatment.

**WE'RE NOT
PLAYING
AROUND**



USELESS GRASS has got to go.

Nevada law requires the removal of useless, decorative grass in medians, commercial developments, roundabouts, HOAs and common areas.

REPLACE GRASS with water-smart landscaping
GET CASH INCENTIVES WHILE THEY LAST

start today at snwa.com

Leading by Example

Increasing Efficiency Through Non-Functional Turf Ban

Nevada [enacted a law](#) in 2021 prohibiting **Southern Nevada Water Authority (SNWA)** to deliver water to irrigate decorative grass in streetscapes, medians, parking lots, and other areas where it does not serve a functional purpose. The law aims to help businesses conserve nearly 10% of Southern Nevada's water supply and is estimated to save more than 9.5 billion gallons per year once fully enacted.

9.5 billion gallons

of water may be saved per year once Nevada's law is fully enacted.



ACTION PLAN

Sustainable Water Systems

The *All-In Community Plan* establishes goals, strategies, and actions for each focus area. These are highlighted in the summary matrix, along with indications of alignment with other regional and state plans.

Goal 1: Water supply is high quality and sustainable.

Alignment

1.1 Protect and enhance the quality of Southern Nevada's water resources.

- 1.1.A Identify areas for targeted vegetation enhancement and restoration due to proximity to sensitive water resources.
- 1.1.B Establish pilot projects to explore innovative technologies for removing pollutants from non-point source runoff.

1.2 Improve Southern Nevada's resilience to drought.



- 1.2.A Transition all public property to drought-resilient landscaping.
- 1.2.B Establish an efficiency review policy and process for new, large water users that encourages efficient development and disincentivizes consumptive uses.
- 1.2.C Expand existing guidebooks and training on incorporating drought tolerant [green infrastructure](#) onto existing properties.

Goal 2: Southern Nevada is a national leader on water conservation and efficiency.

2.1 Reduce or eliminate consumptive water uses.



- 2.1.A Develop a program to transition industrial and commercial customers to efficient, dry cooling technologies.
- 2.1.B Expand submetering and rates to comply with outdoor watering laws.

2.2 Require aggressive water conservation in new development.



- 2.2.A Develop and implement uniform regional performance standards to help local jurisdictions evaluate water demands of planned development.
- 2.2.B Develop tools and guidance for developers to estimate water demand of proposed projects and report results to local jurisdictions.

2.3 Increase water conservation in existing buildings.



- 2.3.A Train and incentivize building tradespeople to identify and repair water leaks.
- 2.3.B Identify barriers to and implement solutions for participation in SNWA's commercial and industrial Water Efficient Technologies program.

Goal 3: Water and wastewater infrastructure is reliable, safe, resilient, and efficient.

3.1 Enhance resilience of the water system and alignment of regional policies.



- 3.1.A Align all jurisdictions' water policies and programs with existing studies and water resource plans.
- 3.1.B Ensure power grid redundancy for water and wastewater transmission systems.



Aligns with Southern Nevada Water Authority 2021 Water Resource Plan.

Pathway to Action

The *All-In Climate Vulnerability Assessment* identified opportunities to increase resilience of the region's water systems, including:

- Continuing to advance regional collaboration on water resiliency planning and management;
- Working with local agencies to integrate climate-related risks (e.g., projected water levels, water quality) into wastewater infrastructure design and maintenance plans; and
- Promoting conservation and preservation practices to protect and enhance water quality and maintain riparian and aquatic habitat connectivity.

"We go *All-In* by advocating and protecting endangered species such as the Moapa Dace fish!"

CLARK COUNTY RESIDENTS EMILY NELSON AND REBECCA GRIMM DESCRIBING HOW THEY'RE GOING *ALL-IN* TO PROTECT WATER QUALITY AND SOUTHERN NEVADA WILDLIFE



TRACKING PROGRESS

Monitoring these fundamental numbers will help demonstrate progress towards the goals.

METRIC	BASELINE	YEAR	2030 TARGET	2040 TARGET
Annual Water Consumption	123 gallons per capita per day (GCPD) ⁵⁵	2020	98*	86*
Southern Nevada's Consumptive Use of Colorado River Resources	256,000 acre-feet per year (AFY)	2020	225,000 AFY**	200,000 AFY**

* 2030 Water Consumption target is two-thirds of progress towards SNWA goal of 86 by 2035.

** Targets calculated based on % reduction between 2002 and 2020. Not targets set by SNWA.

Improved Tracking

Some actions in this plan cannot be monitored by metrics currently being tracked. Developing and monitoring additional metrics will improve knowledge of how actions are progressing.



