Air Quality Planning in the North Front Range

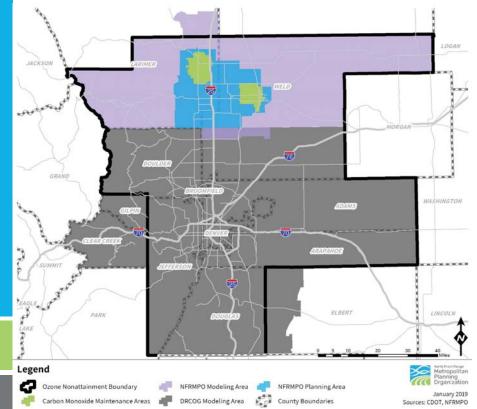
NFRMPO Planning Council



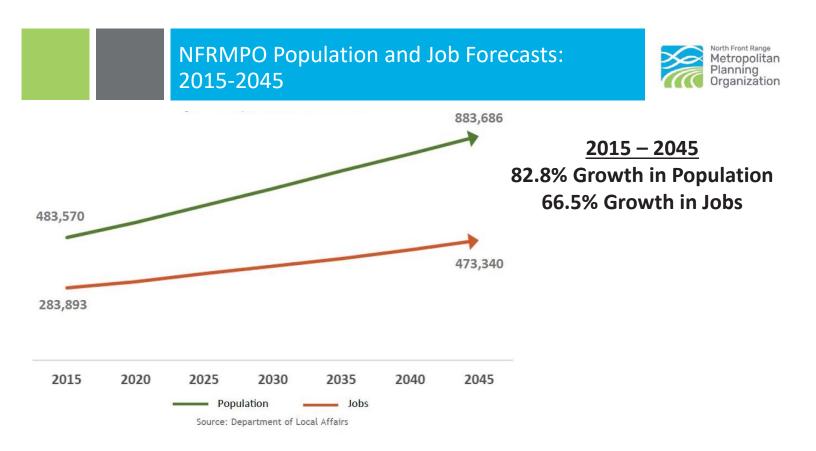
North Front Range Metropolitan Planning Organization







- Model the Northern Subarea of the Denver/North Front Range 8-hour Ozone Nonattainment Area
- Includes portions of the Upper Front Range TPR
- Model the two Carbon Monoxide (CO) Maintenance Areas in the region: Fort Collins and Greeley





NFRMPO Plans and Programs



- For commuters traveling to/from/within the NFRMPO region
 - Typically 25 miles or more one way
- Currently 48 vanpools in operation
- Two new routes were initiated in 2018
- New branding and marketing



www.VanGoVanpools.com

Public Outreach

- NFRMPO staff attend 15 or more community events each year
 - "Simple Steps. Better Air." information, resources, giveaways and prizes
 - Interactive education
 - Transportation Trivia Wheel
 - "Ozometer"
 - Children's Activity Book
 - Resident and visitor surveys
- Social media posts
- Website









• The NFRMPO awards CMAQ, STBG, and TA funds through a competitive Call for Projects process

CMAQ Projects Implemented FY2016-2018						
Project Type	Number of Projects	VOC (kg/day)	NOx (kg/day)			
Alternative Fuels and Vehicles	5	9.4	27.8			
Bicycle and Pedestrian Facilities and Programs	5	7.8	20.6			
Congestion Reduction and Traffic Flow Improvements	9	155.7	54.8			
Total	19	172.9	103.1			

2045 Regional Transportation Plan (RTP)

- Long-term multimodal transportation vision for the region
- Updated every four years due to ozone non-attainment status
- To be adopted by September 2019
- Includes:
 - Corridor-specific vision plans
 - Plan Scenarios
 - A fiscally-constrained plan
 - Implementation plan



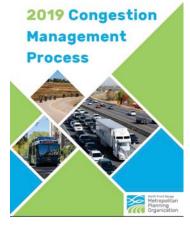


• Performance-based approach to addressing congestion

- Congestion-related goals and objectives
- Data collection and system performance
- Identification and evaluation of congestion management strategies
- Propose strategies and opportunities for congested corridors
- Periodic assessment of strategy implementation

