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Arapahoe County Regional Electric Vehicle Action Plan

December 5, 2023



Source: Arapahoe County Government



Source: Shutterstock_749339836



Source: Arapahoe County Government

TODAY'S OBJECTIVES

- Review the plan process
- Review what we heard last study session and plan edits
- Preview public engagement
- Allow time for comments and questions





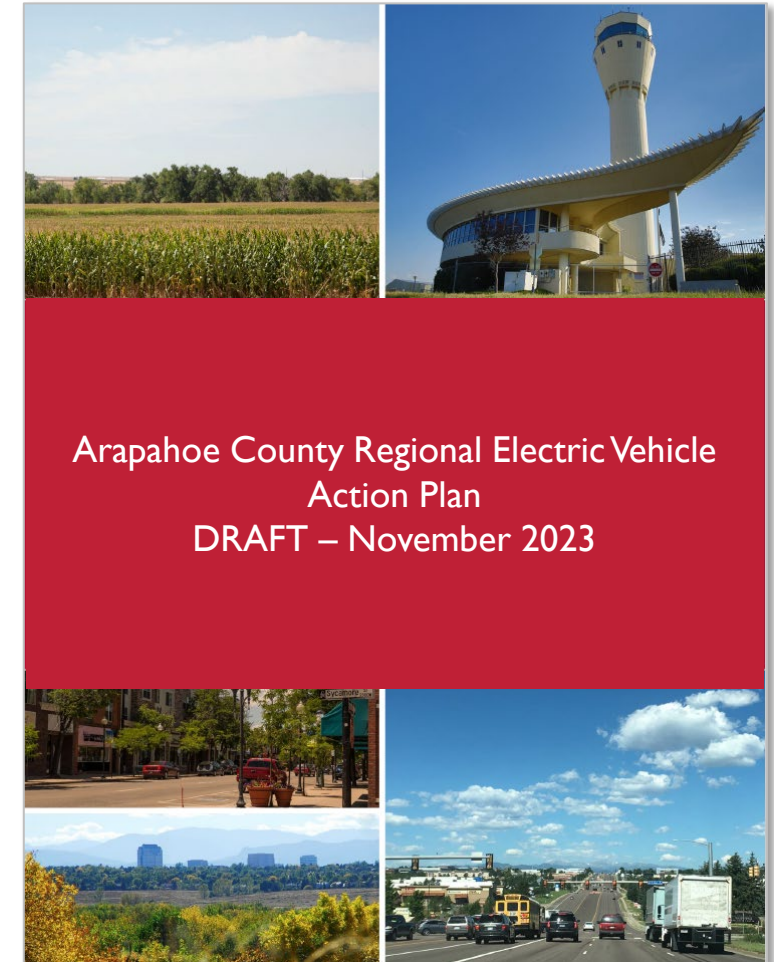
Source: Partners in Energy

PLANNING PROCESS

REGIONAL PLANNING
THROUGH XCEL ENERGY'S
PARTNERS IN ENERGY

PLAN DEVELOPMENT PROCESS

- Developed through Xcel Energy Partners in Energy





Source: Arapahoe County Government

REVIEW: WHAT WE HEARD

FROM SEPTEMBER BOCC
STUDY SESSION

COMMENTS WE HEARD

Like the
collaborative
planning process

Like sharing the
State EV
projections related
to the County

Want to hear from
the community
about the priority
of EVs



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QUESTIONS ASKED

What are the greenhouse gas emissions related to EVs?

What are EV charger installation costs?

What are the impacts of EVs?

Is this a priority of the community? If this is a priority for the County, what might be impacted?



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ARAPAHOE COUNTY REGIONAL ELECTRIC VEHICLE ACTION PLAN EDITS

WHAT CHANGED IN THE
PLAN?

REGIONAL ELECTRIC VEHICLE ACTION PLAN OVERVIEW

Executive Summary

- **Narrative** summary of the plan.

Introduction

- Case for a regional transportation electrification plan.

Where We Are Now

- Outlines current levels of EV adoption and public charging, along with other existing efforts.

Where We Are Going

- Vision and **EV adoption and EV charger projections.**

How Do We Get There

- Strategies and implementation details – **denotes high level plan with costs to be determined as part of implementation.**

How We Stay On Course

- Outlines how the City will track progress toward Arapahoe County's EV vision, **and how it will adapt to a changing landscape during implementation.**

Appendices

- Electric Vehicles 101, Arapahoe County EV Baseline, **Supplemental Information**, Works Cited.