Number of trained tradespeople in leak identification and repair.



Outdoor and commercial water consumption via submetering.



Number of plan review processes incorporating water use efficiency considerations.



Clark County Introductions

MARCI HENSON

Director, Department of Air Quality

JODI BECHTEL

Assistant Director, Department of Environment and Sustainability

SAM BAKER

Sustainability Program Administrator

Samantha.Baker@ClarkCountyNV.gov

Allin@ClarkCountyNV.gov

<https://plan.allinclarkcounty.com/>



GOING ALL-IN: IMPLEMENTING THE PLAN

Clark County is *all in* on climate action.

Implementation Priorities 2023-2026

Given that scientists agree there is less than a decade remaining⁵⁶ to dramatically reduce GHG emissions to avoid the worst of climate change, and that climate impacts are already a reality for Southern Nevada, Clark County launched the ***All-In Clark County Sustainability and Climate Action Initiative***. The *All-In Community Plan* was built as a tool to facilitate immediate implementation to meet the County's aggressive emissions reduction goals and enhance the community's resilience to climate change.

The process for developing the *All-In Community Plan* focused on identifying and evaluating a set of practical, proven actions that will yield the greatest impact for the region over the next three to five years. The process also intentionally identified conditions that could prevent or slow down implementation, and then designed solutions to these challenges. These solutions are foundational to overall successful implementation of the *All-In Community Plan* and achievement of its goals and therefore must be prioritized. These are the solutions the County is prepared to lead on over the next three years.

Implementation Challenge

County does not have authority or jurisdiction to implement all actions in this Plan.

Community understanding of climate change impacts must improve to spur the action needed to meet identified goals.

Existing energy programs are not reducing emissions quickly enough. Residents and businesses may require additional financial support to implement measures.

Climate action plans often do not provide the level of detail necessary to quickly implement an action.

Implementation can get off track without regular review of targets and metrics. Transparency and accountability are necessary to build community trust.



All-In Solution



- Regional collaboration
- County-wide climate education program
- Energy "program stacking"
- Implementation blueprints
- Tools for sharing progress

Upon approval of the *All-In Community Plan*, the County will begin implementation of two cross cutting strategies and two high impact actions.

Cross-Cutting Strategies

Cross cutting strategies are those that cut across the focus areas in the plan and lay the foundation for implementation of all actions moving forward and are therefore essential to short and long-term success. Throughout the planning process, two themes emerged as being foundational to creating a more sustainable and resilient future for Southern NV. These were regional collaboration and community education. The proposed *All-In* Regional Collaborative and the County-Wide Climate Education Program are detailed further in this section of the plan.

High Impact Actions

The GHG Pathways Analysis identified aggressive action to reduce energy use in existing buildings as the number one opportunity to meet the 2030 GHG reduction target.⁵⁷ Existing buildings are often one of the toughest areas for communities to address and therefore, we must get to work now. The County can support a reduction in both energy and water use in buildings through the swift implementation of [Action 1.2.B under Clean & Reliable Energy](#) and [Action 11.C under the Smart Buildings and Development](#) focus area. Both of these actions leverage a program stacking funding model for the region. This funding mechanism is a catalyst for aggressive and equitable implementation of existing and potentially new weatherization, energy efficiency, and water conservation programs. From energy and water use and cost savings to improved comfort and indoor air quality, these actions contribute to more resilient buildings and more affordable homes. All of which play an essential role in the region's sustainable future.



**ALL-IN REGIONAL
COLLABORATION**



**COUNTY-WIDE CLIMATE
EDUCATION PROGRAM**



**ENERGY
"PROGRAM STACKING"**



CROSS-CUTTING STRATEGIES

ALL-IN REGIONAL COLLABORATION

REGIONAL COLLABORATION OPPORTUNITIES TO SUPPORT ALL-IN



Develop and consider adoption of a model ordinance for electric vehicle charging infrastructure in new development.



Adopt the updated International Energy Conservation Code (IECC).



Develop a public education program on climate change impacts, mitigation, and resilience in Southern Nevada.



Support establishment of an energy efficiency and deep energy retrofit program stacking model.



Identify and pursue federal climate change funding for regional priorities.



Collect and share data on action implementation.

The climate challenges that the *All-In Community Plan* address transcend the boundaries of any one government's jurisdiction. Intergovernmental collaboration has proven to be efficient and effective in addressing these challenges in other regions of the country. Southern Nevada can leverage the collective resources of its local and regional governmental entities to ensure the long-term social, environmental, and economic resilience of the entire region.

