

Clark County Transportation Electrification Working Group

Nov. 9, 2022



AGENDA

1. TEWG Members
2. TEWG Update
3. Managed EV Charging
Connor Tariche, AmpControl
4. Model EV Charging Ordinance Comments
5. Regional Transportation Electrification
Plan Overview
6. Q&A: Public and Interested Parties
7. Clark County Clean Cities Update
8. Next Steps



Ford F-150 Lightning

TEWVG MEMBERS

Marci Henson
Clark County

MEMBERS

- CHISPA
- City of Boulder City
- City of Henderson
- City of Las Vegas
- City of North Las Vegas
- Clark County
- Clark County School District
- NAIOP
- NV Climate Initiative
- NV Department of Transportation
- NV Division of Environmental Protection
- NV Energy
- NV Governor's Office of Energy
- NV Resort Association
- NV State Apartment Association
- Regional Transportation Commission
- Southern NV Water Authority
- Southern NV Home Builders Association
- Southwest Energy Efficiency Project
- The Electrification Coalition
- Western Resources Advocates



Questions?

Post questions in the chat or raise your hand.

Time reserved for Q&A and discussion.



Rivian R1T

LOAD MANAGEMENT FOR EV CHARGERS

Connor Tariche
AmpControl

MODEL EV CHARGING ORDINANCE COMMENTS

Marci Henson
Clark County

THANK YOU FOR YOUR COMMENTS

- Caring, Helping & Restoring Lives
- City of Henderson
- City of Las Vegas
- City of North Las Vegas
- Clark County School District
- Electrification Coalition
- NAIOP
- Nevada Conservation League
- NV Resorts Association
- Southern Nevada Home Builders Association
- SWEEP
- Western Resource Advocates

COMMENT FOCUS AREAS

- Market trends
 - Oversupply vs. not enough
 - Study shows 16K non-home chargers needed by 2030*
- Define variances/exceptions
 - If lot can't accommodate more spaces
 - Utility can't supply power to location
 - Additional utility design requirements cause cost or timeline impacts
 - Valet parking
 - Parking age, physical conditions
 - Schools due to budget deficit
 - If already a parking variance, then should be excluded
 - Longer spots required by EVs could trigger a waiver



*International Council for Clean Transportation, Charging Up America: Assessing The Growing Need For U.S. Charging Infrastructure Through 2030, July 2021.

COMMENT FOCUS AREAS CONT'D

- Define
 - Triggers for additional parking requirements
 - Parking calculations for EV-only
 - ADA requirements vs. developer discretion
- Segment separation requests
 - Industrial from office and retail where seen as an amenity
 - Schools from resorts due to use case and demographic
 - Resorts from all due to scale
- Enforcement
 - Conduit installations
 - EV-only signage
 - In private lots



COMMENT FOCUS AREAS CONT'D

- Building/Zone Code
 - Feedback from Building Department/code expert?
 - Put in land use and zoning vs. building
 - Electrical rooms built larger with EV capable is enough
 - Title 30 creates overparked developments
 - Single Family: Make part of Administrative Amendments of the International Residential Code by the Building Official, however builder can't waive
 - Require free or paid parking like public spaces?
 - Space count as part of total requirement not additional
 - Space count determined by technical study
- Costs
 - Make NV uncompetitive to build
 - Offer developer incentives
 - Cost-benefit analysis already done in NV to support ordinance*
 - Ordinance estimates were missing costs to retrofit existing projects



*MJ Bradley and Associates for NRDC, SWEEP and WRA, Plug-In Vehicle Cost-Benefit Analysis: Nevada, February 2021. See <https://www.swenergy.org/press-release?PressID=281>

COMMENT FOCUS AREAS CONT'D

- Multifamily
 - Equity: intervention is needed
 - Retrofitting HOA parking an obstacle
 - Combine townhomes with single-family
 - Townhome community spots comply?
 - See no installations here and skeptical low-income will
 - Hard enough to incentivize building low-income
- Already installing so not needed
- Impact of gas station model vs. EVs everywhere

