Colorado Coalition for Greenhouse Gas Reduction Through Equitable Vehicle Emissions Testing

Pitch for Coalition Members

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MURALS
MULTICULTURAL UNDERGRADUATE RESEARCH ART AND LEADERSHIP SYMPOSIUM
Innovation & Entrepreneurship

Background

FAILED!

(Me)

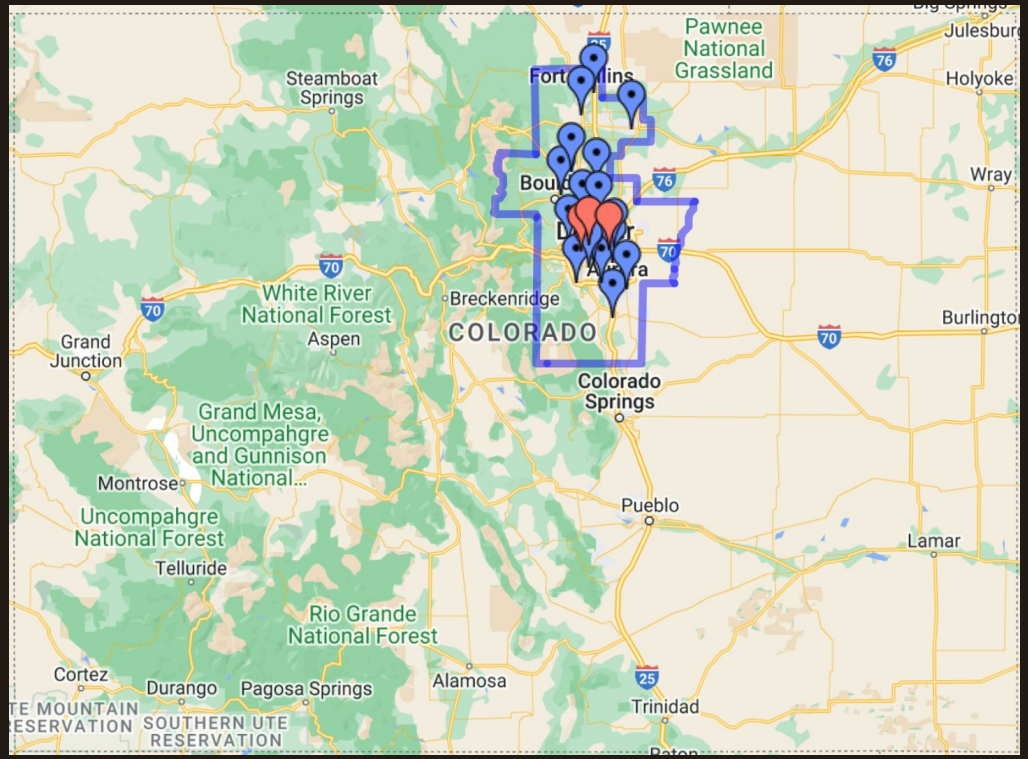
Problem

The Earth is warming faster than ever, yet Colorado's greenhouse gas emissions are rising.

Vehicle emissions are a significant contributor, but Colorado's vehicle emissions regulations are not applied equitably to all fossil-fueled vehicles.

(Causes, Me, Colorado General, Going)

Colorado vehicle emissions regulation *exempt roughly 90%* of the state geographically.



Vehicle emissions testing is required only within the blue region.

Pinpoints are Colorado's emissions testing facilities

(Weld)

Additionally, these vehicles types are ***exempt*** from emissions testing:

Street Rods

Kit Cars

Collector Cars

Horseless Carriages

Autocycles

Farm Vehicles

Motorcycles

(Colorado General, View, Hole, Inventory, 1931, 2024, Diesel, Rebel)