A regional collaboration will ensure a coordinated approach to climate planning and provide support for governments and agencies that are implementing the actions in the *All-In Community Plan* and other relevant regional plans. Clark County will take the lead on facilitating the design and launch of this regional collaboration to ensure the *All-In Community Plan* delivers on community sustainability and resilience.

Goals

The primary goals for the regional collaboration are to:

Foster Convening and Capacity Building—regional collaboration can provide a structure to convene members, coordinate strategies and actions, share lessons, discuss challenges, build partnerships, and receive expertise from others to build upon current knowledge and capacity for addressing climate change through organizations in Southern Nevada.

Deliver Regional Public Education and Outreach—regional collaboration can provide a coordinated, unified, and regional approach to public education and stakeholder engagement on issues related to climate planning and actions.

Take Action on Climate Solutions—regional collaboration can produce and house regional and downscaled climate data, perform analyses to make better informed decisions, jointly commission necessary research from academia and/or research organizations, and track regional progress toward climate goals. The collaboration can also support the development of model plans, policies and projects that result in a more coordinated regional response to climate change.

Share Funding and Resources—as appropriate, regional collaboration can endeavor to share financial, human, and technological resources to further the shared goals of the region, including regional applications for new funding opportunities that yield regional beneficial outcomes.



CROSS-CUTTING STRATEGIES

Utilize personally relevant content

Enable learners to experience the scientific process

Address misconceptions

Incorporate engaging and interactive learning

Incorporate local school or community projects for participants to take action

Explore and navigate disagreements and controversial issues

COUNTY-WIDE CLIMATE EDUCATION PROGRAM

As is suggested in the name, the *All-In Community Plan* goals will only be met if everyone does their part. Clark County facilitated this extensive and inclusive process for the entire region to ensure everyone was at the table from the beginning. One area of need that was repeatedly mentioned by nearly all participants was that of coordinated education and outreach on climate change and what it really means for the region and its future.

Almost every action included in the *All-In Community Plan* would benefit from some level of community and stakeholder education, as the success of many actions rely on individuals, businesses, or whole industries to act quickly. Rather than identify a separate education and outreach action in each focus area, it was decided that a County-wide climate education program was necessary as a cross-cutting strategy.



A comprehensive, coordinated education and outreach program can enhance climate literacy and help the community connect disruptions to life in Southern Nevada with climate impacts, as well as educate them on opportunities to correct. To inspire people to act will require information from a trusted source, consistent messaging, and enabling environments. Tackling this important task as one region will bring far more value and consistency than if each jurisdiction were to implement their own program.

Clark County will take the lead on and provide the initial funding to design and launch the County-Wide Climate Education Program. This program will be designed based on best practices and will follow the model developed through research from the University of Florida,⁴⁹ on the key components of an effective climate change education program, highlighted at left.

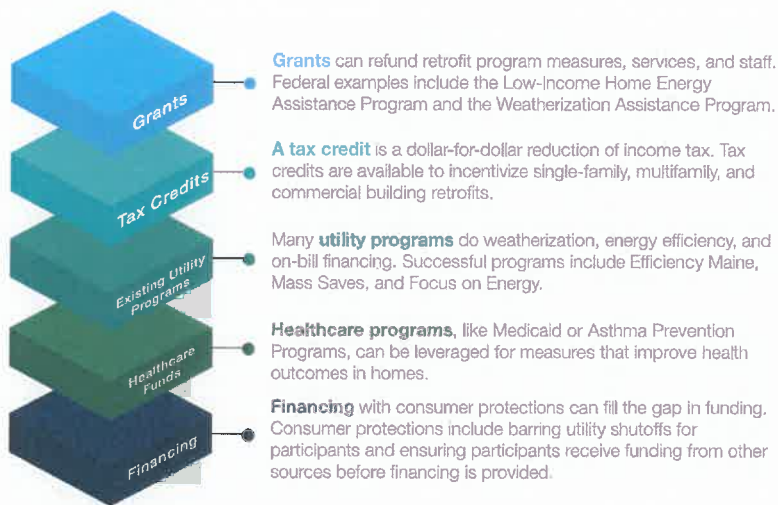


HIGH IMPACT ACTIONS

ENERGY “PROGRAM STACKING”

“Program stacking” creates one-stop shops that can collect funding across a wide variety of programs and drive energy efficiency far beyond what is achievable through existing programs hosted by utilities and funded by utility customers.⁵⁸ Program stacking also maximizes other benefits like health and safety, home comfort, and reduced utility bills. For example, the American Council for an Energy Efficient Economy notes that if weatherization programs targeted common health risks such as asthma and exposure to extreme temperatures, “they could save more than \$228 million due to avoided health harms. Those savings could reach \$2.9 billion over 10 years.”⁵⁹ Therefore, the stacking finance mechanism can be a catalyst to both mitigate and adapt to a changing climate.

