



# *Planning and Support for Transportation Electrification*

Colorado Resilience Office's  
Adaptations and Futures Webinar Series

March 03, 2021  
12 P.M. - 1 P.M.



**COLORADO**  
Resiliency Office  
Department of Local Affairs

# *Climate Adaptations & Futures Webinar Series*

- First Wednesdays from 12pm - 1pm
- Recordings & upcoming webinars are available here:  
[www.coresiliency.com/webinars](http://www.coresiliency.com/webinars)



**COLORADO**

**Resiliency Office**

Department of Local Affairs

# Welcome

Please use the **chat** to communicate any questions or comments to all attendees.

Please use the **Q&A** to communicate any questions to the panelists only.

Your microphone is on mute for the duration of the webinar.

This webinar is being recorded and will be posted on the Colorado Resiliency Office's website: [coresiliency.com/webinars](https://coresiliency.com/webinars)



**COLORADO**

**Resiliency Office**

Department of Local Affairs

# Agenda

- Introduction
- Colorado Greenhouse Gas Roadmap, Transportation Initiatives, and Grant Programs
  - Theresa Takushi and Mike King, CDOT
- Colorado's EV Plan
  - Zach Owens, CEO
- Pueblo County's EV Readiness Plan
  - Ron Go-Aco, Pueblo County
- Estes Park EV Planning and Implementation
  - Vanessa Solesbee, Town of Estes Park
- Q&A with Panelists



**COLORADO**

**Resiliency Office**

Department of Local Affairs



**Theresa Takushi**  
GHG Climate Action Specialist

Colorado Department of  
Transportation



**Mike King**  
Assistant Director of  
Electrification & Energy

Colorado Department of  
Transportation



**COLORADO**

Resiliency Office

Department of Local Affairs



# Incorporating Greenhouse Gas Emissions Reductions into Transportation Planning Regional Meetings - February, 2021



# Colorado's Efforts To Address Climate Change

## HB-1261

- In 2019, the Colorado General Assembly passed House Bill-1261, the *Climate Action Plan to Reduce Pollution*.
- HB 1261 established the following GHG reduction targets:
  - 26% by 2025, 50% by 2030, and 90% by 2050 from 2005 levels

## GHG Roadmap

- Lays out near/long term actions in every sector to meet the established targets
- To ensure that Colorado continues to reduce emissions to meet greenhouse gas targets, reduce local air pollution, and realize the full economic benefits of the transition to a clean energy economy.
- Draft document released in Sept 2020; final in Jan 2021.
- <https://energyoffice.colorado.gov/climate-energy/ghg-pollution-reduction-roadmap>



# Largest GHG Emissions Sources

## 2005 Largest Emission Source:

1. Electric power
2. Transportation
3. Oil & Gas
4. Buildings

## 2020 Largest Emissions Sources

1. Transportation
2. Electric power
3. Oil & Gas
4. Buildings

2020 CO GHG Emissions (MMT CO<sub>2</sub>e, AR5 100-yr GWP)



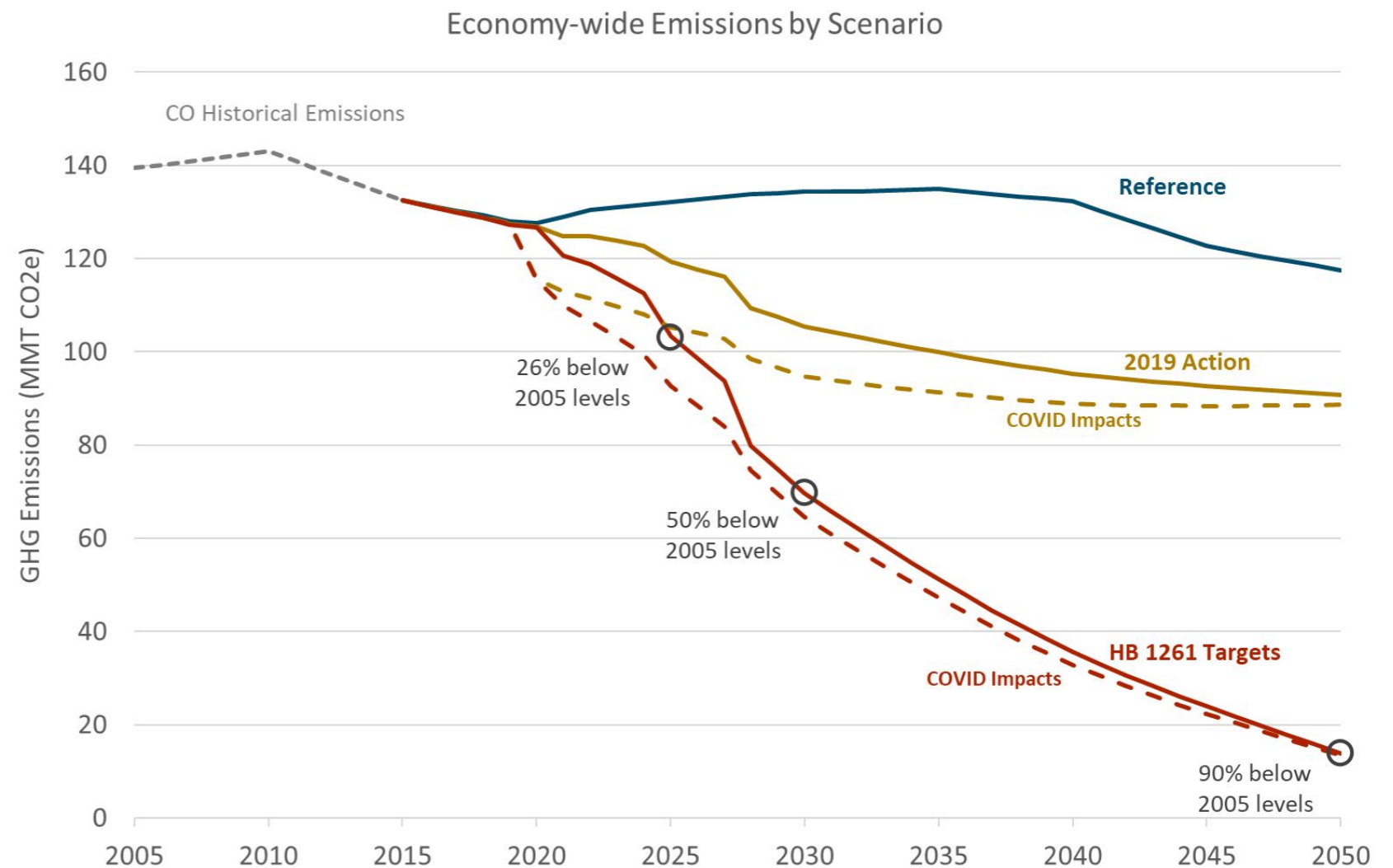




# Colorado GHG Pollution Over Time

## SIGNIFICANT PROGRESS UNDERWAY & MORE ACTION NECESSARY

- As a result of the state's actions to date, we are on a trajectory to achieving approximately half the level of emission reductions to meet the 2025 and 2030 goals.
- Additional strategies can advance co-benefits such as reducing local air pollution, generating economic growth, advancing environmental justice and equity.





# Near-Term Transportation Actions included in the CO GHG Roadmap

## Infrastructure (Planning & Projects)

- GHG pollution standards for transportation plans [FOCUS of MTG]

## Human Factors (Behavior Change)

- Indirect source standards for some types of new development.
- Trip reduction/TDM requirements and encouraging telecommuting for large employers [Separate process]
- Expansion of public transit, including setting the stage for Front Range Rail
- Incentives for land use decisions by local governments that reduce pollution and support greater access to housing near jobs.