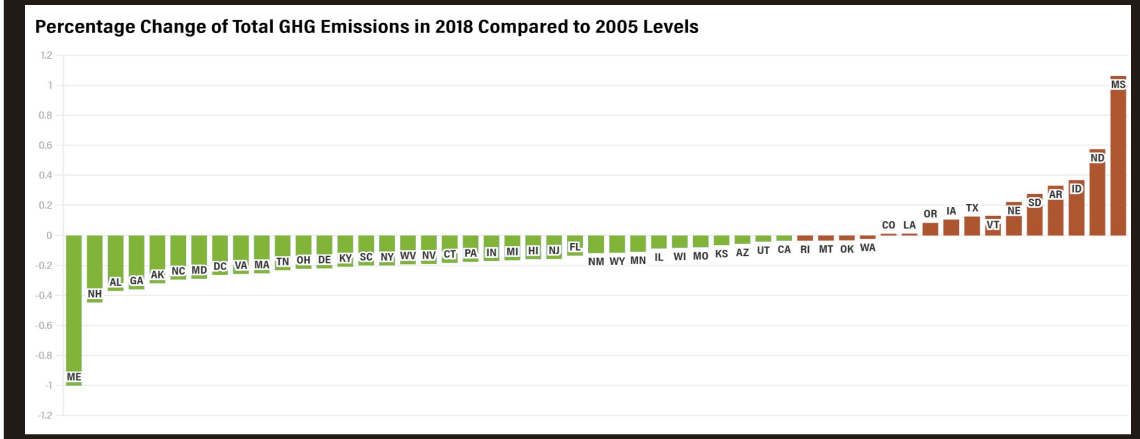
Plus, an emissions testing *waiver* is available if:

1. Fail an emission test
2. Invest in emissions-related repairs
    - $715 if vehicle is 1968 or newer
    - $75 if vehicle is 1967 or older
3. Fail a second emissions test

(Colorado General, Dyno)

Why

Colorado is one of the *last 12 states* whose greenhouse gas emissions are still rising.

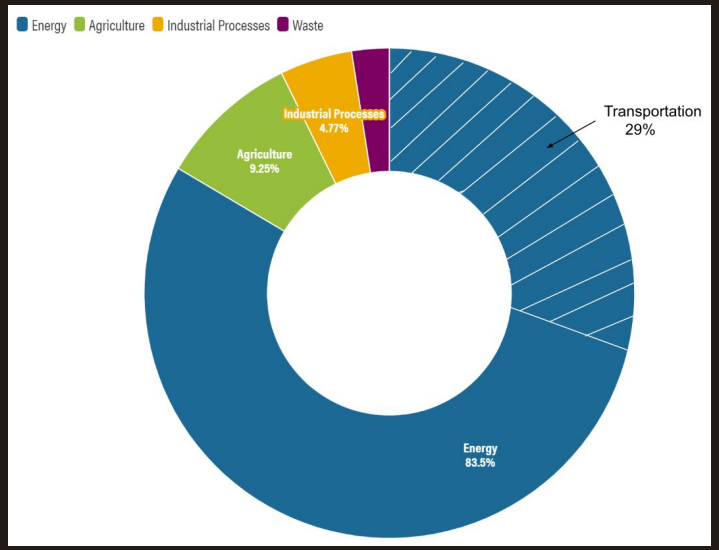


(Friedrich, Me)

Vehicle emissions are a significant contributor to greenhouse gas emissions.

29%

Vehicle Emissions Contribution



Greenhouse Gas Emissions from the U.S. Energy Sector

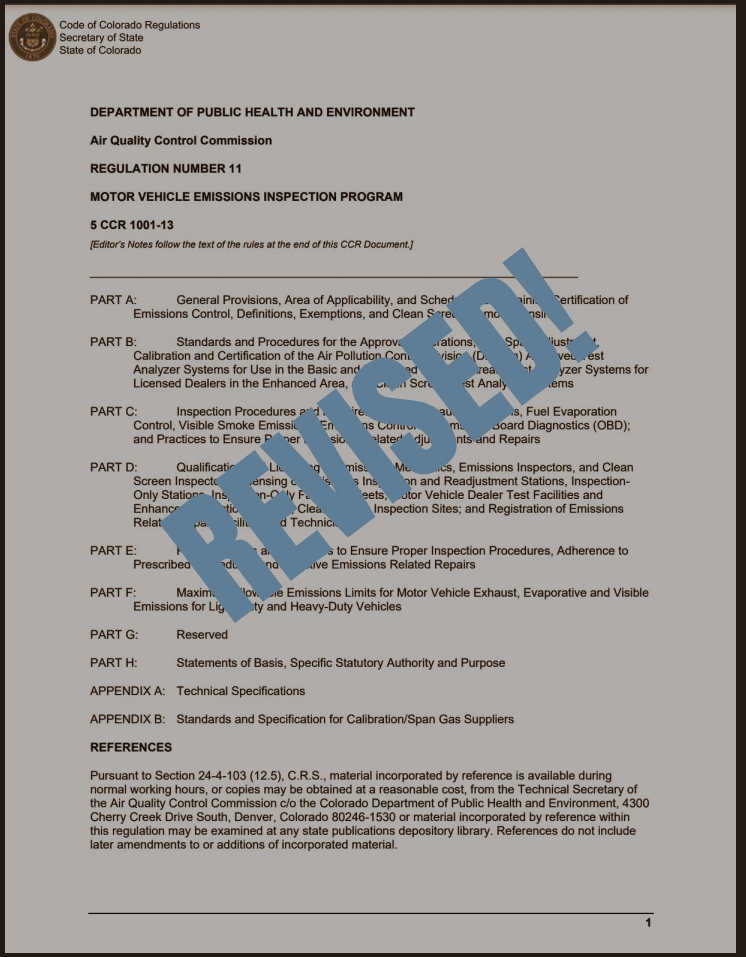
(Friedrich, Rura)