The maximum benefit would come from the creation of a service delivery organization which can coordinate Program Stacking across utility, state, and federal programs, as well as County or regional agency incentives, like water saving rebates.



A program stacking model would likely increase the effectiveness of existing programs by:

Integrating health services into energy efficiency to attract additional streams of funding which, when combined, make the program more cost-effective

Coordinating services to serve more people and providing support through complex application processes to avoid the issues that commonly lead to rejected or deferred applications in smaller programs

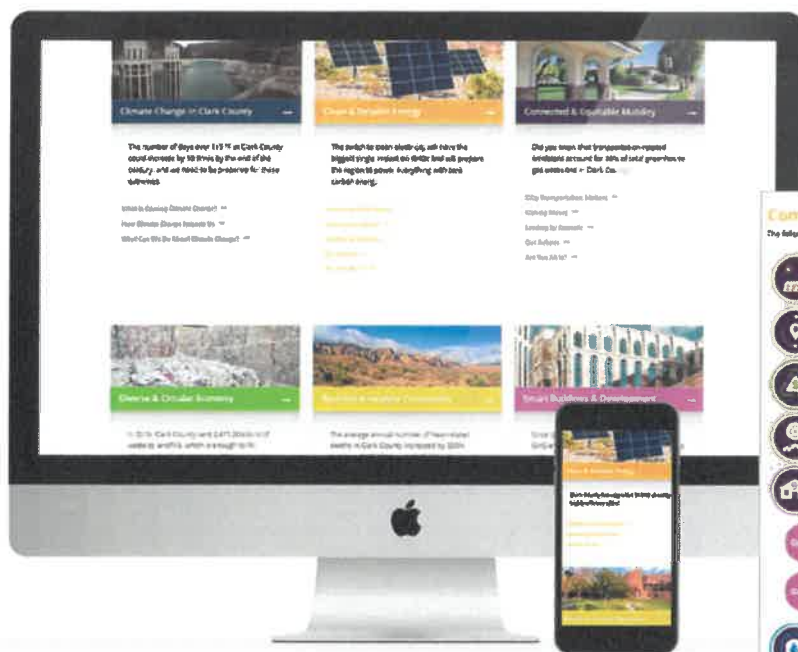
Leveraging funds from federal agencies such as the Department of Energy and Department of Housing and Urban Development. Funding trends show more support for comprehensive services to housing authorities, tribes, and other entities to implement energy conservation measures alongside other programs to create more viable, mixed-income communities and green improvements to affordable housing.

Program stacking can create more equitable, healthy and energy efficient communities while delivering the **six-fold increase in efficiency programs** necessary to reach Clark County’s greenhouse gas reduction targets.⁶⁰

Program stacking is relevant to two key actions in the *All-In Community Plan*: [Clean & Reliable Energy Action 1.2.B](#) and [Smart Buildings and Development Action 11.C](#). Determining the best way to implement this in Southern Nevada will be a top priority for Clark County over the next three years.

Implementation blueprints provide the specifics needed to get started quickly with an *All-In* action. Blueprints outline which department, agency, or non-profit can lead and which can support or collaborate, how long the initial implementation will take, and provide detailed steps to achieve the action. Blueprints help the action's champion anticipate barriers and uncover opportunities. They help implementors to think through how the action might impact social equity, the roles that partners might play, what outreach or education is necessary for the action to be successful, and what other benefits the action could bring. The implementation blueprint template will be used as an internal guide as actions are prioritized for implementation.





The *All-In* Dashboard will turn the Community Plan into a living, dynamic, and interactive experience.



Tools for Sharing Progress

As Accountability and Open and Inclusive Government are core values for Clark County, publicly tracking and reporting progress toward goals and implementation of actions is paramount. Transparency is also a guiding principle of the *All-In* Initiative. The County already provides transparency on the status of the *All-In County Operations Plan* through an online dashboard. This dashboard has been updated to integrate the goals, metrics, and actions from the *All-In Community Plan* to provide ongoing information and updates to the public.

Analyzing key metrics data before and after implementation help determine if the completed action is achieving the emissions reductions and other resilience benefits expected. The County has committed to deliver formal progress reports every two years and a full plan review every five years.