## Mobile Sources (Vehicles)

- Clean trucking strategy including evaluation of Advanced Clean Truck ZEV standards
- New revenue mechanism to fund infrastructure and incentives to transition to low and zero emissions cars, trucks and buses



# Regional Meeting Information & Contact Information

To sign up for future Regional Meetings, please visit:

<https://www.codot.gov/programs/environmental/greenhouse-gas/ghg-transportation-policy-rulemaking-process>

Theresa Takushi

GHG Climate Action Specialist

[theresa.takushi@state.co.us](mailto:theresa.takushi@state.co.us)

303.757.9977



# CDOT's EV Goals

## PD 14 Environmental Impact Objectives & Targets

CDOT will work collaboratively with other state agencies and local partners to **reduce statewide GHG pollution** from the transportation sector by **26% by 2025, 50% by 2030, 90% by 2050** relative to 2005 statewide GHG pollution levels.

Collaborate with other state agencies to **increase electric vehicle registrations** to support a future fleet of at least **940,000 light-duty EVs** by 2030.

Work with other state departments, transit agencies, and electric utilities to meet the transit vehicle goals specified in its 2020 Electric Vehicle Plan to **convert the state transit fleet to 100% ZEV** by 2050, with an interim target of at least **1,000 ZEVs by 2030**.

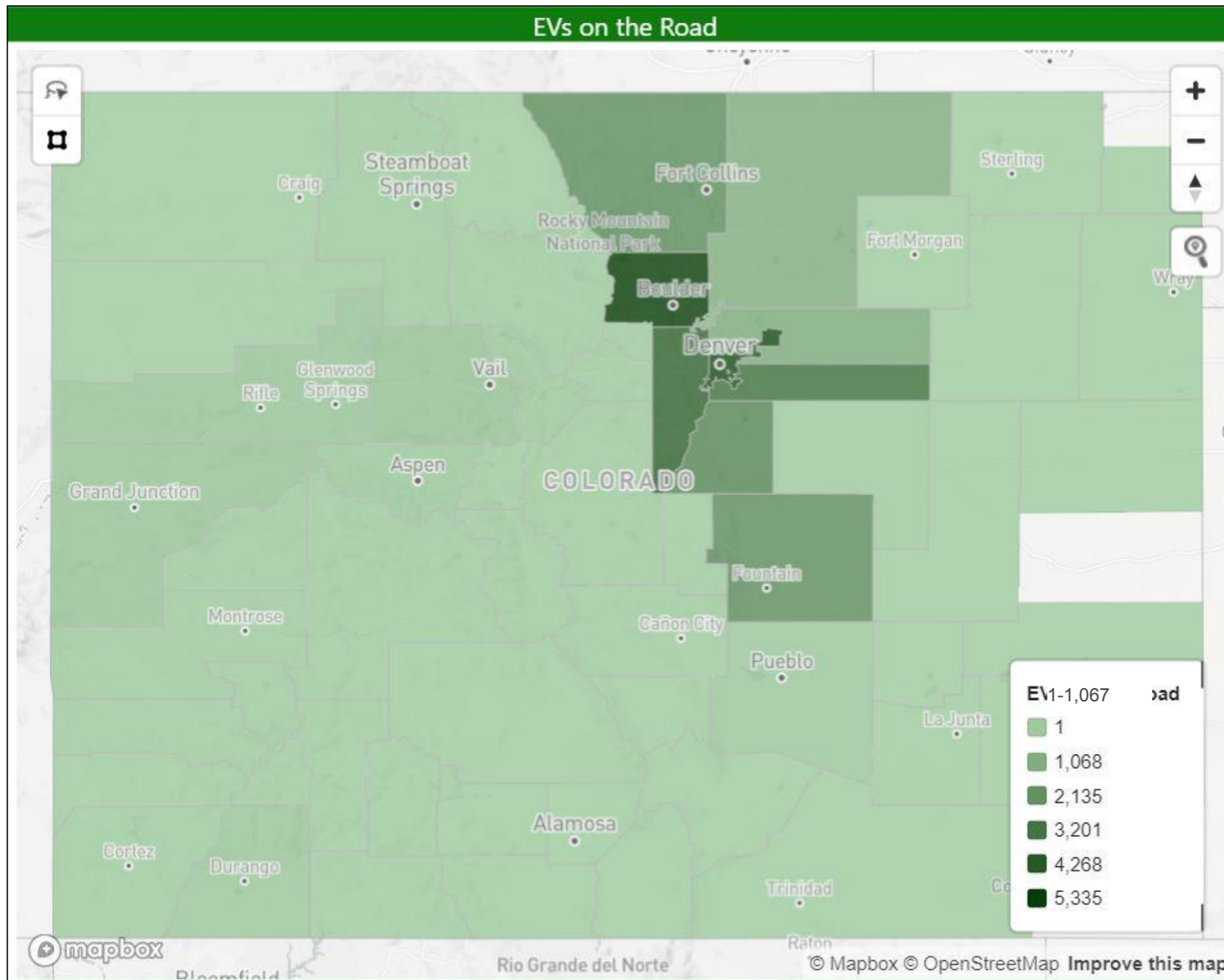
Collaborate with other state agencies, local governments, and private companies to **increase the percentage of total state highway miles within a 30-mile travel buffer of DC fast-charging stations** from 40% in FY 2020 to 100% by FY 2030.

Coordinate with other state agencies, the Colorado Scenic & Historic Byways Commission, local governments, and individual site hosts to **increase the number of Colorado Scenic & Historic Byways classified as electrified byways** from 3 in FY 2020 to 26 by the end of FY 2025.