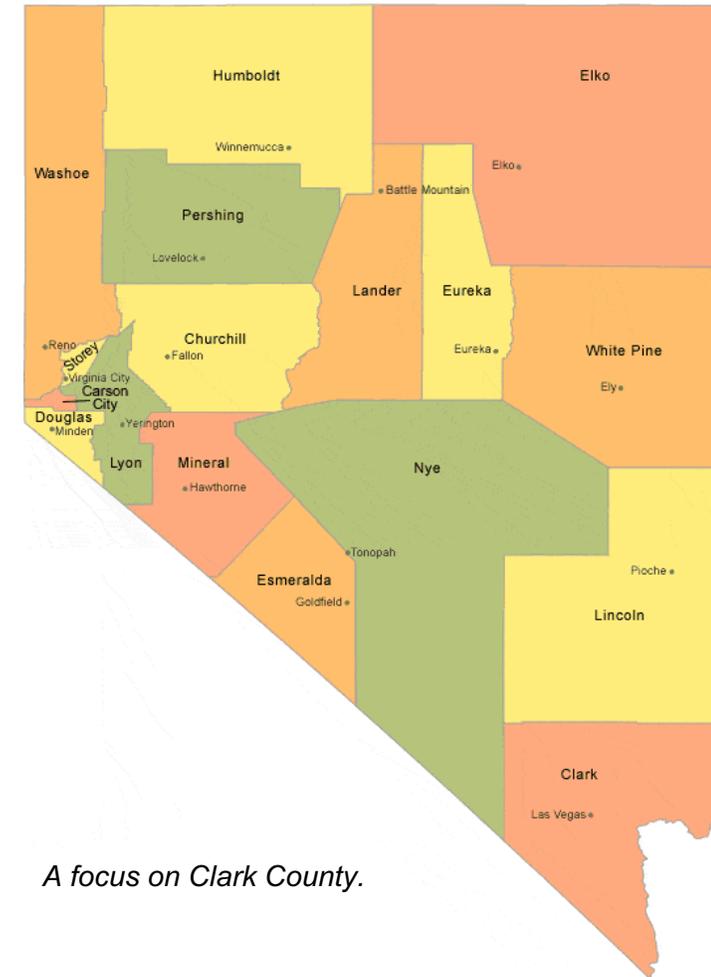


CLARK COUNTY REGIONAL TE STRATEGY

April Bolduc
S Curve Strategies

TE STRATEGY RECOMMENDATIONS

- Lay the groundwork to rapidly accelerate EV adoption in the Clark County region (COMPLETE)
- Current and future EV adoption projections to meet net zero by 2050 (COMPLETE)
- Projections for EV charging to meet EV adoption goals (COMPLETE)
- Existing EV infrastructure, development needs, and installation planning (COMPLETE)
- Elevate the Working Group transportation electrification acumen (COMPLETE)



A focus on Clark County.

TE STRATEGY RECOMMENDATIONS CONT'D

- Draft a model EV infrastructure ordinance – draft and comments received (COMPLETE)
- Understand PUCN TE efforts – Overviews by PUCN and NV Energy, stakeholders encouraged to provide comments to proceedings (COMPLETE)
- Economic and workforce development efforts and opportunities (COMPLETE)
- Government agencies determine where EV goals housed and by who (COMPLETE)
- Launch Clark County Clean Cities Coalition (COMPLETE)

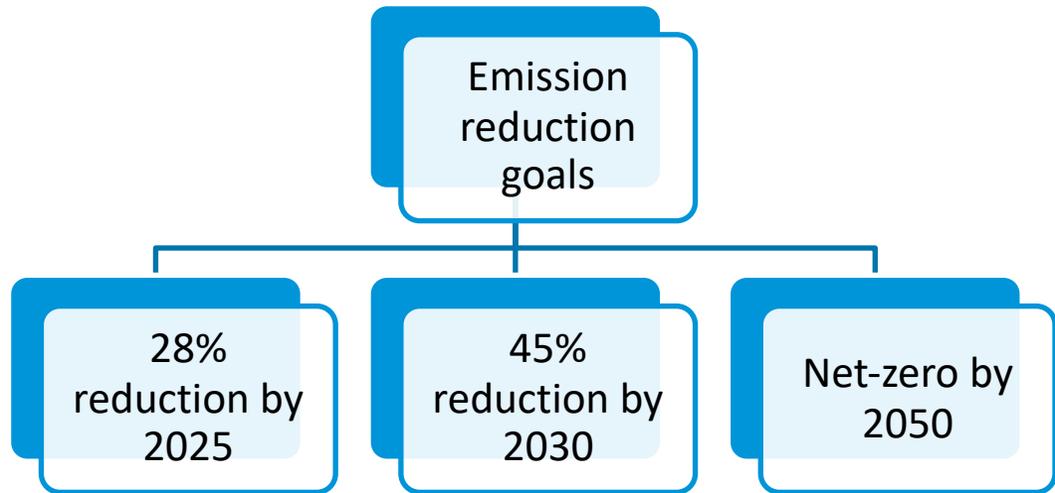


TE STRATEGY CONTENTS

- Current TE policies, incentives, and plans
 - State
 - Local
- EV adoption baseline for Clark County jurisdictions
- Barriers to EV adoption
- Recommendations