Online Dashboard

The *All-In* Dashboard will turn the *All-In Community Plan* into a dynamic and interactive experience. The Dashboard will serve as an information hub for everyone involved in implementing the *All-In Community Plan*—from local governments and agencies across the county, to businesses, NGOs, and households. The Dashboard can be easily and frequently updated with new data, status of actions, and fresh opportunities for organizations or individuals to participate in climate action.

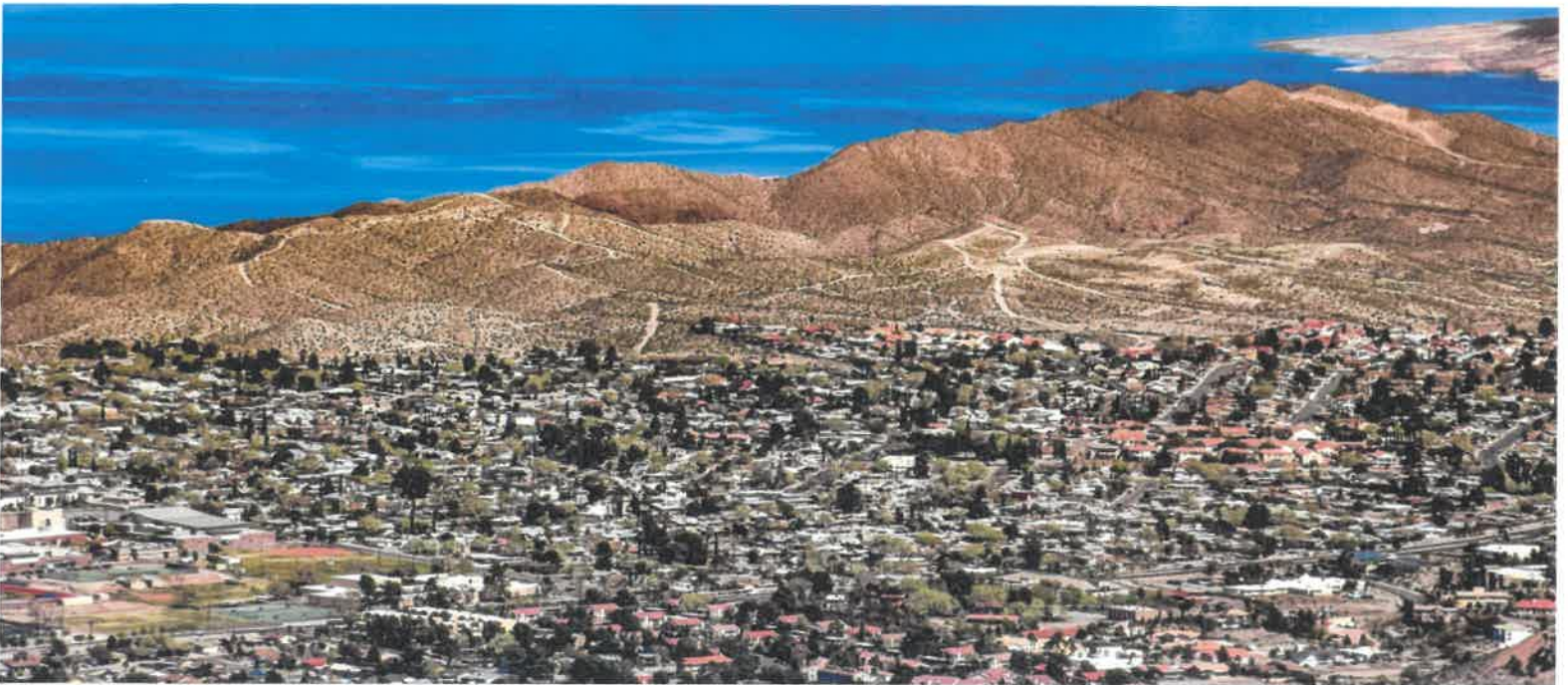
Biennial Progress Reports

Progress reports provide transparency to the community, accountability for all the action champions, and insights into success of implementation. Elements of the *All-In Community Plan*, such as actions and metrics, will be reviewed at least biennially, then analyzed to see if adjustments are needed to any implementation efforts. Clark County needs to quickly create meaningful action from the *All-In Community Plan*—biennial reporting will help maintain momentum and identify shifts in approach or additional resources necessary for success.

Five-Year Plan Reviews

This plan focuses on actions that can be implemented quickly and deliver significant emissions reductions and resilience improvements in the next three to five years. However, the Clark County community is growing and constantly changing. At the same time, the technologies, policies, and programs available to support climate action are always advancing.