# EV Market Background

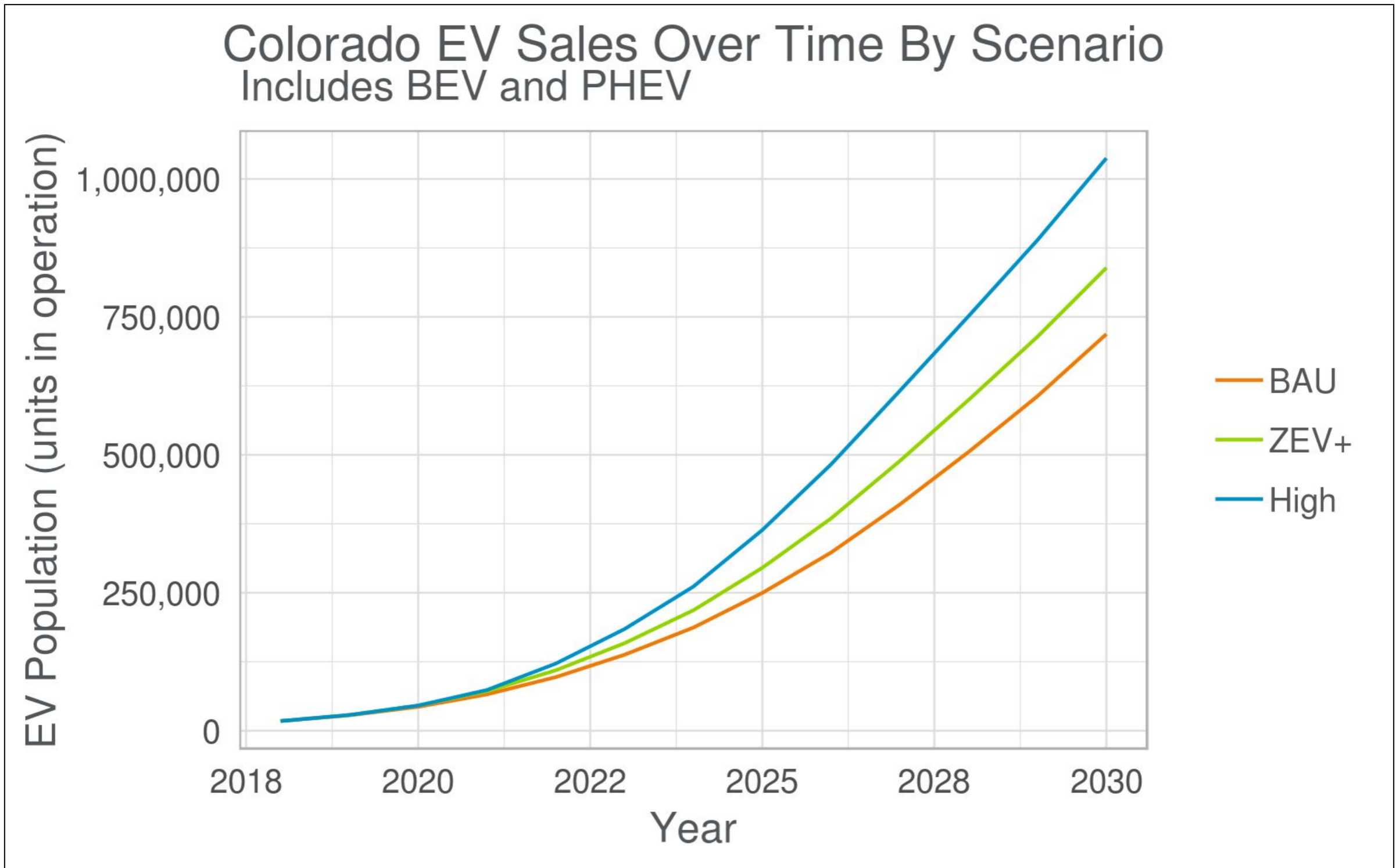


**32,730 EVs in Colorado**

- 22,577 BEVs
- 10,153 PHEVs



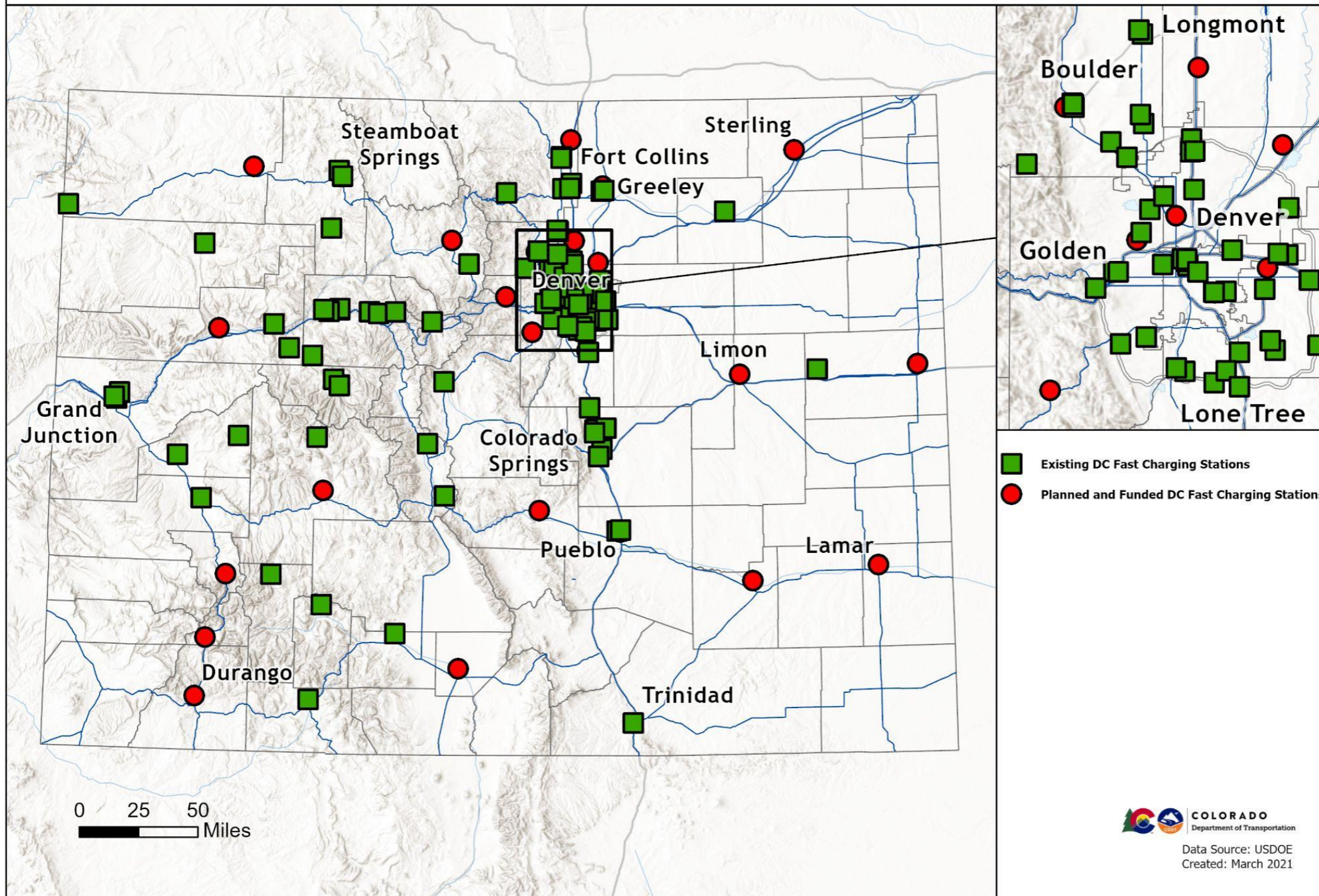
# EV Growth Projections





# Statewide EV Fast Charging Corridors

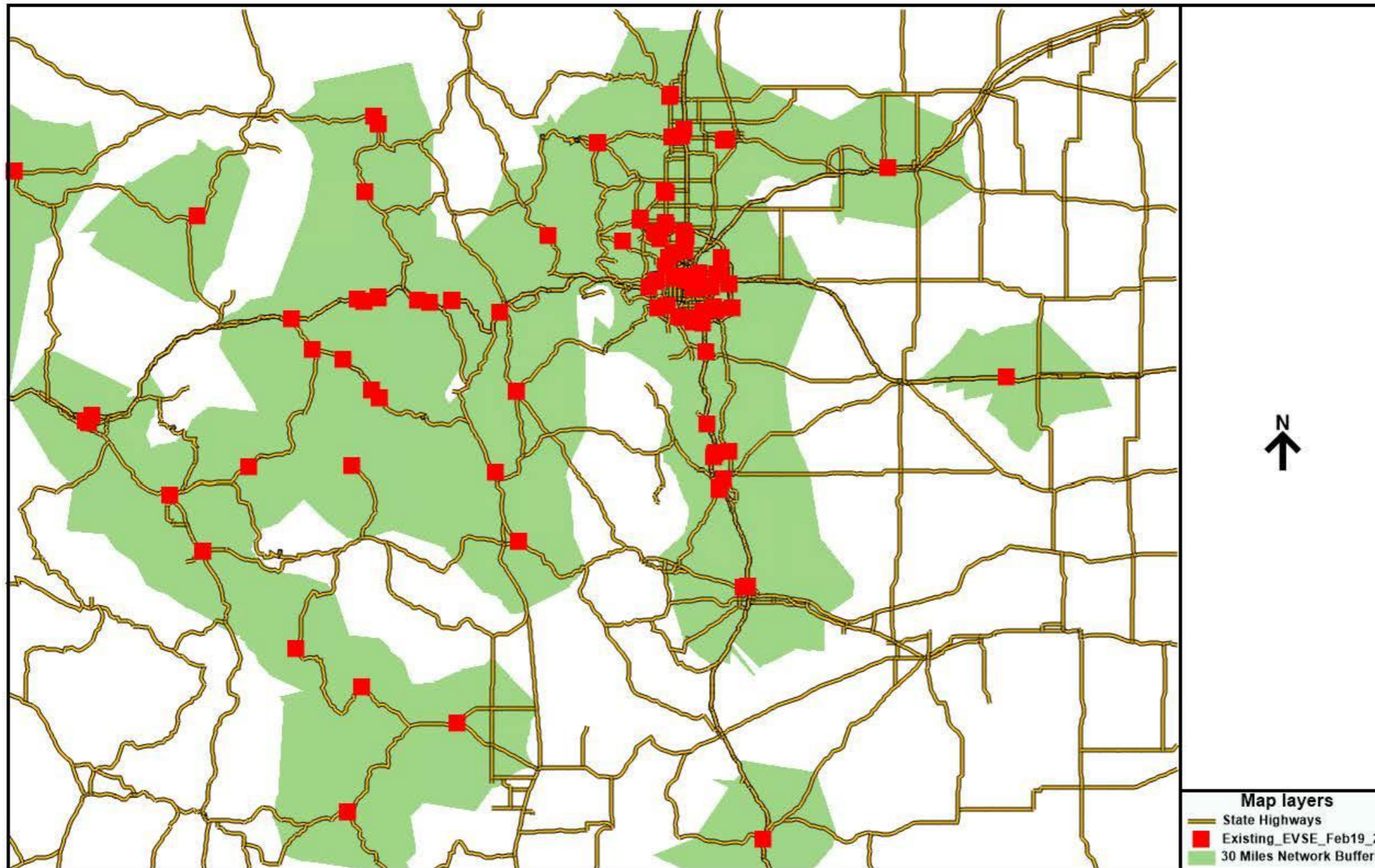
## Publicly Accessible EV Fast Charging Network 2021