Bicycle and Pedestrian (Non-Motorized) Planning

- 2016 Non-Motorized Plan (NMP)
 - Regional Non-Motorized Corridors (RNMCs)
 - Best practices, tools, and resources to assist local planning efforts
- Bicycle and Pedestrian Count Program
 - NFRMPO staff manages permanent and temporary count devices to better understand usage and demand
- NoCo Bike & Ped Collaborative
 - Local agencies, non-profit organizations, and residents
 - Share best practices, host events, and make recommendations to the NFRMPO













Metropolitan Planning Organization

Two Plans

•

- Short-Term <u>Coordinated Public Transit/Human</u> Services Transportation Plan (Coordinated Plan)
 - Projects and actions to benefit the mobility of older adults and individuals with disabilities
- Long-Term Regional Transit Element (RTE)
 - Region-wide assessment of transit out to 2045

Larimer and Weld County Mobility Committees

 Brings together human service agencies, transit agencies, and staff from the NFRMPO to ensure residents have mobility and access

Transit Planning and Mobility Coordination (continued)

Rider's Guide Brochure and Find My Ride Online Tool

• Fare, schedule, and contact information for fixed-route services, demand-response services, commercial services, and paratransit in the region.

Larimer County One Call/One Click Center

• Assist residents of Larimer County with finding transportation options, and improving data collection, efficiency, and coordination among ride providers









North Front Range Metropolitan Planning Organization









Connect With Us



ON THE MOV







make up the Execu eting. TAC re-elected Dr

an of Loveland as Chair and elected Mitch N nce as Vice-Chair. Dawn Anderson of Weld County will we to serve as Past Chair

\$20M BUILD Grant Awarded to North I-25

lication for th d an ap ing Investments nent (BUILD Disc on for \$2 hase 2 project was submitted.

2019 at their December



On December 6, 2018 it was ann tata DE Danas Das unced that the North Inte ed a \$20M BUILD Grant

Email: staff@nfrmpo.org Web: nfrmpo.org Twitter: @nfrmpo **Blog:** nfrmpo.blogspot.com Facebook: facebook.com/nfrmpo LinkedIn: linkedin.com/company/nfrmpo **Community Remarks:** communityremarks.com/northfrontrange Newsletter: https://nfrmpo.org/newsletter/

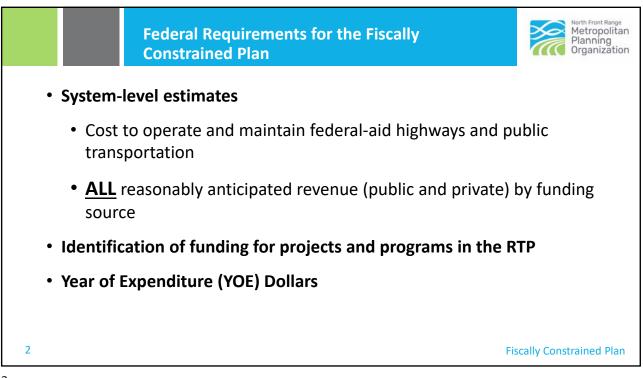
Ryan Dusil – Transportation Planner II 970 - 224 - 6191 rdusil@nfrmpo.org