The *All-In Community Plan* will be reviewed every five years to evaluate progress and determine if there is a need to reprioritize actions and develop additional actions or measures. Regular review and updates ensure that implementation efforts are focused on the most impactful and feasible strategies. Plan reviews are also an opportunity to re-engage with stakeholders and community members to revise strategies so that they continue to reflect the unique context of the County and the diversity of Southern Nevada.



AN EYE ON WHAT'S NEXT

The first iteration of the *All-In Community Plan* is intentionally focused on actions that are ready to be implemented immediately. However, to meet the long-term goals set in this plan, Clark County must be open to new opportunities. Staying abreast of the data and successes of new technologies, policies, and programs as they become available will empower the County and its partners to pursue aggressive climate action with each five-year Plan review. Some breakthroughs that may be on the horizon include:



Sequestering carbon using nature-based solutions customized to Clark County's ecosystems.



Advanced solar thermal systems to replace fossil-fuel heat in large buildings and industrial applications.



Combination of impact investing, green banks, and revolving funds to finance transitions across sectors.

GLOSSARY

TERM	DEFINITION
ACTION	The specific activity that will be undertaken to achieve a strategy.
BROWNOUTS	Intentional or unintentional drops in voltage in an electrical power supply system.
CIRCULAR ECONOMY	Keeps materials, products, and services in circulation for as long as possible. A circular economy reduces material use, redesigns materials, products, and services to be less resource intensive, and recaptures “waste” as a resource to manufacture new materials and products.
CLIMATE	The prevailing weather conditions in an area over a long period, from months to thousands of years.
CLIMATE CHANGE	A change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which goes beyond natural climate variability observed over comparable time periods.
CLIMATE JUSTICE	A concept analyzing sustainable action through the lens of equality, human rights, collective rights, and the historical responsibilities for climate change, acknowledging the differing social, economic, public health, and other adverse impacts that climate change has on underprivileged populations.
CLIMATE VULNERABILITY	The degree to which a system is susceptible to and unable to cope with adverse effects of extreme weather events like drought or wildfire.
DEEP ENERGY RETROFITS	Energy conservation method that minimizes on-site energy use and improves building performance in existing buildings.
DIVERSION RATE	Diversion rates measure the portion of waste not sent to the landfill. Tracking diversion rates help measure the effectiveness of reuse, recycling, and composting programs.
DROUGHT	A condition of long-term dryness in a given area, determined by observations of how much water is available in streams, lakes, and soils compared to usual for the same time of year.
ENERGY BURDEN	The percentage of household income spent on home energy bills. A high energy burden is considered to be above 6% and a severe energy burden above 10%.
ENERGY USE INTENSITY (EUI)	A measure of building efficiency determined by the total energy used in a structure divided by floor area.
EQUITY	The inclusivity and empowerment of diverse populations. Equity incorporates inclusive, accessible, and authentic engagement and representation, fair distribution of benefits and burdens, structural accountability, and consideration of generational impacts.
EXTREME HEAT DAY	In Clark County, an extreme heat day is defined as a day with temperatures exceeding 106 °F. ⁶¹
FLASH FLOODING	Flooding that occurs within 6 hours, and often 3 hours, of heavy rainfall or another cause. Flooding occurs so quickly that communities can face dangerous, high, and/or fast-moving water without ample time for preparation.
GOAL	The desired outcome presented as a broad vision statement.
GREEN INFRASTRUCTURE	Systems or measures that leverage plants, soil systems, and landscaping to store, treat, and evapotranspire stormwater, reducing flows to sewer systems and bodies of water.
GREENHOUSE GAS EMISSIONS (GHGs)	Primarily carbon dioxide (CO ₂), methane (CH ₄), and nitrous oxide (N ₂ O) which create a “blanket” in the atmosphere that traps heat and regulates the Earth’s temperature. When fossil fuels are burned to power homes, businesses, and automobiles, and materials are placed in landfill to decompose, the level of GHGs in the atmosphere increases. This increase has created a much thicker “blanket” and higher global temperatures that have led to disruptions in the Earth’s climate.
HAZARD	A natural or human-induced physical event or trend that may cause loss of life, injury, or other health impacts, as well as damage to property, infrastructure, livelihoods, service provision, ecosystems, and environmental resources.