# Statewide EV Fast Charging Corridors

Colorado Existing EV Fast Charging Stations (117) (with 30 Miles Travel Buffers) *Updated 02/25/2021*



Total State Hwy Miles	30 Miles Network Buffer's Miles	% of State Hwy Miles In Buffers
9,067	4,467	49%







**Zach Owens**  
Senior Program Manager  
Colorado Energy Office



**COLORADO**

**Resiliency Office**

Department of Local Affairs



# State Resources and Grant Programs



**COLORADO**  
Energy Office

# Colorado EV Plan 2020 Vision

---

Large scale transition of Colorado's transportation system to zero emission vehicles, with a long term goal of 100% of light-duty vehicles being electric and 100% of medium- and heavy-duty vehicles being zero emissions



**COLORADO**  
Energy Office

# Colorado EV Plan Actions

---

- Conduct an EV Equity Study
- Conduct EV market research study and use to inform the development of consumer campaign and dealership engagement strategy.
- Provide grants for charging infrastructure.
- Provide grants in support of local EV Readiness Planning.
- Roadmap to 100% electrification.



**COLORADO**  
Energy Office

# Resources and Grant Programs

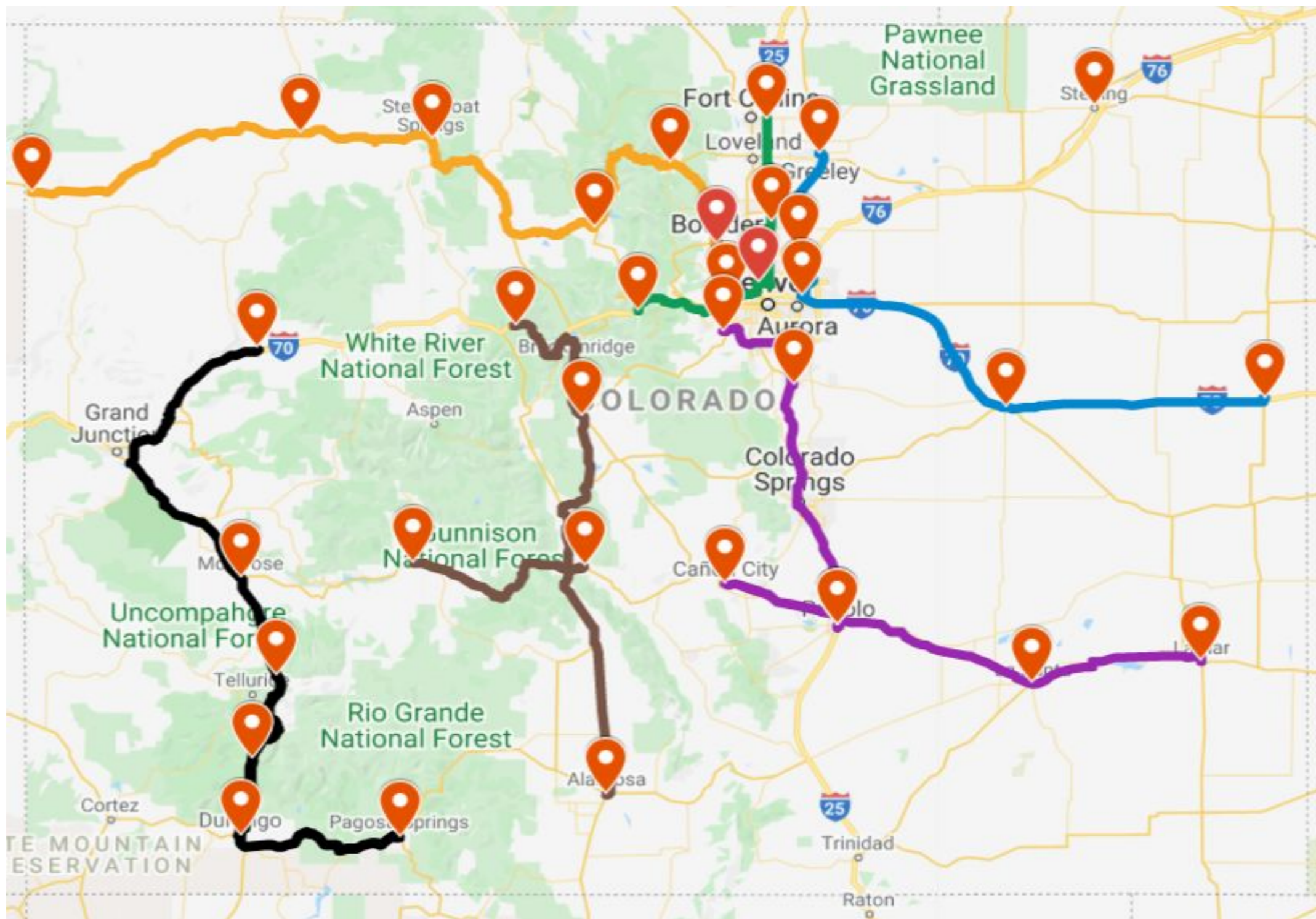
---

- EV Fast Charging Corridors
- EV Plazas
- Charge Ahead Colorado
- EV Readiness
- EV Education & Awareness Campaign



**COLORADO**  
Energy Office

# Colorado EV Corridors: Site Locations



**COLORADO**  
Energy Office

# DCFC Online



- Dinosaur
- Salida
- Fairplay
- Estes Park



**COLORADO**  
Energy Office



# DCFC Online



- Steamboat Springs
- Montrose
- Pagosa Springs
- Vail



**COLORADO**  
Energy Office

# Corridors: What's Ahead

---

- Coming Soon:
  - Rifle, Wellington, Granby, Craig, Wheat Ridge
- Majority of chargers in design & engineering and projected to come online this summer
- Finalizing site host agreements