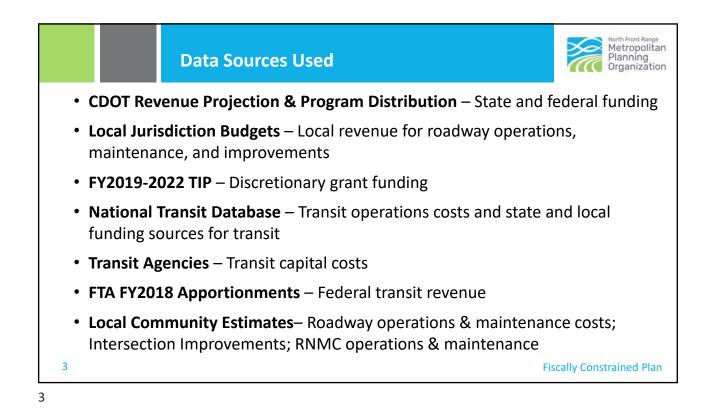


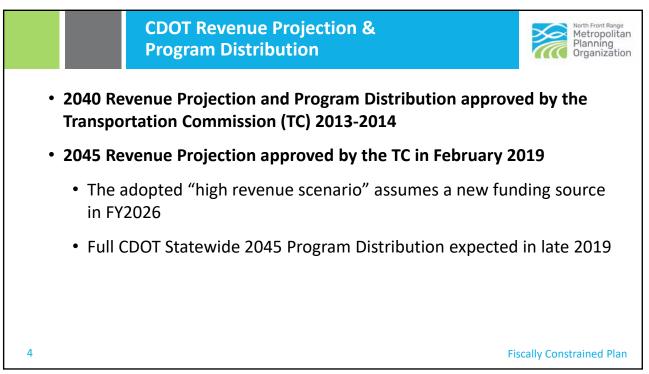
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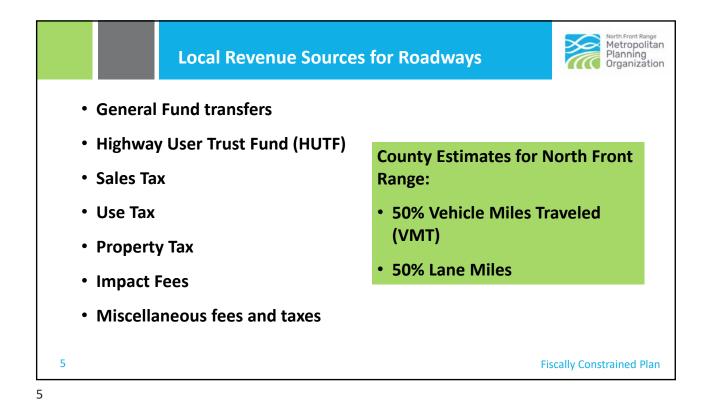