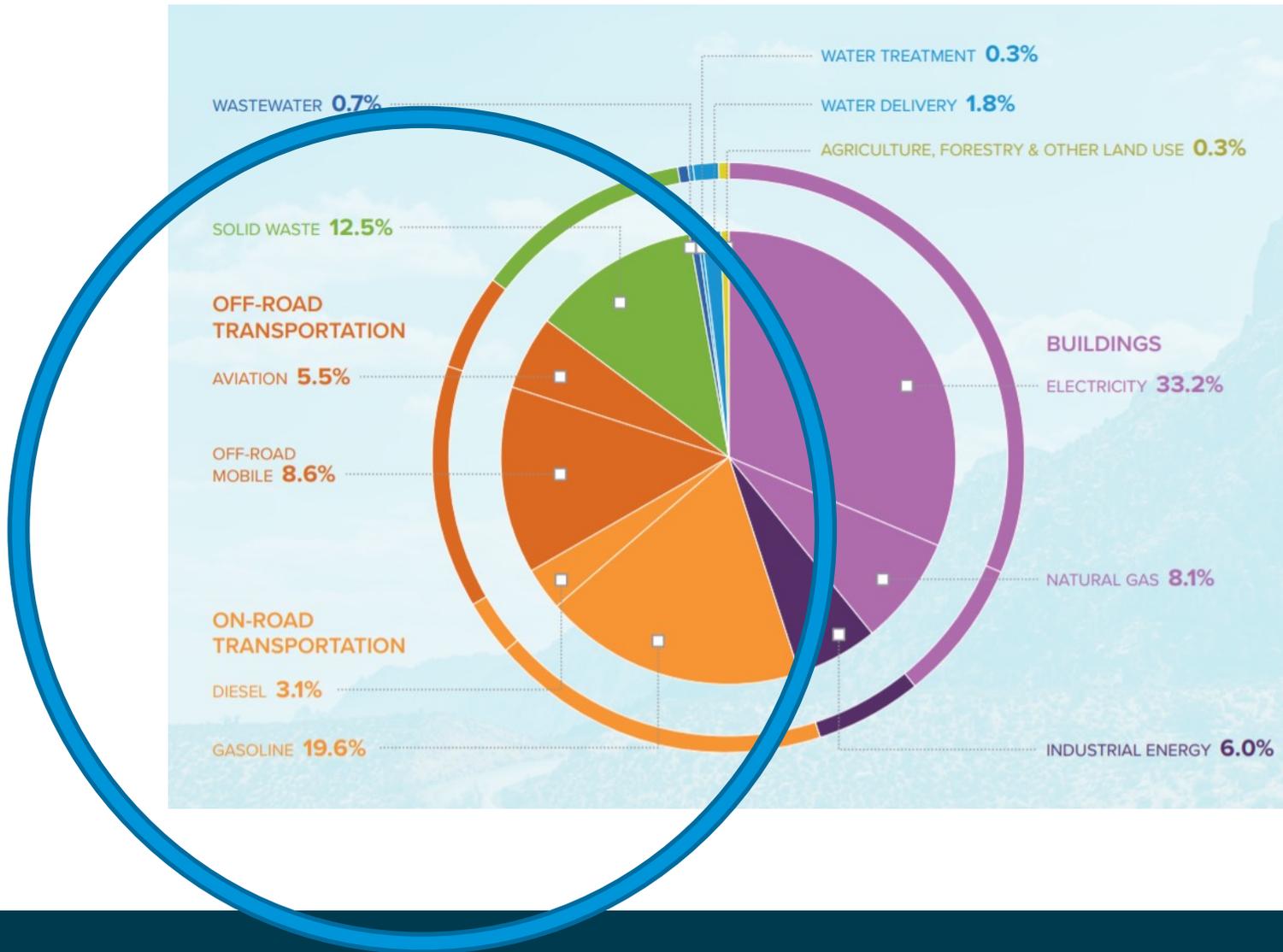


CLARK COUNTY SHARES STATE POLICIES



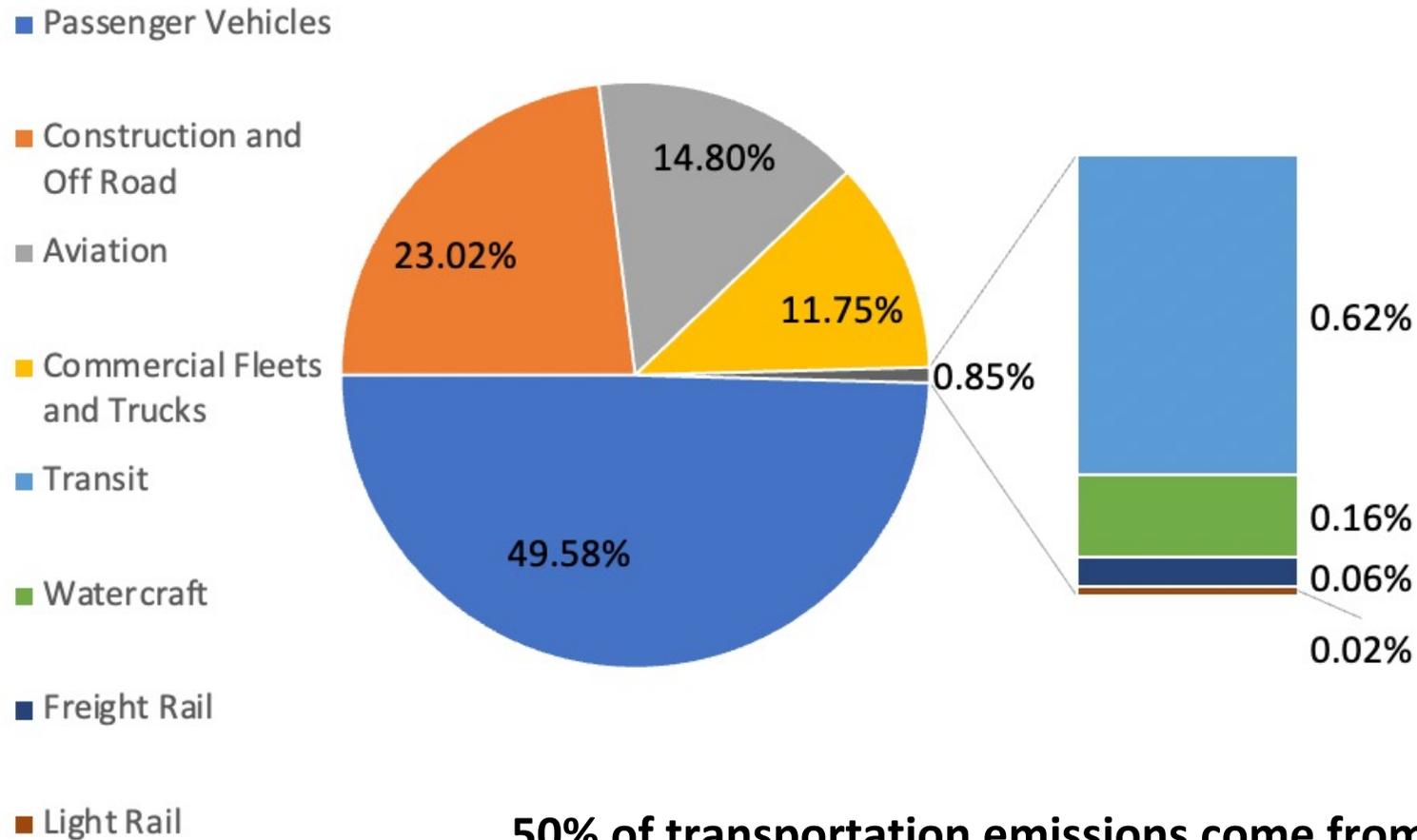
Gov. Sisolak delivers remarks on the need for climate action in front of a public electric bus operated by RTC Washoe. Credit: NRDC