**COLORADO**  
Energy Office

# EV Fast-Charging Plazas

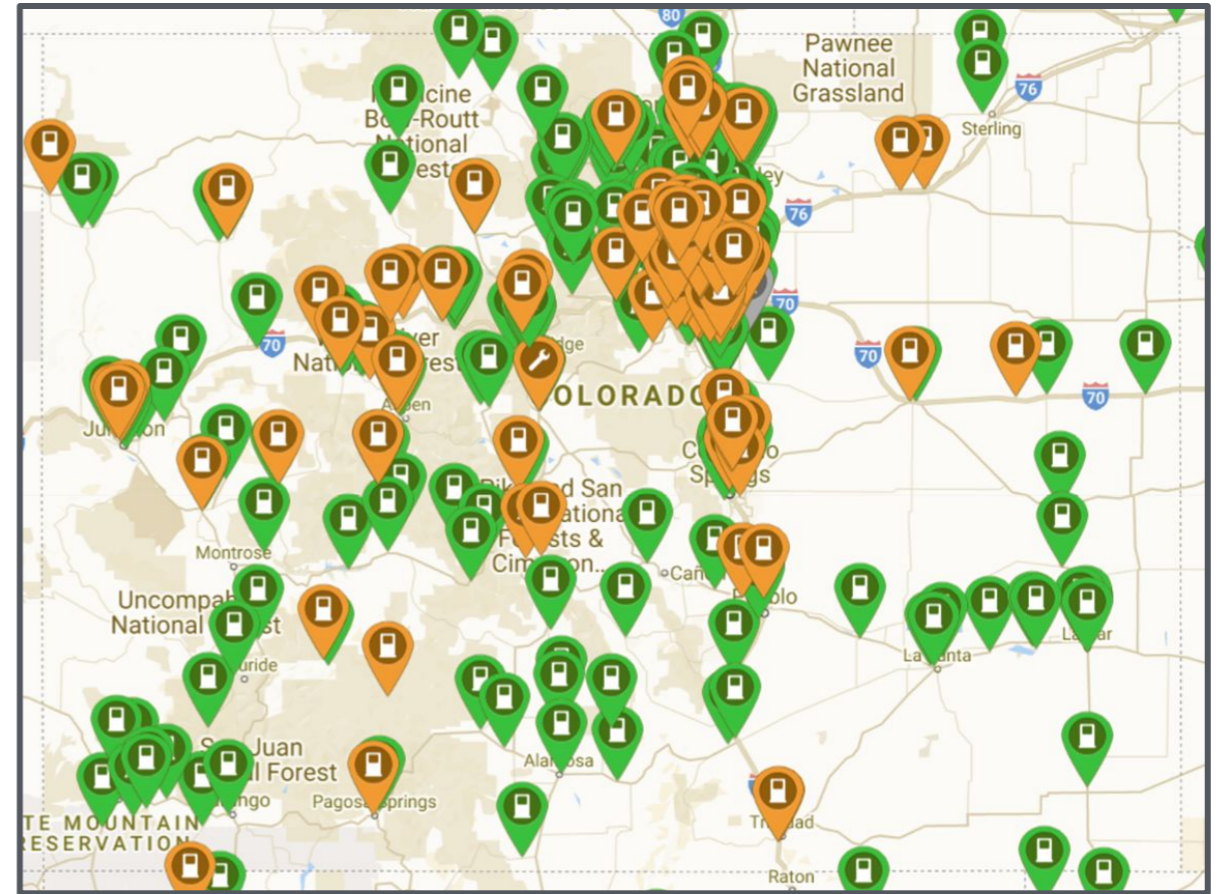
- Provide charging for drivers without regular access to home or workplace charging or in need of quick, convenient charging
- Located at DEN, in and around downtowns, near high-density housing and commercial developments, near transit hubs, and in locations where there is a high density of TNC/fleet EV drivers living
- 2-8 chargers at each site, 100-150 kW charging, modular design
- Provide up to 80% of eligible costs. Higher match from applicants evaluated more favorably.
- 7 awards issued in December 2020
- Currently accepting applications through April 16, 2021



**COLORADO**  
Energy Office

# Charge Ahead Colorado

- Partnership between CEO and Regional Air Quality Council
- Grants for community-based Level 2 and DC fast-charging stations across the state
- Competitive application process 3 times per year – January, May, October
- Grants for more than 1,000 chargers awarded to date



Source: PlugShare



**COLORADO**  
Energy Office



# Charge Ahead Colorado Funding Levels

---

- RAQC and CEO will fund 80% of the cost of a charging station up to the following set maximums:
  - Level 2, Fleet Only Charging Stations: \$6,000
  - Level 2, Dual Port Station (up to 25kW): \$9,000
  - Level 3, Multiple Connection Standard Station (minimum 50kW+): \$35,000
  - Level 3, Ultra-fast Multiple Connection Standard Station (minimum 100kW+): \$50,000 (limited availability at the discretion of the awarding agency)



# What's in an EV Readiness Plan?

---

- Shared Vision for EV Readiness and Community Goals and Objectives
- Community context including a description of how the plan aligns with/connects to other community goals, plans, and priorities
- Assessment of existing EV market
- Description of key barriers to increased adoption
- Stakeholder/public engagement strategy
- Infrastructure deployment including public, private, workplace, residential
- Policies and programs to increase adoption (including EV Ready Building Codes!)



**COLORADO**  
Energy Office

# Local Planning

---

- ▶ Denver—Opportunities for Vehicle Electrification in the Denver Metro area and Across Colorado
- ▶ Boulder—Boulder Electric Vehicle Infrastructure and Adoption Assessment
- ▶ Boulder County—Pledged to become a GoEV county—[www.goevcity.org](http://www.goevcity.org)
- ▶ Fort Collins—Electric Vehicle Readiness Roadmap
- ▶ Aspen—Aspen Community Electric Vehicle Readiness Plan
- ▶ Westminster—Westminster Forward Sustainability Plan
- ▶ Pueblo County—DOLA Grant for EV Readiness Plan
- ▶ Colorado Springs—DOLA Grant for EV Readiness Plan
- ▶ Estes Park—DOLA Grant for EV Infrastructure Plan



# Funding Opportunity

---

- CEO will provide a 50% cost share, up to \$20,000, to communities to develop EV Readiness Plans.
- Funding is available for contracted third-party services only and is not available for funding existing staff time.
- Applicant match must be in the form of cash which can include funds from local or state agencies (e.g. DOLA); utilities; grants, gifts, or donations; or other public or private entities.
- This is not a competitive grant. Funds are distributed on a first-come, first-served basis.



**COLORADO**  
Energy Office



# Application Process

---

- It is expected that prior to submitting an application, CEO and the local government will hold a number of discussions related to CEO's and the local government's goals and objectives of an EV Readiness Plan.

**Contact us to get started!**

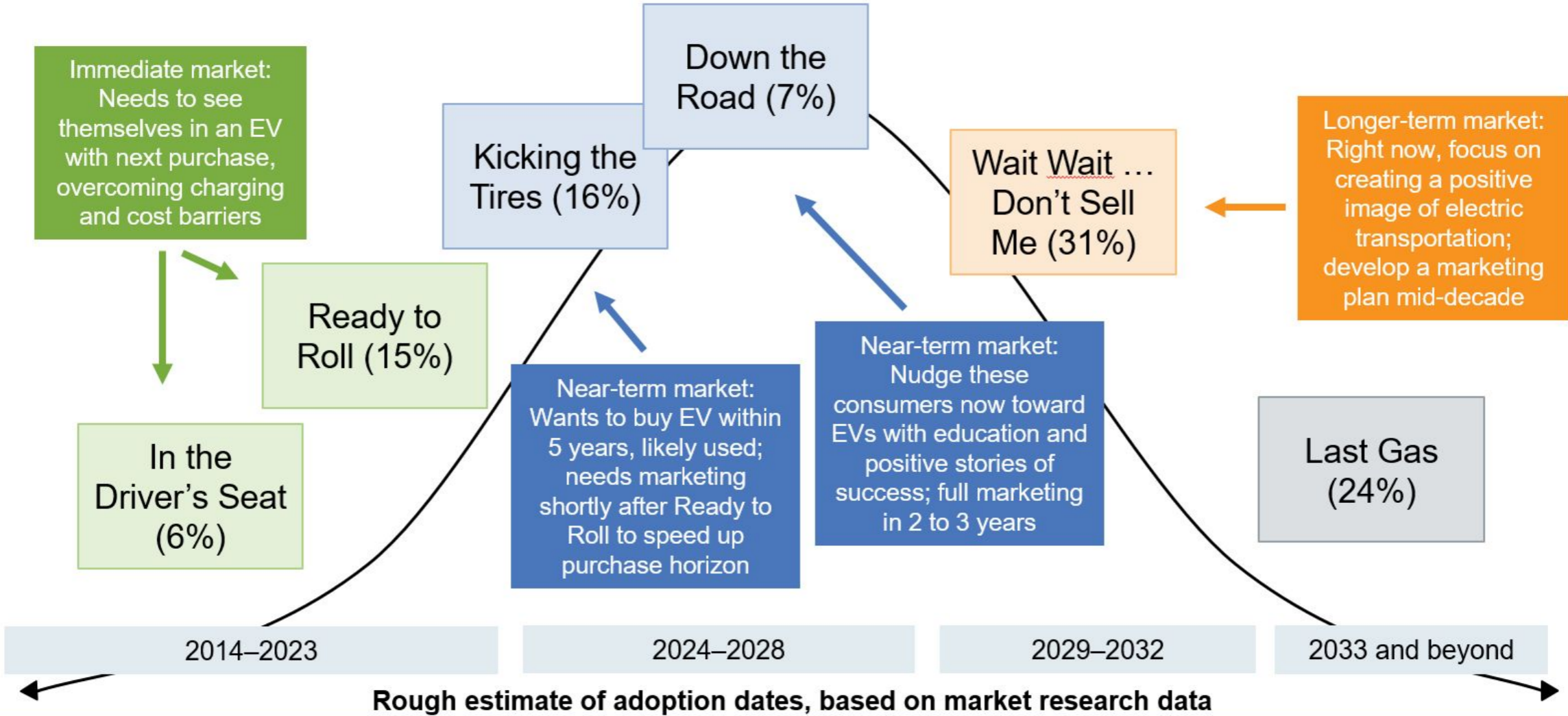
- Once the discussions have reached a point where the local government has a clear vision for the plan and a clear path forward to procure third party services, the local government may submit a proposal for funding to CEO.