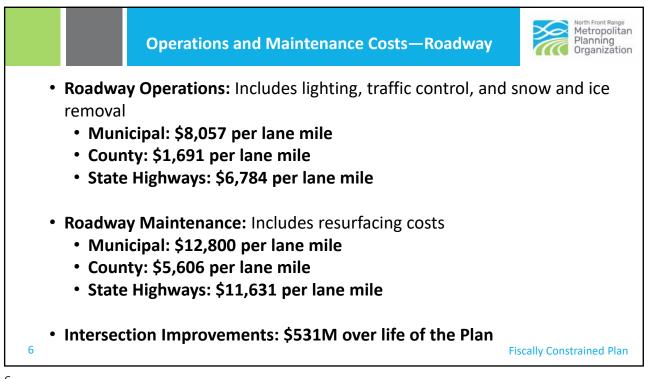


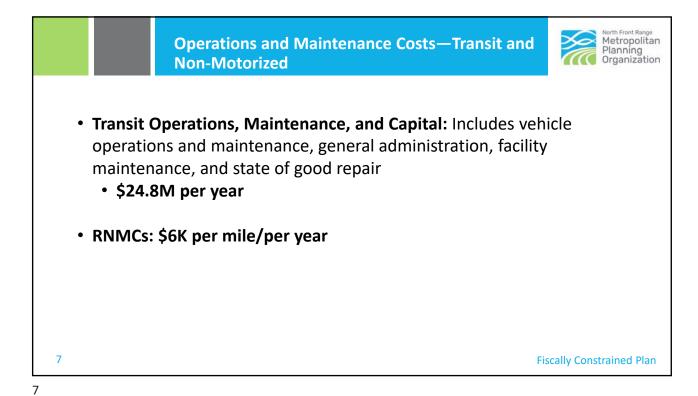








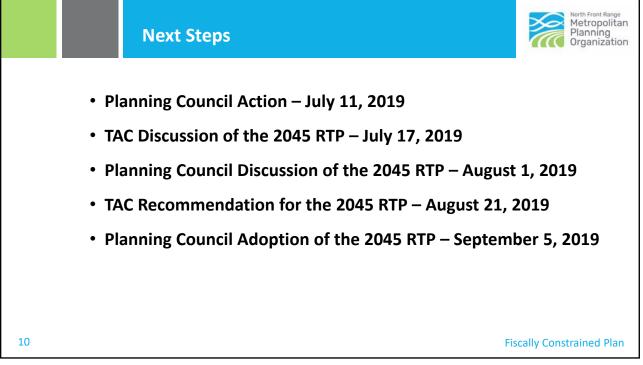


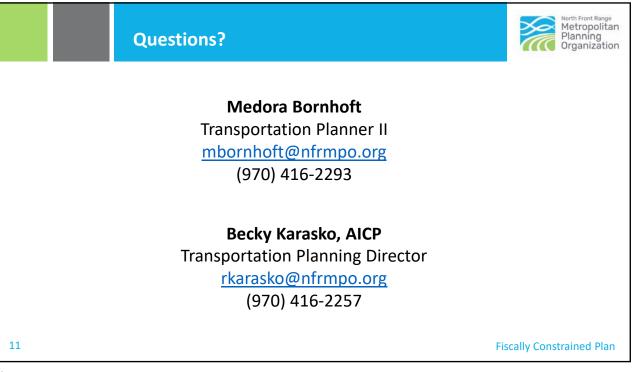


Funding Program	2020	2021	2022	2023	2024	2025	2026- 2030	2031- 2035	2036- 2040	2041- 2045	TOTAL 2020-2045
Maintenance	\$26	\$29	\$24	\$21	\$22	\$22	\$109	\$117	\$122	\$124	\$6
Surface Treatment	\$22	\$24	\$19	\$16	\$16	\$16	\$79	\$85	\$84	\$86	\$4
Structures On-System	\$5	\$5	\$4	\$3	\$3	\$3	\$14	\$11	\$9	\$10	\$
Structures Off-System	\$2	\$2	\$2	\$2	\$2	\$2	\$12	\$13	\$14	\$16	\$
Highway Safety Investment Program (HSIP)	\$2	\$2	\$2	\$2	\$2	\$2	\$11	\$12	\$12	\$12	\$
FASTER Safety	\$3	\$3	\$3	\$3	\$4	\$4	\$20	\$24	\$27	\$27	\$1
Transportation Alternatives (TA)	\$1	\$1	\$1	\$1	\$1	\$1	\$4	\$4	\$4	\$4	\$
Surface Transportation Block Grant (STBG)	\$3	\$3	\$3	\$4	\$4	\$4	\$18	\$18	\$19	\$19	\$
Congestion Mitigation/Air Quality (CMAQ)	\$4	\$4	\$4	\$4	\$4	\$4	\$21	\$22	\$22	\$23	\$1
Regional Priority Program (RPP)	\$0	\$0	\$12	\$0	\$0	\$0	\$27	\$15	\$16	\$18	Ş
New Funding Source	\$0	\$0	\$0	\$0	\$0	\$0	\$34	\$52	\$52	\$51	\$:
Federal Discretionary Grants	\$8	\$8	\$8	\$8	\$8	\$8	\$45	\$49	\$55	\$60	\$
FASTER Transit - Transit and Rail Grants	\$1	\$1	\$1	\$0	\$0	\$0	\$2	\$3	\$3	\$3	
FASTER Transit - Bustang	\$1	\$1	\$1	\$1	\$1	\$1	\$7	\$8	\$9	\$10	
FTA §5307	\$7	\$7	\$7	\$7	\$8	\$8	\$41	\$45	\$50	\$55	\$
FTA §5310	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$1	\$1	\$1	
FTA §5339	\$2	\$2	\$2	\$2	\$2	\$2	\$11	\$12	\$14	\$15	
Local - Transit	\$16	\$16	\$17	\$17	\$17	\$18	\$94	\$103	\$114	\$126	\$
Local - Roadway	\$162	\$165	\$168	\$171	\$175	\$178	\$947	\$1,045	\$1,154	\$1,274	\$5,
Local - Bike/Ped	\$3	\$3	\$3	\$3	\$3	\$3	\$15	\$16	\$18	\$20	
State Discretionary Bike/Ped Grants	\$1	\$1	\$1	\$1	\$1	\$1	\$3	\$3	\$4	\$4	
Developer Contributions	\$15	\$16	\$16	\$16	\$17	\$17	\$90	\$99	\$110	\$121	\$
TOTAL	\$285	\$295	\$300	\$286	\$292	\$297	\$1,616	\$1,770	\$1,926	\$2,094	\$9