TRANSPORTATION EMISSIONS



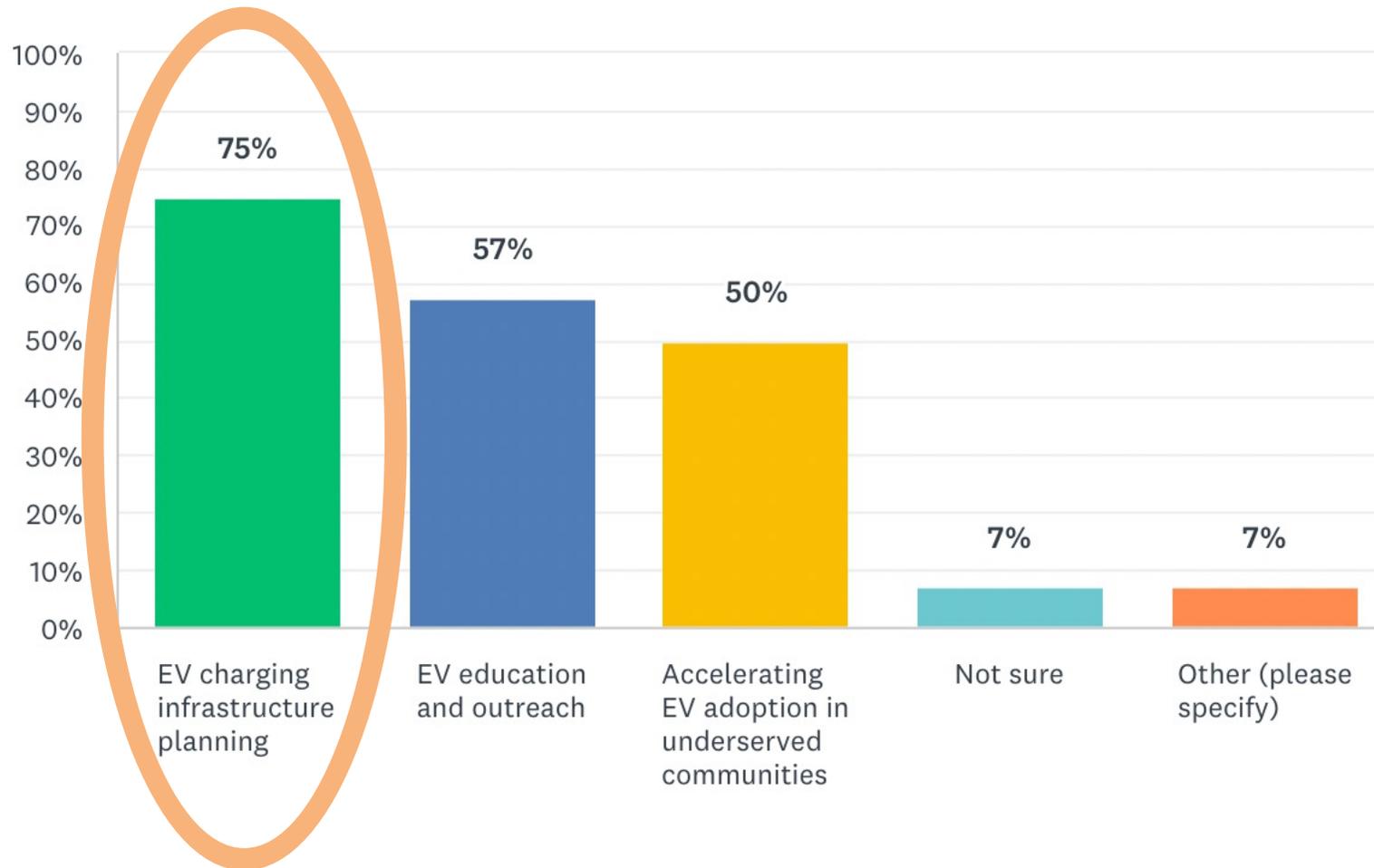
More than 1/3 of Clark County GHG emissions come from transportation.