TERM	DEFINITION
INDUSTRIAL PROCESS HEAT	A range of processes in the industrial sector that require large amounts of heat and energy. Renewable industrial process heat (like solar industrial process heat) can work to lower industrial dependence on fossil fuels.
kW (Kilowatt)	Unit of measurement used for electricity. A kilowatt is one thousand watts which would power 16 of the 60-watt incandescent light bulbs found in a standard home at once.
LOAD BALANCING	A technique used within electrical power systems that balances power supplied to electric grids in order to ensure that energy supply can meet energy demand.
METRIC	Data that provides an indication of progress toward a goal or desired outcome.
MICROGRIDS	Localized energy grids that can disconnect from the traditional grid to operate autonomously. These grids can operate even when main grids shut down.
MMBtu (Million British Thermal Unit)	A common measure for different energy sources (electricity, natural gas, oil, etc.) that help compare total energy use.
MTCO_{2e}	Each type of greenhouse gas (GHG) has a different ability to trap heat in the atmosphere. This GHG heat-trapping ability can be compared to that of the common GHG carbon dioxide (CO ₂). This is called the CO ₂ equivalent and allows a single measure to calculate all GHG emissions: metric tons of CO _{2e} (MTCO _{2e}).
MULTIMODAL TRANSPORTATION	The use of several means of transportation for an individual to arrive at their final destination.
MW (Megawatt)	A unit used to measure energy capacity, or the total amount of energy a system can produce at perfect conditions. One megawatt is equivalent to one million watts, or the energy produced by about 10 automobile engines.
ORGANIC WASTE	Biodegradable materials that come from animals or plants.
PROGRAM STACKING	An emerging strategy to create one-stop shops that can identify funding opportunities across a range of applicable programs and drive energy efficiency beyond what is achievable through ratepayer supported programs.
RENEWABLE ENERGY	Energy produced from renewable sources, such as the sun, wind, waves, and geothermal heat.
RENEWABLE PORTFOLIO STANDARD (RPS)	Policies designed to increase the use of renewable energy sources for electricity generation.
RESILIENCE	A resilient Clark County supports residents, businesses, and visitors to be healthy, successful, and adaptable to changing climate conditions.
RESILIENCE HUB	Support and resources that increase community and personal adaptive capacity, strengthening resilience before, during, and after natural or human-made disasters.
SOLAR PHOTOVOLTAIC (PV) SYSTEMS	Electric power systems that convert sunlight into electrical energy.
STAKEHOLDER	A person or entity with an interest in or whom may be affected by the project.
STORMWATER	Water runoff from rain events that flows over land or impervious surfaces and does not reabsorb back into the ground.
STRATEGY	The general approach used to accomplish a goal.
SUSTAINABILITY	A sustainable Clark County balances resource efficiency, social well-being, and environmental stewardship while equitably meeting the needs of a growing community and thriving economy.
TRANSPARENCY	The openness and honesty with which County resources are allocated and why. Accessible information is proactively disseminated.
URBAN HEAT ISLAND	Significantly hotter conditions in urban areas compared to surrounding rural areas, due largely to the presence of surfaces that absorb and retain heat (such as dark pavement, concrete, and asphalt) in cities.

ENDNOTES

- 1 UNLV Center for Business and Economic Research, [2021-2060 Population Forecasts: Long-Term Projections for Clark County, Nevada](#), 2021.
- 2 CalAdapt, [Temperature: Decadal Averages Map](#), 2021.
- 3 Clark County, [Climate Vulnerability Assessment](#), 2021.
- 4 Clark County, [Clark County Website Homepage](#), 2021.
- 5 Global Change Research Program, [Impacts Risks, and Adaptation in the United States: Fourth National Climate Assessment](#), 2018.
- 6 Southern Nevada Water Authority, [2020 Water Resource Plan](#), 2020.
- 7 CDC, Heat and [Health Tracker](#), 2022.
- 8 U.S. Energy Information Administration, [Annual Electric Power Industry Report](#), Form EIA-861, 2022.
- 9 NV Energy, [Power Content Label](#), 2022.
- 10 Nevada Governor's Office of Energy, [2021 State of Energy Report](#), 2021.
- 11 NV Energy, [Power Content Label](#), 2022.
- 12 U.S. Energy Information Administration, [Annual Electric Power Industry Report](#), Form EIA-861, 2022.
- 13 U.S. Energy Information Administration, [Annual Electric Power Industry Report](#), Form EIA-861, 2022.
- 14 U.S. Energy Information Administration, [Annual Electric Power Industry Report](#), Form EIA-861, 2022.
- 15 Clark County, [Greenhouse Gas Emissions Pathways Analysis](#), 2022.
- 16 Impact NV, [Southern Nevada State of Sustainability](#), 2022.
- 17 California Air Resources Board, [Advanced Clean Cars II Regulations: All New Passenger Vehicles Sold in California to be Zero Emissions by 2035](#), 2022.
- 18 The Economist, ["Progress on COP26 pledges: zero-emission vehicles,"](#) 2022.
- 19 Clark County, [Greenhouse Gas Emissions Pathways Analysis](#), 2022.
- 20 U.S. Census Bureau, American Community Survey 1-Year Estimates, 2019.
- 21 Impact NV, [Southern Nevada State of Sustainability](#), 2022.
- 22 National Transit Database, [Monthly Ridership Report](#), 2019.
- 23 Regional Transportation Commission of Southern Nevada, [Regional Bicycle & Pedestrian Plan for Southern Nevada](#), 2020.
- 24 U.S. Census Bureau, American Community Survey 1-Year Estimates, 2019.
- 25 C40, [Consumption Based Emissions of C40 Cities](#), 2018.
- 26 Republic Services, [Vegas Recycling Center](#), 2022.