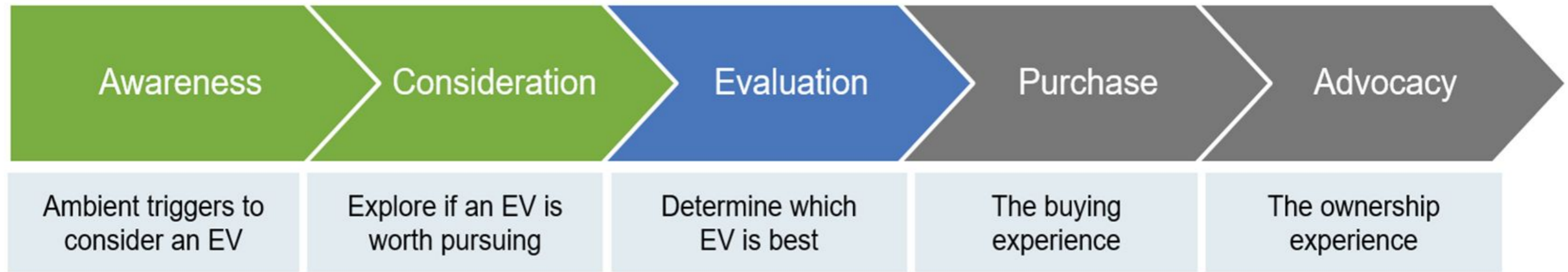
**COLORADO**  
Energy Office

# Education & Awareness Campaign

## Segments along the EV adoption curve



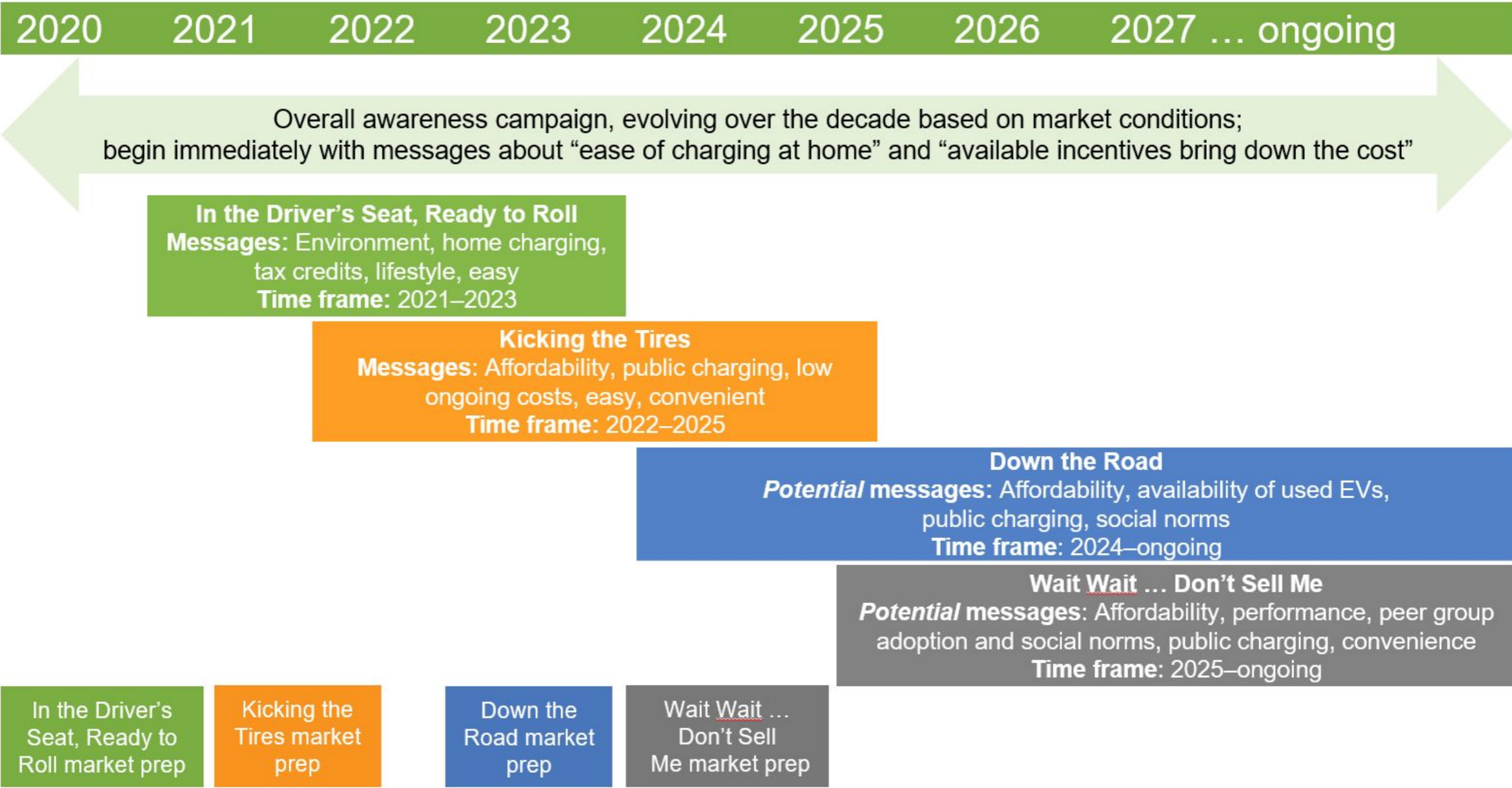
# Customer Journey: The EV Decision Process



- There are five stages that all Colorado consumers go through. The key difference is how and when different segments enter the journey.
- This project focused primarily on the first two phases (in green) and partially on the evaluation phase (in blue). Our roadmap does not contain advice on the purchase or advocacy phases (in gray).
- Each phase has key moments—make-or-break points where buyers continue on or drop off the journey.
- The goal is to identify existing pain points and improve the journey to keep people from dropping out.



# Develop and Launch a Campaign



---

Zach Owens  
Senior Program Manager  
Transportation Fuels and Technology  
[zachary.owens@state.co.us](mailto:zachary.owens@state.co.us)  
303.866.3279



**COLORADO**  
Energy Office

# Energy/Mineral Impact Assistance Fund Planning & Implementation Grants

**COLORADO**  
Department of Local Affairs

Search

Assessment Appeals    Disaster Recovery    Housing    Local Government    Property Taxation

[Home](#) > [Funding Programs](#) > Energy/Mineral Impact Assistance Fund Grant (EIAF)

## Energy/Mineral Impact Assistance Fund Grant (EIAF)

COVID-19 Relief for Local Governments >

Account Login

Civil Asset Forfeiture Reporting

The purpose of the EIAF Program is to assist political subdivisions that are socially and/or economically impacted by the development, processing, or energy conversion of minerals and mineral fuels. Funds come from the state severance tax on energy and mineral production and from a portion of the state's share of royalties paid to the federal government for mining and drilling of minerals and mineral fuels on federally-owned land.

[Apply and Manage Grant](#)

- Talk to your DOLA Regional Manager to find out more.