TE STRATEGY FOCUS: LIGHT-DUTY EMISSIONS



50% of transportation emissions come from light-duty vehicles.

Which initiative do you feel your organization can help make the biggest impact in accelerating light-duty EV adoption?



PROJECTED CLARK COUNTY EV ADOPTION NEEDS

Year	% Light-Duty Sales	Annual New EV Sales	Total EVs
2025	25%	24,676	92,174
2030	50%	50,181	285,107
2035	86%	87,183	629,631
2040	100%	104,759	1,105,074
2045	100%	108,725	1,587,407
2050	100%	112,691	2,069,741

PROJECTED CUMULATIVE EV REGISTRATIONS

- 2022 – 20,000* EVs (July)
- 2025 – 92,000 EVs
- 2030 – 285,000 EVs
- 2050 – 2M EVs

To meet Clark County GHG emission reduction goals, grow cumulative EV registrations by 4x within 3 years.

*DMV





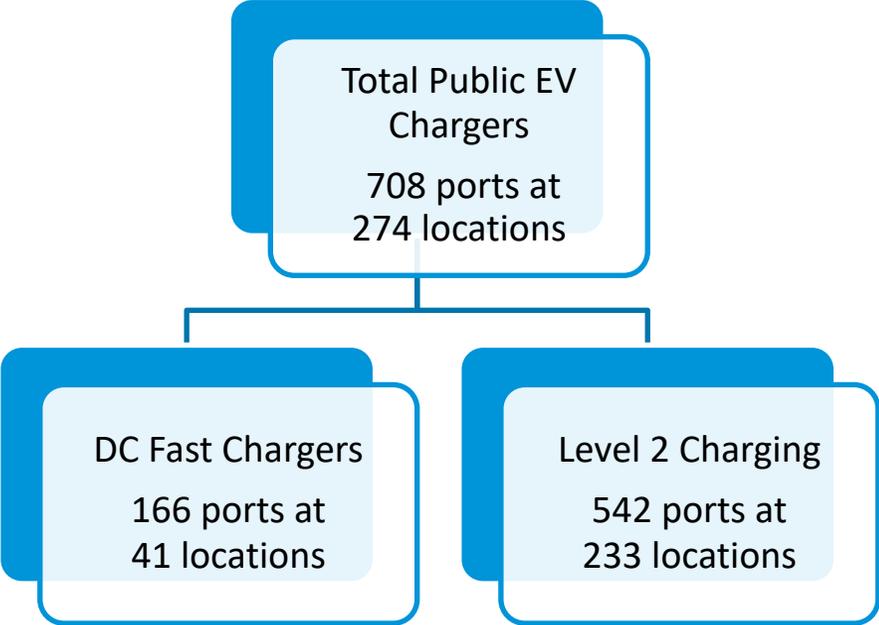
PROJECTED ANNUAL EV SALES NEEDED

- 2021 – 7,150 EVs (actual)
- 2025 – 25,000 EVs
- 2030 – 285,000 EVs
- 2040 – 1M EVs
- 2050 – 2M EVs

To meet Clark County GHG emission reduction goals, grow annual EV sales by 3x by 2025.

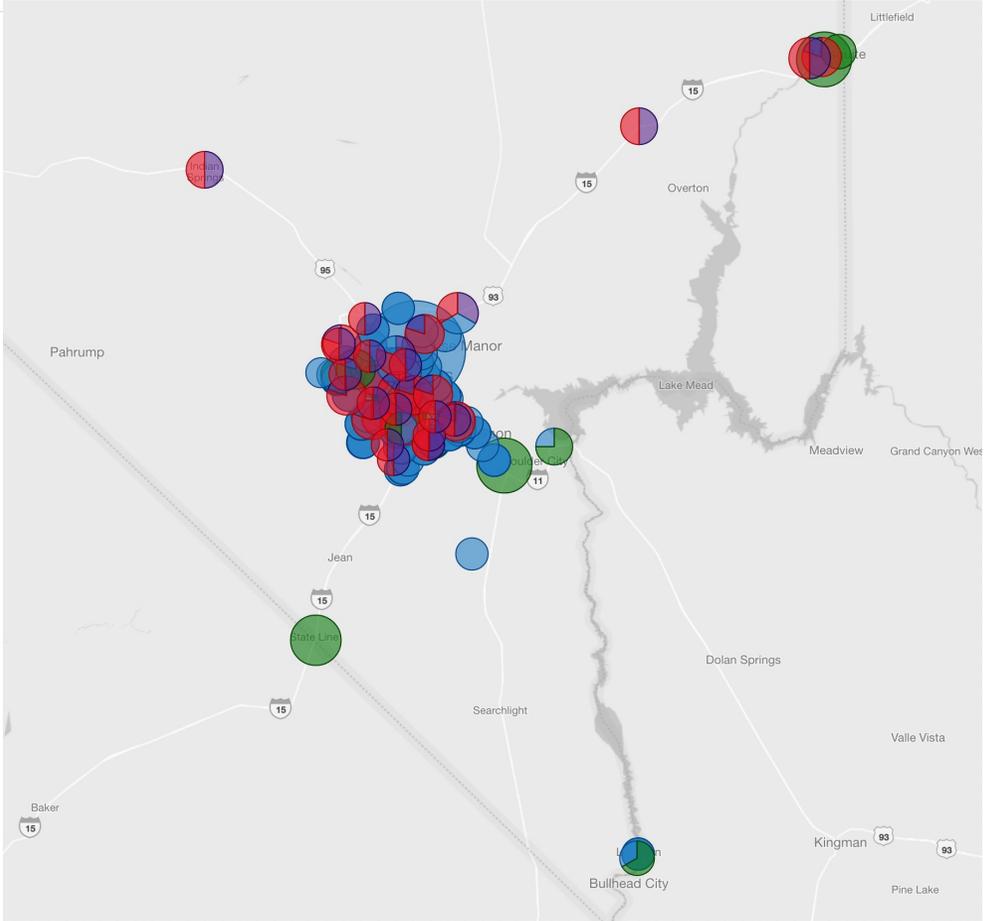
Note: Awaiting DMV 2022 annual EV sales data.