- 27 Calculated using the United States Environmental Protection Agency's [Waste Reduction Model \(WARM\) v14](#), 2016.
- 28 Nevada Recycles, [2019 Recycling and Waste Reduction Report](#), 2019.
- 29 Southern Nevada Health District, [2019 Clark County Recycling Report](#), 2019.
- 30 E2, [Clean Jobs Nevada](#), 2020.
- 31 Southern Nevada Health District, [2019 Clark County Recycling Report](#), 2019.
- 32 Southern Nevada Health District, [2019 Clark County Recycling Report](#), 2019.
- 33 Environmental Entrepreneurs, [Clean Jobs Nevada](#), 2021.
- 34 Clark County, [Greenhouse Gas Emissions Pathways Analysis](#), 2022.
- 35 U.S. EPA, [Advancing Sustainable Materials Management: Facts and Figures Fact Sheet](#), 2018.
- 36 Clark County, [Seasonal Ozone and Smoke Advisory](#), 2022.
- 37 Las Vegas Review Journal, ["More trees may help east Las Vegas cool down from urban heat islands,"](#) 2021.
- 38 Clark County Department of Environment and Sustainability, 2021.
- 39 Clark County Office of the Coroner/Medical Examiner, Personal Communication, December 2022.
- 40 Clark County Office of the Coroner/Medical Examiner, Personal Communication, December 2022.
- 41 Urban Sustainability Directors Network, [Guide to Developing Resilience Hubs](#), 2019.
- 42 RTC, [Title VI Report](#), 2022.
- 43 Regional Transport Commission of Southern Nevada, [Southern Extreme Heat Vulnerability Analysis](#), 2022.
- 44 ACEEE, [How High Are Household Energy Burdens?](#), 2020.
- 45 U.S. Green Building Council, [Projects Database](#), 2023.
- 46 Clark County, [Greenhouse Gas Emissions Pathways Analysis](#), 2022.
- 47 National Renewable Energy Lab, [ResStock Building Characteristics](#), 2022.



- 48 Clark County, [2019 Regional Community Greenhouse Gas Emissions Inventory](#), 2021.
- 49 Clark County, [Greenhouse Gas Emissions Pathways Analysis](#), 2022.
- 50 EIA, [Residential Energy Consumption Survey](#), 2015.
- 51 Southern Nevada Water Authority, [SNWA 2020 Water Resources Plan](#), 2020.
- 52 National Environmental Modeling and Analysis Center, [US Climate Explorer](#), 2021.
- 53 National Centers for Environmental Information, [Climate at a Glance](#), 2022.
- 54 Southern Nevada Water Authority, [SNWA Operating and Capital Budget](#), 2022.
- 55 Southern Nevada Water Authority, 2021 Water Resource Plan, 2021.
- 56 IPCC, [Sixth Assessment Report](#), Climate Change 2022: Mitigation of Climate Change, 2022.
- 57 Clark County, [Greenhouse Gas Emissions Pathways Analysis](#), 2022.
- 58 RMI, [Funding Our Future: Creating a One-Stop Shop for Whole Home Retrofits](#), 2022.
- 59 ACEEE, [Making Health Count—Monetizing the Health Benefits of In-Home Services Delivered by Energy Efficiency Programs](#), 2020.
- 60 Clark County, [Greenhouse Gas Emissions Pathways Analysis](#), 2022.
- 61 Cal-Adap, [Extreme Heat Days & Warm Nights](#), 2022.



<https://allinclarkcounty.com>