PLAN EDITS AND ADDITIONS

Executive summary

- Narrative text from image rich

Goals to projections

- Clarifying language that the County will track key metrics (EV adoption and EV charging stations) to understand the need for more local government involvement

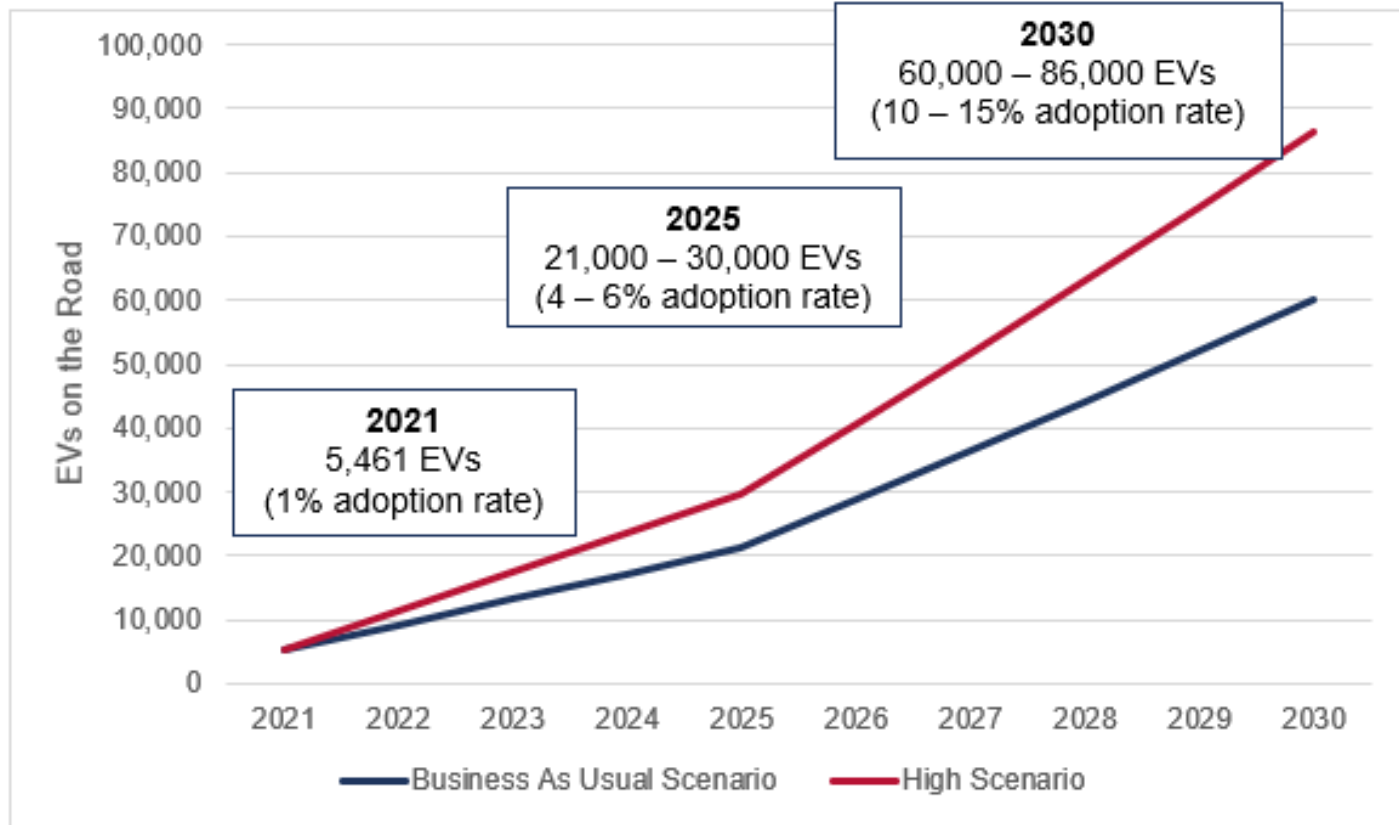
Additions

- Argonne National Laboratory cradle to grave GHG emissions analysis
- Added language that costs related to strategies will be determined during implementation and be separate budget requests
- Added average EV charger and installation costs for residential, multifamily, and commercial from Xcel Energy semi-annual report

County staff developed a supplemental report

- Includes environmental factors, EV battery, EV weight, EV charging considerations, costs and economics, micromobility and transit
- Included in plan document as separate appendix and referenced in the Plan





Projected EVs on the road in Arapahoe County based on Colorado Energy Office Business as Usual (BAU) and High scenarios scaled to Arapahoe County zip codes (Colorado Energy Office, 2019).