CLARK COUNTY



Workplace, single family, and multifamily unknown.

- Level 2
- Tesla
- DC Fast (Chademo)
- DC Fast (Combo Connector)



Clark County public EV charging

PUBLIC EV CHARGERS BY JURISDICTION

Boulder City 6 charge ports at 2 locations

Henderson 105 at 25 locations

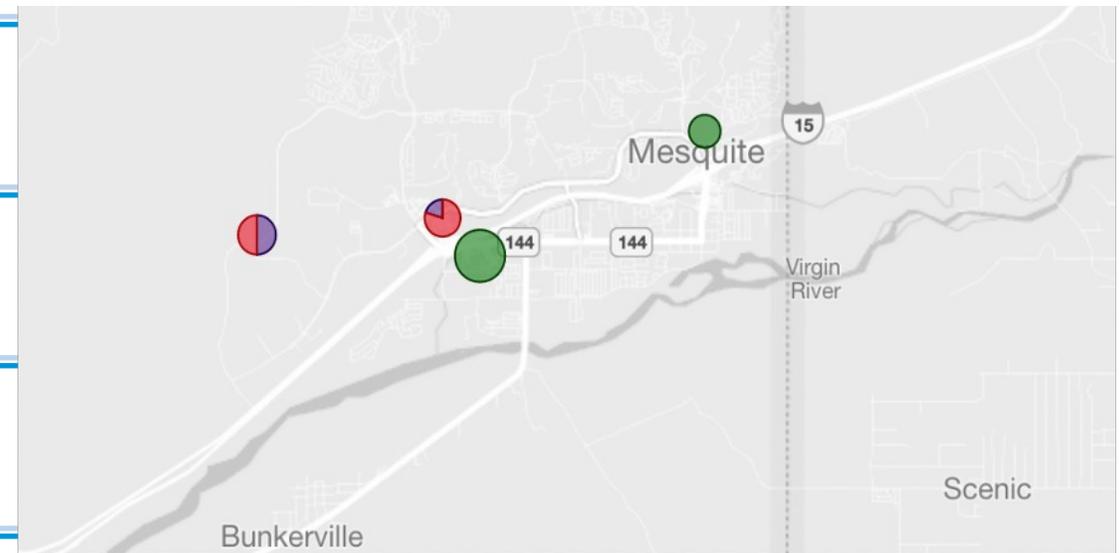
Las Vegas 551 at 114 locations

Mesquite 26 at 4 locations

North Las Vegas 17 at 5 locations

Unincorporated Areas 34 at 5 locations

● Level 2 ● Tesla ● DC Fast (Chademo) ● DC Fast (Combo Connector)



Mesquite public EV charging

PROJECTED CLARK COUNTY EV CHARGING NEEDS

Best practices for regional EV charging planning say 1 charger for every 11 cars. This considers most will charge at home.

Year	Workplace Level 2	Public Level 2	Public DC Fast Chargers
2022	Unknown	542	166
2025	4,440	2,723	752
2030	13,734	8,422	2,326
2035	30,329	18,599	5,138
2040	53,231	32,644	9,017
2045	76,465	46,892	12,953
2050	99,699	61,140	16,889

EV CHARGING EFFORTS MUST GROW EXPONENTIALLY

For Clark County to meet its GHG emission reduction goals, it must:

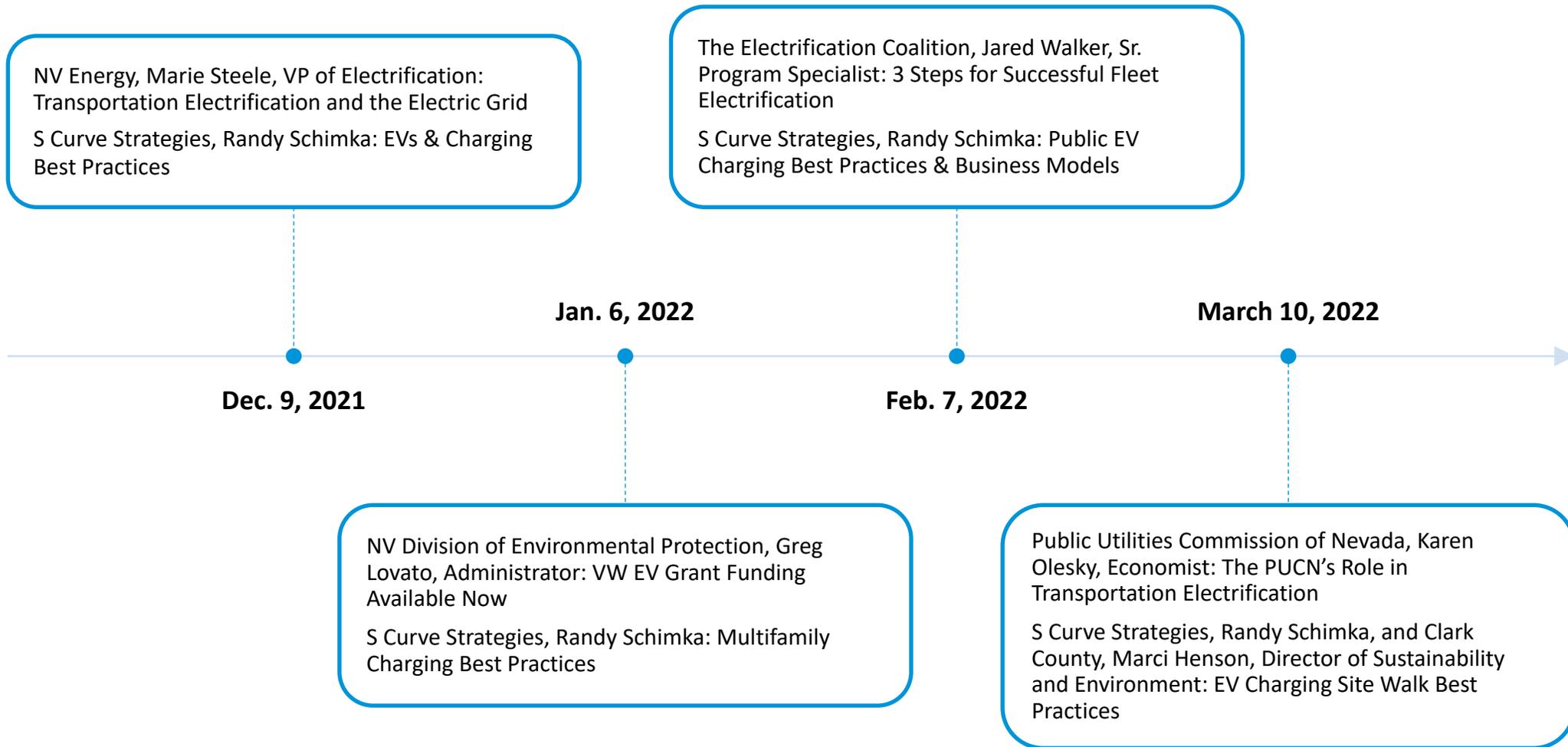
increase public DC Fast chargers by 4.5x by 2025,

increase public Level 2 chargers by 5x by 2025.