Identified Need		Revenue		Total	Total
Category	Cost	Dedicated	Flexible	Funded	Unfunded*
Roadway Operations and Maintenance	\$5,070	\$1,339	\$3,731	\$5,070	\$0
Intersection Improvement Projects	\$531	\$99	\$432	\$531	\$0
Regional Non-Motorized Corridor (RNMC) Operations, Maintenance, and Expansion	\$273	\$122	\$151	\$273	\$0
Transit Operations, Maintenance, and Local System Expansion	\$1,339	\$950	\$390	\$1,339	\$0
Regional Transit Element (RTE) Corridors and Front Range Passenger Rail	\$2,043	\$0	\$14	\$14	\$2,029
Regionally Significant Corridor (RSC) Capacity Projects	\$3,638	\$0	\$1,392	\$1,392	\$2,247
Non-RSC Capacity Projects	\$678	\$0	\$477	\$477	\$200
TOTAL	\$13,573	\$2,510	\$6,586	\$9,097	\$4,476

*Unfunded projects include the buildout RTE corridors, Front Range Passenger Rail, and RSC and non-RSC capacity projects not identified as fiscally constrained by project sponsors.





AIR QUALITY CONTROL COMMISSION, STATE OF COLORADO

In the Matter of Proposed Regulation Number 20 - ZEV

PREHEARING STATEMENT OF THE NORTH FRONT RANGE METROPOLITAN PLANNING ORGANIZATION (NFRMPO)

The NFRMPO submits this Prehearing Statement (Statement) in this proceeding to adopt Colorado Air Quality Control Commission (AQCC) Regulation Number 20, which adopts California Zero Emission Vehicle standards for vehicles made available in Colorado beginning in Model Year (MY) 2023.

The Notice of Rulemaking Hearing before the Colorado AQCC in response to Colorado Executive Order B 2019 002, signed by Governor Polis Tuesday January 17, 2019 and, pursuant to Sections 24-4-103 and 25-7-110, 110.5 and 110.8 C.R.S., as applicable and amended in the AQCC's Procedural Rules.

1. Summary of policy, factual or legal issues the applicant has with the proposed regulation

The NFRMPO has identified concerns about the Proposed Regulation and its impacts. These issues include:

Whether the ZEV's contribute monetarily, with an appropriate share, to the maintenance of transportation infrastructure through the Highway User Trust Fund (HUTF)

Transportation funding in Colorado has continually fallen short of the need statewide, but especially with the passage of the Taxpayer Bill of Rights (TABOR) in 1992. Since TABOR was enacted, the HUTF funding (gas tax) has not been raised in Colorado since 1992. In the fall of 2018, both Proposition 109 (bonding) and 110 (statewide sales tax increase) did not pass a taxpayer vote leaving Colorado still lagging in funding for roads and transportation. According to CDOT's <u>2040 Statewide Transportation</u> <u>Plan</u>, there is a \$24.9B funding shortfall in Colorado for road construction and other transportation improvement projects with \$8.77B shortfall in the next 10 years.

Under the current HUTF funding structure, the State of Colorado receives on average \$105 per year per traditional light duty vehicle and just \$30 per EV vehicle. Adoption of the California ZEV standards exacerbate the road funding shortfall due to this disparity in revenue generation. **We propose a change to HB 12-1110 that would increase the EV fees to be in parity with a traditional gas-powered vehicle.** While this will not correct the historic and chronic funding shortfall, it will not contribute to making it worse.

Colorado has explored a Vehicle Mile Traveled (VMT) fee; however, residents are reluctant due to fears of 'big brother' tracking. Until the revenue structure is changed, we strongly encourage parity within the current system.

Whether Taxpayers are currently and will continue to subsidize the purchase of ZEVs.

It is likely ZEVs will be most prevalent in urban areas of the State which have shorter driving distances and more robust charging infrastructure. While this is logical, the effect of the fleet mix required to come to Colorado will artificially raise the cost of non-ZEV vehicles in rural areas, which, on average, have a lower household income than urban areas. For example, according to the U.S. Census Bureau the average household income in Denver is \$60,110, while in Brush it is \$51,300. If gas-powered vehicle prices rise, this leaves the more economically vulnerable rural areas subsidizing the more affluent urban areas. **We propose a purely market driven demand for ZEVs without mandates or incentives**.