Solution

Reducing emissions from vehicles will have a significant effect on the reduction of greenhouse gas emissions, therefore:

Colorado's vehicle emission regulations must require all vehicles registered in Colorado powered by fossil fuels to pass emission regulations without waiver or exemption because this would allow all vehicle owners to contribute equitably to reduce Colorado's greenhouse gas emissions.

(Going, Me)



Code of Colorado Regulations
Secretary of State
State of Colorado

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Air Quality Control Commission

REGULATION NUMBER 11

MOTOR VEHICLE EMISSIONS INSPECTION PROGRAM

5 CCR 1001-13

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

PART A: General Provisions, Area of Applicability, and Sched... ...ertification of Emissions Control, Definitions, Exemptions, and Clean Scre... ...mo... ...nsi...

PART B: Standards and Procedures for the Approv... ...rations, ... Sp... ...justm..., Calibration and Certification of the Air Pollution Con... ...vision (D... ...) A... ...ved ...est Analyzer Systems for Use in the Basic and ... ...ed ... ...rea ... ...t ...yzer Systems for Licensed Dealers in the Enhanced Area, ...n Scr... ...st Analy... ...ems

PART C: Inspection Procedures a... ...re... ...au... ...s, Fuel Evaporation Control, Visible Smoke Emissi... ...En... ...ns Contro... ...ma... ...Board Diagnostics (OBD); and Practices to Ensure P... ...per ... ...sio... ...elated ... ...dju... ...nts and Repairs

PART D: Qualificati... ...Li... ...g ... ...miss... ...Me... ...es, Emissions Inspectors, and Clean Screen Inspecto... ...ensing ... ...s Ins... ...on and Readjustment Stations, Inspection-Only Station... Ins... ...on-Only Fa... ...eets, ...otor Vehicle Dealer Test Facilities and Enhanc... ...ic... ...Clea... ... Inspection Sites; and Registration of Emissions Relat... ...a... ...cili... ...d Technici...

PART E: H... ...a... ...s to Ensure Proper Inspection Procedures, Adherence to Prescribed ...du... ...no... ...ive Emissions Related Repairs

PART F: Maxim... ...low... ...ie Emissions Limits for Motor Vehicle Exhaust, Evaporative and Visible Emissions for Lig... ...ty and Heavy-Duty Vehicles

PART G: Reserved

PART H: Statements of Basis, Specific Statutory Authority and Purpose

APPENDIX A: Technical Specifications

APPENDIX B: Standards and Specification for Calibration/Span Gas Suppliers

REFERENCES

Pursuant to Section 24-4-103 (12.5), C.R.S., material incorporated by reference is available during normal working hours, or copies may be obtained at a reasonable cost, from the Technical Secretary of the Air Quality Control Commission c/o the Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530 or material incorporated by reference within this regulation may be examined at any state publications depository library. References do not include later amendments to or additions of incorporated material.

1

REVISED!