**COLORADO**

Resiliency Office

Department of Local Affairs



**Ron Go-Aco**  
Energy Coordinator

Pueblo County



**COLORADO**

**Resiliency Office**

Department of Local Affairs

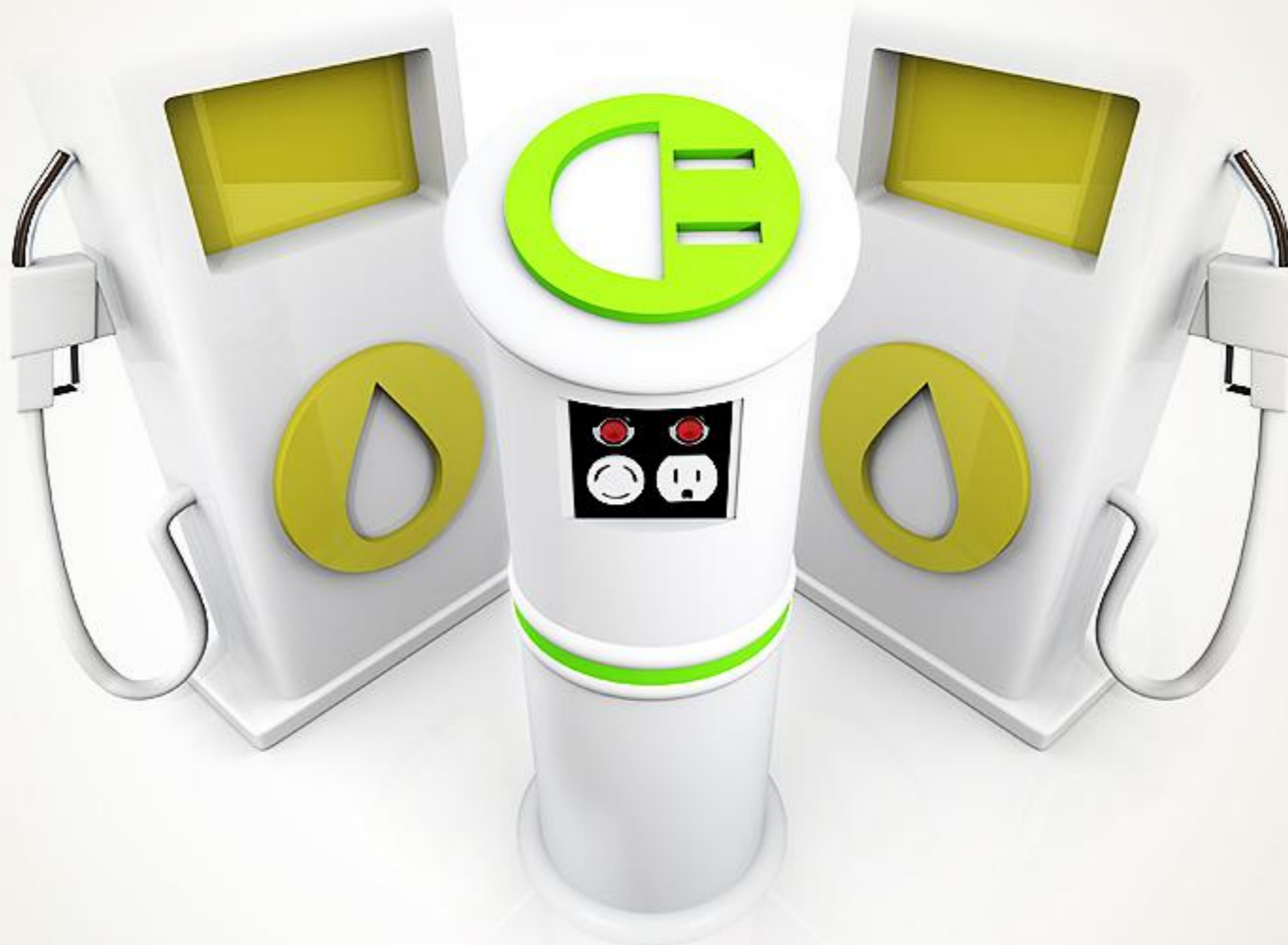


# PUEBLO EV Readiness Plan



PUEBLO COUNTY  
COLORADO





**In 2025, Apple plans to sell electric vehicles...**

**FINALLY! AN APPLE PRODUCT THAT WILL HAVE "WINDOWS".**

# How did it go?



- The project was funded through a grant from the Department of Local Affairs (EIAF)
- Goals were mainly driven by
  - Leadership in Energy and Environmental Design (LEED) for Cities & Communities
  - State grants for EV charger installations
- Six (6) months of work including community surveys and stakeholder collaborations

# What did we learn?

- Goal setting: we could have set a higher bar (public transit electrification, electric bus route expansion, etc.)
- Public Engagements: we could have involved more stakeholders responsible in developing grants (CDOT, CDPHE, etc.)
- Timeline: we could have set longer timeline to achieve more deliverables (at least 1 year)

**We did great but there's always room to be better!**



# What's the main challenge?



Increases in EV chargers drive EV adoption

Y2016/2017:

Public Charger – 4 to 9

Y2017/2018:

PEV – 103 to 155

Y2018/2019:

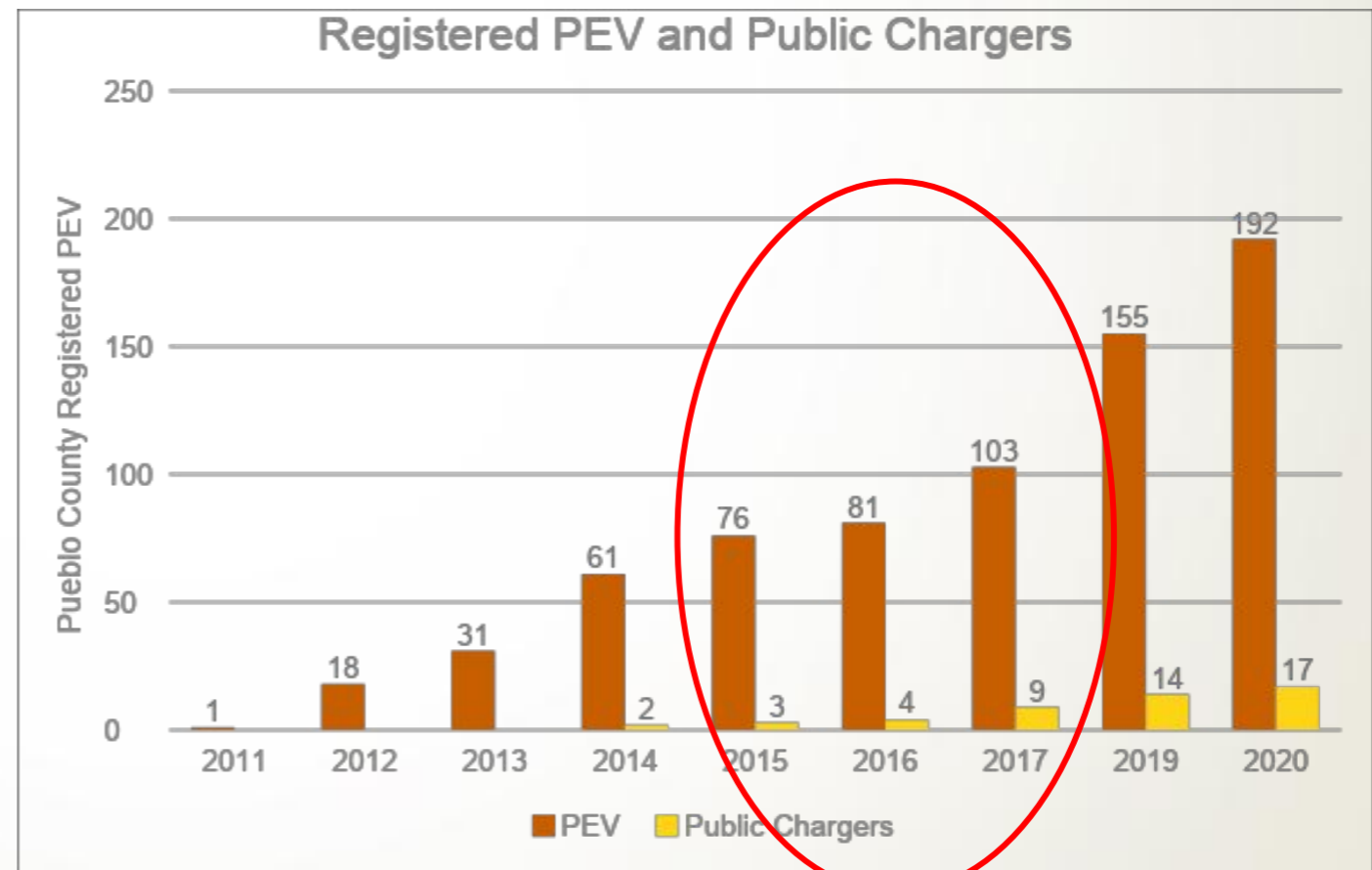
Public Charger – 36% up

PEV – 34% up

Y2019/2020:

Public Charger – 18% up

PEV – 19% up



**Note: The statewide goal is 940,000 EVs by 2030**

# What else do we suggest to other local governments?



- Identify a lead champion for the project
- Involve the utilities in community outreach
- Reach out for inputs from other local governments who have done this before

# The Project Makes Pueblo Better

- Enables Pueblo County to be the EV hub in Southern Colorado
- Economic investments are driven into the region
- Money saved for Pueblo communities with cheaper charging than traditional refueling
- Creates a model for clean energy as a rural issue (not only urban)
- Enhanced air quality across Pueblo



# ELECTRIC CARS ARE ALREADY CHEAPER TO DRIVE.

ANNUAL COSTS




Source: <https://www.kochvsclean.com/electric-cars-cheaper-gas-cars/>




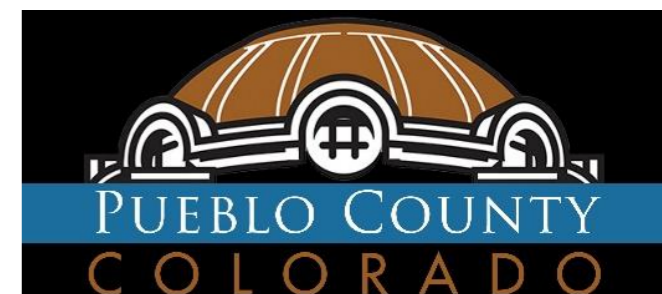
# Pueblo EV Readiness Plan

**Ron Allan Go-Aco**, CEM, CMVP, CRE, LEED AP  
Economic Development & GIS / Energy  
Pueblo County  
215 W. 10TH STREET Room 340  
PUEBLO, CO 81003

 [go-acor@pueblocounty.us](mailto:go-acor@pueblocounty.us)

 719-583-6245 (Direct)

 719-225-9028 (Mobile)







**Vanessa Solesbee, CAPP**  
Parking & Transit Manager

Town of Estes Park, CO



**COLORADO**

**Resiliency Office**

Department of Local Affairs



**Town of Estes Park**  
*The Future is Looking Electric!*



- Home to ~6,000 residents
- Over 4 million annual visitors
- Small, mountain town character
- Gateway to Rocky Mountain Ntl Park
- Convergence of three major highways
- Committed to stewardship of natural resources

# EV Infrastructure & Readiness Plan

## Plan Goals:

1. Maximize the Town's existing EV infrastructure investment;
2. Guide the Town's future EV investment in infrastructure and fleet.
3. Explore policy, land use and environmental implications.

## Funding:

- Dept. of Local Affairs Renewable & Clean Energy Challenge
- Colorado Energy Office



# Estes Park Today

- 65 EVs on the road; 50 are fully electric
- Level II charging stations (2018)
  - Charge Ahead Colorado recipient
- Level III DC fast-chargers (2020)
  - Alt Fuels Colorado DC fast-charging participant
- 25+ charging locations in Town  
(public & private)
- “Trolley, trolley!”



Ribbon-cutting in a pandemic!?



Public Works staff hanging with our new DC Fast Chargers!

# Fleet Electrification Journey

- **Benefits**

- 40% of transit fleet will be electric by 2021
- Improved experience for riders and pedestrians
- 3,456 gallons of fuel saved annually (per vehicle)
- Reduce 16 different pollutants, most notably Carbon Monoxide, Carbon Dioxide and Nitrogen Oxide



- **Challenges**

- Maintenance and reliability
- Learning curve for staff
- Specialized repair needs



# EV Plan Implementation

## 2021 Goals:

- Education and promotion to locals and visitors, with a special focus on encouraging EV Tourism
- Coordination with local and regional partners
  - Northern Colorado Clean Cities Coalition
  - Peak to Peak Scenic Byway Committee
  - Visit Estes Park
- Explore GoEV Resolution and ZEV First Fleet Policy
- Town Comprehensive Plan and Code Updates (thank you, DOLA!)



Photo credit: agefotostock



EV Plan Implementation Table						
	Recommendation #1	Recommendation #2	Recommendation #3	Recommendation #4	Recommendation #5	Recommendation #6
	Education and Awareness	Partnerships	TOU Rate	"ZEV First" Fleet Policy	Code Amendments and Policy	Expand Charging Infrastructure
<b>Year 1 (2021)</b>						
Implementation Focus	Focus on the trolley and new Level 3 DCFCs; leverage existing relationships and programs using the Town's website, social media and press releases	Continue to strengthen partnerships with NCCC, RMNP, Estes Valley Recreation and Parks District, and others to galvanize resources and leverage existing momentum.	Hold preliminary discussions between EPCC and PRPA about EV charging and time of use (TOU) rates.	Draft and adopt an Estes Park-specific "ZEV First" Fleet Replacement Policy	Adopt the GoEV City Resolution to further pledge support for EVs at the policy level.	Monitor usage at existing charging stations; explore data sharing agreement with ChargePoint for new Level 3 DCFCs and/or Tesla for monthly usage of the Superchargers
Potential Partners/Lead	NCCC, RMNP, Visit Estes Park	NCCC, RMNP, Estes Valley Recreation and Parks District, Larimer County	EPCC and PRPA	Town Staff and support from NCCC	Town Board of Trustees	ChargePoint and/or Tesla
Funding/Bandwidth	NCCC has funding to support this recommendation; additional funding could come from the Town's budget, grants, or other similar funds.	Investment of Town staff time and resources needed.	Investment of Town staff time and resources needed.	Investment of Town staff time and resources needed.	None needed; resolution is already drafted and included herein.	Investment of Town staff time and resources needed to track.
<b>Years 2-5 (2022-2025)</b>						

The image shows the interior of a bus with extensive wood paneling on the walls and ceiling. The ceiling features a central light fixture with three bulbs and several circular air vents. Metal handrails are mounted along the sides of the bus, with brown fabric straps hanging from them. The windows are arched and framed in dark wood. The overall atmosphere is warm and classic.

# Thank You!

Vanessa Solesbee, CAPP  
Parking & Transit Manager

[vsolesbee@estes.org](mailto:vsolesbee@estes.org) // 970-577-3957





**COLORADO**

**Resiliency Office**

Department of Local Affairs

# Q&A

*Please leave your questions in the Q&A or chat*



**Theresa  
Takushi**  
CDOT



**Mike King**  
CDOT



**Zach Owens**  
CEO



**Ron Go-Aco**  
Pueblo  
County



**Vanessa  
Solesbee**  
Town of  
Estes Park



**COLORADO**

**Resiliency Office**

Department of Local Affairs

# *Upcoming Webinars*

## **New Buildings - Energy Efficiency and Building Codes**

Wednesday, April 7, 2021

12 P.M. - 1 P.M.

**Sign up at:** [www.coresiliency.com/webinars](http://www.coresiliency.com/webinars)



**COLORADO**

Resiliency Office

Department of Local Affairs

***THANK YOU!***



**COLORADO**

**Resiliency Office**

Department of Local Affairs