Whether charging stations and infrastructure are adequate, especially in rural areas, to support ZEVs

Much of northeastern Colorado is very rural with low population density. This area is not prepared to handle a non-natural market influx of EVs. According to the Colorado Division of Oil and Public Safety, there are currently 2,350 retail gas stations in the State of Colorado and two fast charging level 3 stations in Northern Colorado that would somewhat compare to gas station fill times.

According to OhmHome, a level 3 charging station cost is variable, but is typically between \$30,000 and \$80,000. This is illustrated in the following table. The cost of these charging facilities cannot be incurred by municipalities or MPOs as funding is already stretched to capacity and charging stations may not be an eligible expense for certain funds received by these entities. Again, **we encourage a market driven approach to implementation**.

	Level 2 Home	Level 2 Parking Garage	Level 2 Curb- side	Level 3 DC Fast Charging	Description/Key Assumptions
Charge station Hardware	\$400- \$1,000	\$1,500- \$2,500	\$1,500- \$3,000	\$12,000- \$35,000	
Electrician Material Electrician Labor	\$50- \$150 \$100- \$350	\$210- \$510 \$1,240- \$2,940	\$150 \$300 \$800- \$1,500	\$300- \$600 \$1,600- \$3,000	 \$1.50-2.50/ft for conduit and wire, plus misc other materials \$50,080/hour (per dist?) \$500-1,000 if new breaker is required Assume 2x electrical cost for level 3
Other Material Other Labor		\$50- \$100 \$250- \$750	\$50- \$150 \$2,500- \$7,500	\$100- \$400 \$5,000- \$15,000	 \$25-100/ft for trenching/boring- depends on surface, soil and underground complexity Mounting, signage, protection, and restoration also included here, but don't usually contribute more than a few hundred dollars
Transformer	NA	NA	NA	\$10,000- \$25,000	• 480V transformer installed by utility
Mobilization	\$50- \$200	\$250- \$500	\$250- \$500	\$600- \$1,200	 Home: 1-3 hours of electrician time for a home installation Public: \$250-500 of time for 1-2 electricians and other labor. We found that the work could usually be completed in a single visit from each contractor
Permitting	\$0 - \$100	\$50- \$200	\$50- \$200	\$50- \$200	Varies city by city, often a flat fee for one or several stations

Source: OhmHome <u>https://www.ohmhomenow.com/electric-vehicles/ev-charging-station-</u> <u>cost/#Level3ChargingStationCost</u> Additionally, EV's on average are about \$8,500 more expensive than traditional gas-powered vehicles as shown on the table below. While there are currently tax incentives available through the State of Colorado up to \$7,500 per vehicle, they expire on December 31, 2021. Cost comparisons in the table below are based on direct contact with vehicle dealers.

			Gasoline	
Make	EV Model	Price (low)	Model	Price (low)
Fiat	500 EV	\$34K	500	\$17K
Ford	Fusion EV	\$28K	Fusion	\$23K
Hyundai	Kona EV	\$37K	Kona	\$20K
Kia	Niro EV	\$39K	Niro	\$24K
	Average	\$29.5K		\$21K
Not all ca	 rs availabe in CO			

To look further at the cost difference of EV vs. non-EV, to fully charge a Nissan Leaf it takes 40kWh and 5.7 hours using a home charger. Some larger vehicles could take up to 8 hours to charge at home. Level 3 chargers can provide an 80% charge in 30 minutes and cold weather can lengthen that time.

The average cost of electricity in Colorado as of July 2019, is 11.46 cents per kWh. Therefore, the person driving the average EV 12,000 miles per year pays about \$491 per year to charge it. Of course, if you add in the variable rates charged by utility providers this can vary widely generally being more expensive in the peak periods.

The average price per gallon for regular gasoline was \$2.72 as of July 2019, according to AAA. The average driver travels 12,000 miles per year, according to FHWA. With average miles per gallon (MPG) at 23.6, according to EPA, the average gas-powered vehicle driver spends \$1,383 per year on fuel. The time it takes to fuel the vehicle is 15 minutes or less.