How

Form:

The *Colorado Coalition for Greenhouse Gas Reduction Through Equitable Vehicle Emissions Testing*

Members:

Air pollution professionals

Goal:

Work with Colorado's Air Quality Control Commission to revise the Motor Vehicle Emissions Inspection Program

(Colorado Department)

Solution Specifics

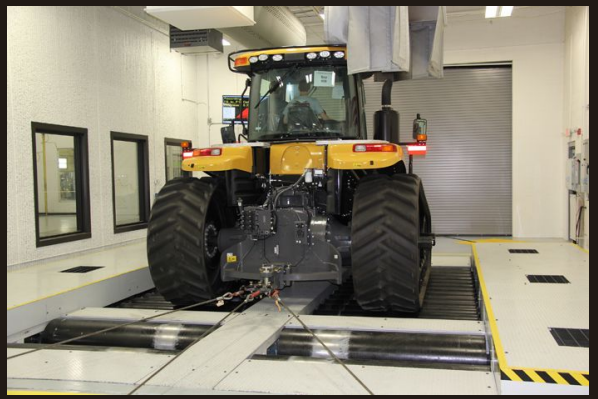
Expand vehicle emissions testing regulations by:

- Elimination of geographical boundaries
  - Must add testing facilities
  - Must expand roadside testing
- Elimination of vehicle exemptions
- Elimination of waivers
  - Require installation of catalytic converters and/or electronic fuel injection (EFI) on vehicles that cannot pass emissions testing

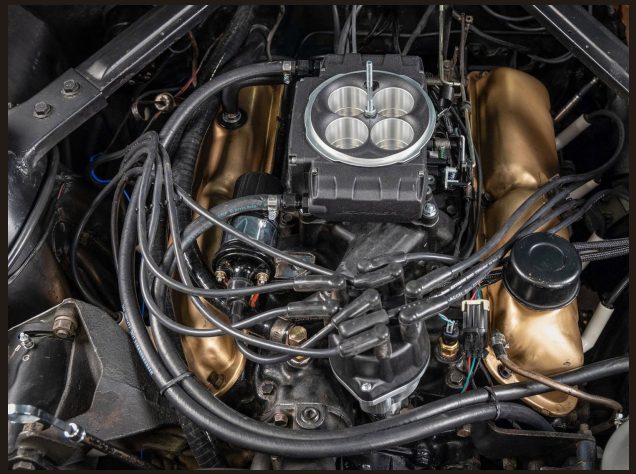
Accomplish this by:

- Presenting new regulatory language and evidence to the Air Quality Control Commission
- Addressing public pushback
- Creating development plan for an app to assist Colorado vehicle owners in locating roadside testing, test facilities, and with understanding the new regulations

(Dyno, Garvey)



Catalytic Converter



Electronic Fuel Injection

Evidence

- As vehicles age, emissions increase exponentially:
  - 10-year-old vehicles emit 200 percent compared to new
  - 20-year-old vehicles emit more than 1000% more than new
  - The average vehicle age in Colorado is 13.1 years and growing
- Most exempt vehicles are older than average and thus high emitters
- Very effective and affordable retrofitting options are available for non-repairable vehicles:
  - Electronic Fuel Injection (EFI) reduce emissions by 30%
  - Three-way catalytic converters reduce exhaust gas pollutants by 98%

(Bernard 8-10, Autos, Nat'l 35, 43, 183, Average, Petrea and Bujoreanu 8-9, Brownell, Popely, Holley)

Cost

It's cheaper to retrofit once than pay repair costs over multiple years:

1. Begin with a catalytic converter, which costs $639.89 ($140.91 parts plus $498.91 labor)

2. If the vehicle still does not pass emission testing, add EFI costing $1836.95 ($1299.95 parts plus $537 labor)

3. NOTE: While these costs exceed the $715 required repair costs to earn a testing waiver, *a waiver is only good for one emission cycle, which is one or two years, depending upon the vehicle's year*.

(Catalytic, Brown, Holley, Colorado General, Butz)

Results

Equitable vehicle emissions testing would yield:

⇩ **99%**

Reduction in Greenhouse Gas Emissions within Colorado's Transportation Sector

Thus

⇩ **27.2%**

Reduction in Colorado's Greenhouse Gas Emissions Overall

(Taylor 5, Nature)

Conclusion

Colorado can reverse course and become a global climate change leader.

The coalition will ensure Colorado does our part to help the Earth today and for future generations.

Now is the time to act!

Let's talk!

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(Taylor 5, Me)

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