ELECTRIC VEHICLE ADOPTION PROJECTIONS

INSTEAD OF GOALS

EV CHARGING PORTS: EXISTING AND PROJECTED NEEDS FOR 2030

Year	Public Level 2	DC fast non-corridor	NEVI DC fast corridor	Total
Sept 2023	317	53	8	378
2030 (total projected need)	2,470	604	26	3,100
2030 (additional charging ports needed)	2,153	551	18	2,722

Projected need for charging ports based on Arapahoe County's anticipated future EV adoption (Hsu, Slowik, & Lutsey, 2021).



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COUNTY DEVELOPED SUPPLEMENTAL EV INFORMATION

Environmental factors

- National energy production, EV batteries, EV weight and tire wear

EV charging considerations

- Reliability of the operation of EV chargers

Costs and economics

- Upfront cost of vehicles, cost of charging equipment, lower total cost of ownership

Micro-mobility and transit

- Considerations and impacts to alternative mobility options from full sized personal vehicles



FOCUS AREAS

Focus Area	Definition
Outreach and Education	<ul style="list-style-type: none">• Educating residents, businesses, and first and second responders about EVs
Charging Infrastructure	<ul style="list-style-type: none">• Supporting the development of convenient and accessible charging infrastructure
Fleet Electrification	<ul style="list-style-type: none">• Supporting the decision process to purchase or lease electric vehicles for public and private fleets
Electric Multimodal Transportation	<ul style="list-style-type: none">• Ensuring expanding electric transportation options such as transit and micromobility

FOCUS AREAS & SHORT-TERM STRATEGIES

2023-2025

Focus Area	Strategies
Outreach and Education	<ul style="list-style-type: none">• EO-1: Conduct annual community surveys to understand existing barriers to EV adoption.• EO-2: Conduct communitywide EV outreach.• EO-3: Support EV training opportunities for first and second responders.
Charging Infrastructure	<ul style="list-style-type: none">• CI-1: Map potential locations for public charging stations• CI-2: Increase public charging infrastructure through installations at public sites and promoting funding opportunities and resources.• CI-3: Develop EV charging outreach materials for developers.
Fleet Electrification	<ul style="list-style-type: none">• FE-1: Encourage public fleets to conduct fleet analyses to recommend opportunities for electrification.• FE-2: Develop fleet electrification resources and conduct outreach to engage regional and local fleets.• FE-3: Support EV training opportunities for mechanics and technicians.
Electric Multimodal Transportation	<ul style="list-style-type: none">• MT-1: Partner with regional entities to support electric multimodal options.• MT-2: Incorporate electric multimodal considerations into multimodal network planning.• MT-3: Coordinate countywide adoption of consistent electric multimodal policies.



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PLAN IMPLEMENTATION

HOW WILL WE ACHIEVE OUR
GOALS?

HOW JURISDICTIONS PLAN TO USE THE EV ACTION PLAN

Support Local Efforts at Regional Scale

- Support efforts on vehicle electrification.
- Serves as a great example to the businesses, residents, and organizations that EV adoption is a priority.

Planning

- Inform Aurora's Multimodal Citywide Transportation Master Plan strategy to prepare for EVs and EV charging.
- Inform opportunities for public charging at City facilities.

Grant Funding

- Support grant applications for funding EV education, EV chargers, fleet transition planning, and fleet vehicle purchases.

Education & Outreach

- Educate staff about updated building codes - multifamily EV related requirements.
- Utilize the plan and resources to help educate the community, both residents and business owners about EVs.

Fleet Electrification

- Already started fleet assessments.
- Support additional electrification of the city vehicle fleet.
- Support planning and grant application for fleets.



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IMPLEMENTATION ROLES – A COLLABORATIVE APPROACH



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NEXT STEPS

Public
Comment
period
Q1 2024

- **Community involvement**
 - Read the plan
 - Take the survey
 - Share with neighbors

Public Event
Q1 2024

- **Community involvement**
 - Hear about the plan
 - Answer polling questions
 - Ask questions

Final Draft Plan
to Board of
County
Commissioners
for adoption

Local
communities
can adopt plan
formally or
informally

- **Community involvement**
 - Reach out to your local government to learn more

Plan
Implementation
Q2 2024



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PUBLIC EVENT – EARLY 2024

Virtual event

Present plan process and draft plan

Engagement through questions

Gather feedback from participants

Survey Questions

- What municipality do you live in?
- How would you rate your EV awareness?
- What is your biggest barrier to EV adoption?
- What are the benefits of EV adoption?
- What do you think is local government's role in electrified transportation?
- How important do you feel is it for local government to support electrified transportation?



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QUESTIONS?