While the monetary savings is a benefit to the consumer, it does not account for the length of time it takes for fueling, which is a substantial difference.

Whether the California regulations work for Colorado as currently presented.

California and Colorado vary greatly in altitude, terrain, and weather. In rural areas, drivers regularly pull heavy loads (trailers, campers, RVs) and EVs are not suitable for these constraints. Colorado's large temperature swings also negatively impact batteries and their load capacity compared to California's more consistent temperature and climate. Additionally, the mix of urban and rural residents is different between the two states. According to the U.S. Census Bureau, 14% of the population in Colorado is rural, while 5% are rural in California making limited range ZEVs more practical.

Some items of note about the California standard:

• Manufacturers position (large, intermediate, small) are based on sales in California and global revenue.

- When the ZEV mandate is in place for the MY 2023, the Credit Percentage Requirement in CA is 17% which will be applicable in CO. There is no ramp up for Colorado as there was in California.
- The California regulation discusses the number of vehicles produced for sale as meeting the requirement. This means delivered for sale in a state. The regulatory requirement is on the manufacturer and not on the dealer selling the vehicles. It is not tied to actual vehicle sales as it would be in Colorado
- The California regulation stops the Credit Percentage Requirement at 2025 with 22%. That percentage would remain in effect for subsequent model years unless there is a change to the regulation. A change in the regulation would be made by California with little or no input from other states which have adopted this standard. There have been a few examples of other states providing input, such as the Pooling Provision, which California initially resisted but other states wanted. California ultimately included the provision.
- Ultimately, Colorado has little to no input on any changes to the California regulation.

We support having a voice in regulations that effect Colorado residents and do not support being tied to California without any input into the program.

2. List of Issues to be Resolved by the Commission

Presume issues identified will be discussed during the Hearing.

3. List of Exhibits that may be Presented at Hearing

None.

4. List of Witnesses that may be Called at Hearing

Don McLeod	Kevin Ross
3 S. Timer Ridge Pkwy	223 1 st Street
Severance, CO 80550	Eaton, CO 80615

Mayor McLeod and Mayor Ross will be discussing if the rulemaking is necessary, if it is cost effective, impacts to citizens with different automobile standards across states, and whether the public input process has been adequate.

5. Text of Proposed Revision, Etc.

None.

6. Time Requested

NFRMPO requests 10 minutes to provide a presentation and discussion of the issues.

7. Conclusion

The NFRMPO appreciates the opportunity to participate in this proceeding on behalf of its members. The NFRMPO believes in protecting the State's air quality and supports cost-effective and reasonable approaches which target the air quality issues the region and state face.

The NFRMPO believes that EVs are a practical way to reduce mobile air emissions with a market-based approach and addressing items such as the HUTF contributions.

Respectfully submitted,

North Front Range Metropolitan Planning Organization

Alone M. ME

Donald M. McLeod, Mayor of Severance

ROIN 6

Kevin Ross, Mayor of Eaton



North Front Range MPO Area - Project Status Updates (7/9/2019)

Roadway / Segment	<u>Status</u>
SH14	
SH14/US287 Flood Repair NW of Fort Collins	Construction is underway
SH14 Safety work west of Ted's Place	In design
SH14 @ WCR33 Intersection Safety	Construction complete
I-25	
Design /Build	Construction is underway. SH402 is closed
Wellington to WYO Cable Rail	Ad August 2019
Vine Drive Bridge	Old bridge demolished. Construction underway
Segment 6 (SH56 to SH402)	In design- construction start estimate Fall 2019
US34	
Big Thompson Canyon Flood Repair	Construction complete
SH60	
WCR 40 Intersection Improvements	Construction is wrapping up
Over the South Platte River	Construction is wrapping up
US287	
SH1 to LaPorte Bypass	Construction complete
Foothills Parkway Intersection	Advertised April 2019. Construction late 2019
Owl Canyon Rd Feasibility Study	Underway. Expected completion by Fall 2019
ADA Curb Ramp Program	
Greeley ADA Curb Ramps Phase 1	Construction complete
Loveland ADA Curb Ramps Phase 1	Construction complete
Windsor Curb Ramps	Construct Summer 2019