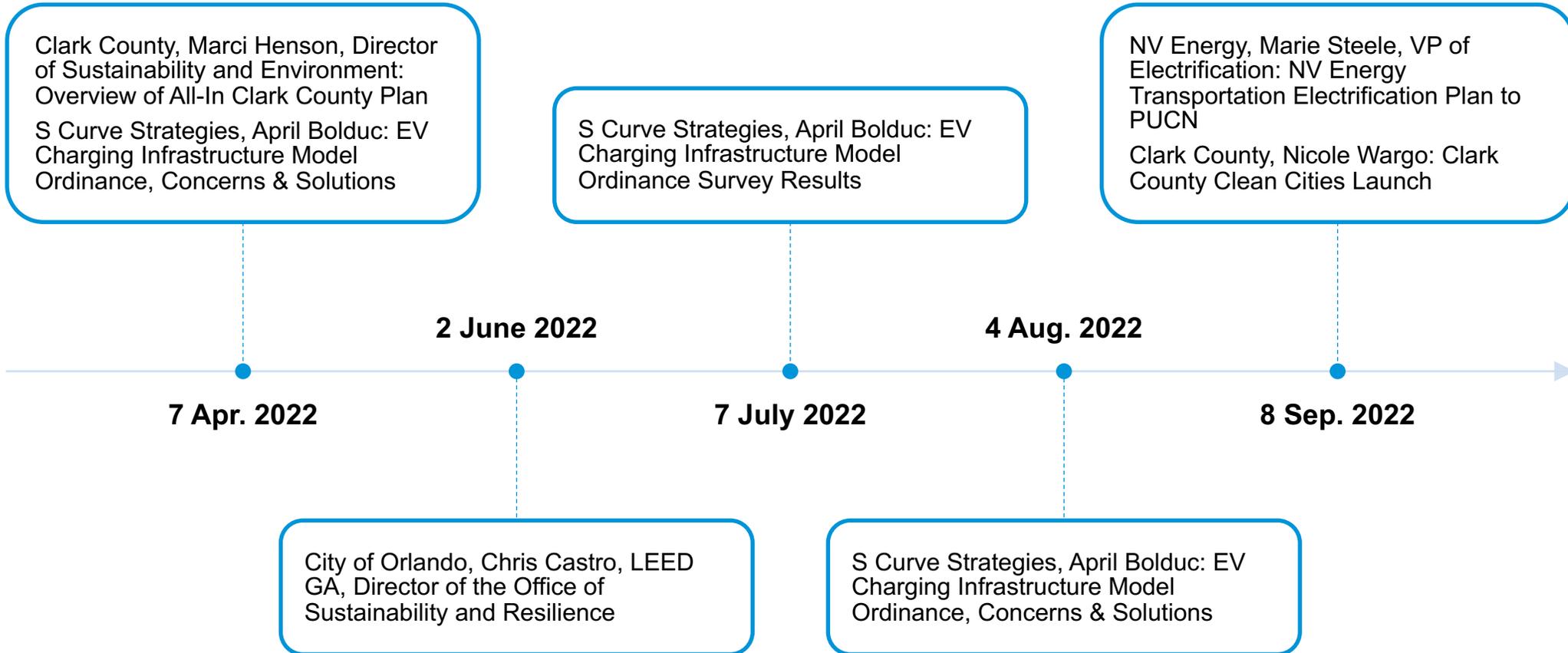
KEY DRIVERS TO ACCOMPLISHING GOAL

Policy	Current policy supports EV adoption: SB 254, SB 448, Clean Cars Nevada; adopt an EV charging infrastructure building code ordinance
Economic Development	Every effort should be made to bring transportation electrification dollars to the region: Infrastructure Investment & Jobs Act, Inflation Reduction Act, NEVI, NV Energy programs, Clean Cars Nevada, leverage grants, and develop incentives
Workforce Development	There is an opportunity to grow and leverage a skilled workforce and increase training programs throughout Clark County
Market Share Growth	In Q2, BEV met standard hybrids in NV market share; NV EVs surpassed national market share 7.9% to 6.4%; two of six top-selling NV vehicles were BEVs; Tesla saw a 45% increase in NV registrations, while all other makers dropped
Education and Outreach	EV adoption can only grow through regional education and outreach efforts to residents and businesses; Clark County Clean Cities Coalition can help educate fleets and drive EV adoption
TE Working Group	Leverage the work of the TE Working Group and create collective milestones, partner with those in the group doing great work in the TE space

WORKING GROUP ENGAGEMENT

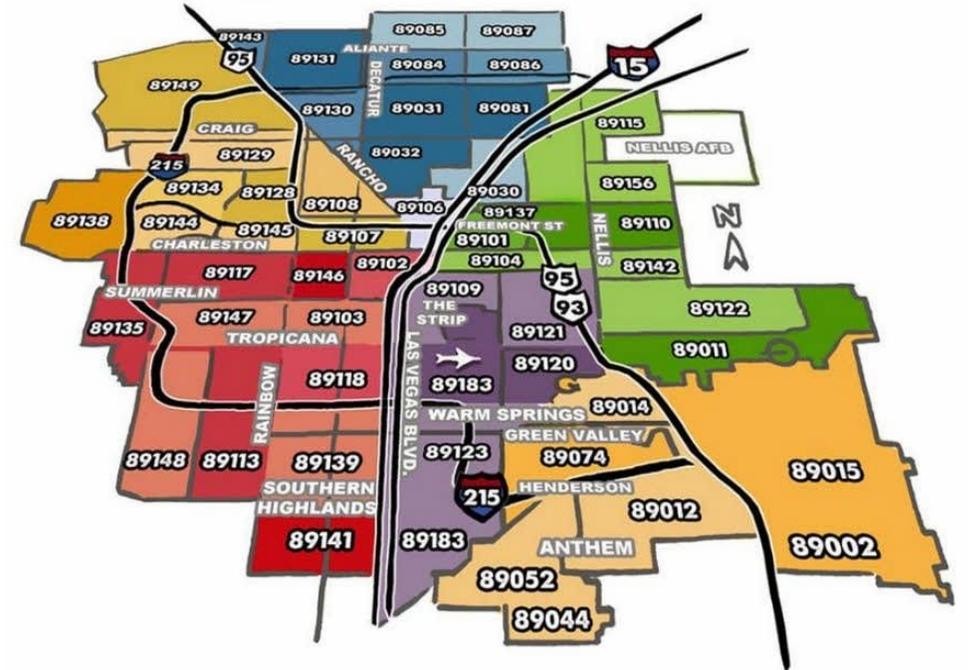


WORKING GROUP ENGAGEMENT CONT'D



NEXT STEPS

- Finalizing City Data Collection
 - Building use case counts
 - Fleet totals
- Draft TE Strategy document finalized then circulated for review
- TE Working Group will receive in Word and will be designed once changes made



CLEAN CITIES

Nicole Wargo
Clark County

CLARK COUNTY CLEAN CITIES

- Next Meeting: Nov. 16, 2022, 11 am to 12 pm
- Webinar
 - The nuances of the Inflation Reduction Act and other opportunities to convert to alternative fuel vehicles
- Speakers
 - Kirsten Stasio, Nevada Clean Energy Fund
 - Adam Grant, NV Energy
- Register at: <https://publicinput.com/HY7362>
- Questions? Nicole.Wargo@ClarkCountyNV.gov.



TEWGW NEXT STEPS

TEWG NEXT STEPS

- Draft Regional Transportation Electrification Strategy
 - Out for review in next couple weeks
- Next month is last TEWG meeting
 - Thursday, Dec. 1, 2pm
- All presentations and recordings of virtual meetings found at:
 - Clark County website by searching “Transportation Electrification Working Group”



Thank you