



Alternative Fuels in Colorado

Air Quality Control Commission (AQCC)

Wes Maurer, Transportation Program Manager

Thursday, November 20, 2014



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Energy Office

The Colorado Energy Office

MISSION STATEMENT

The CEO's mission is to improve the effective use of all of Colorado's energy resources and the efficient consumption of energy in all economic sectors, through providing technical guidance, financial support, policy advocacy and public communications.

DEPARTMENT VISION

The CEO's vision is to help Coloradans live more prosperous and healthy lives by promoting innovative energy production and efficient energy consumption practices that are beneficial to the economic and environmental health of the state.



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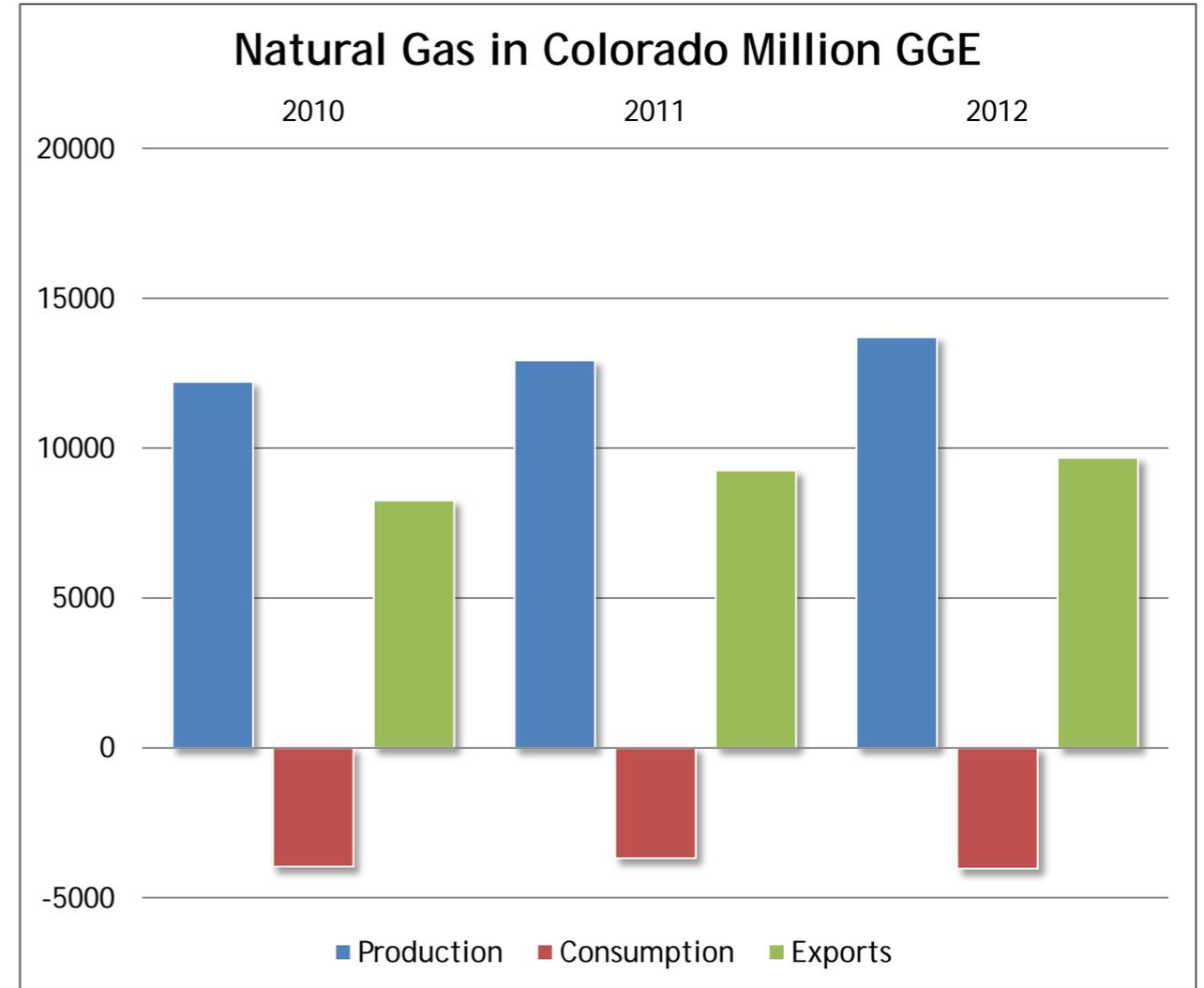
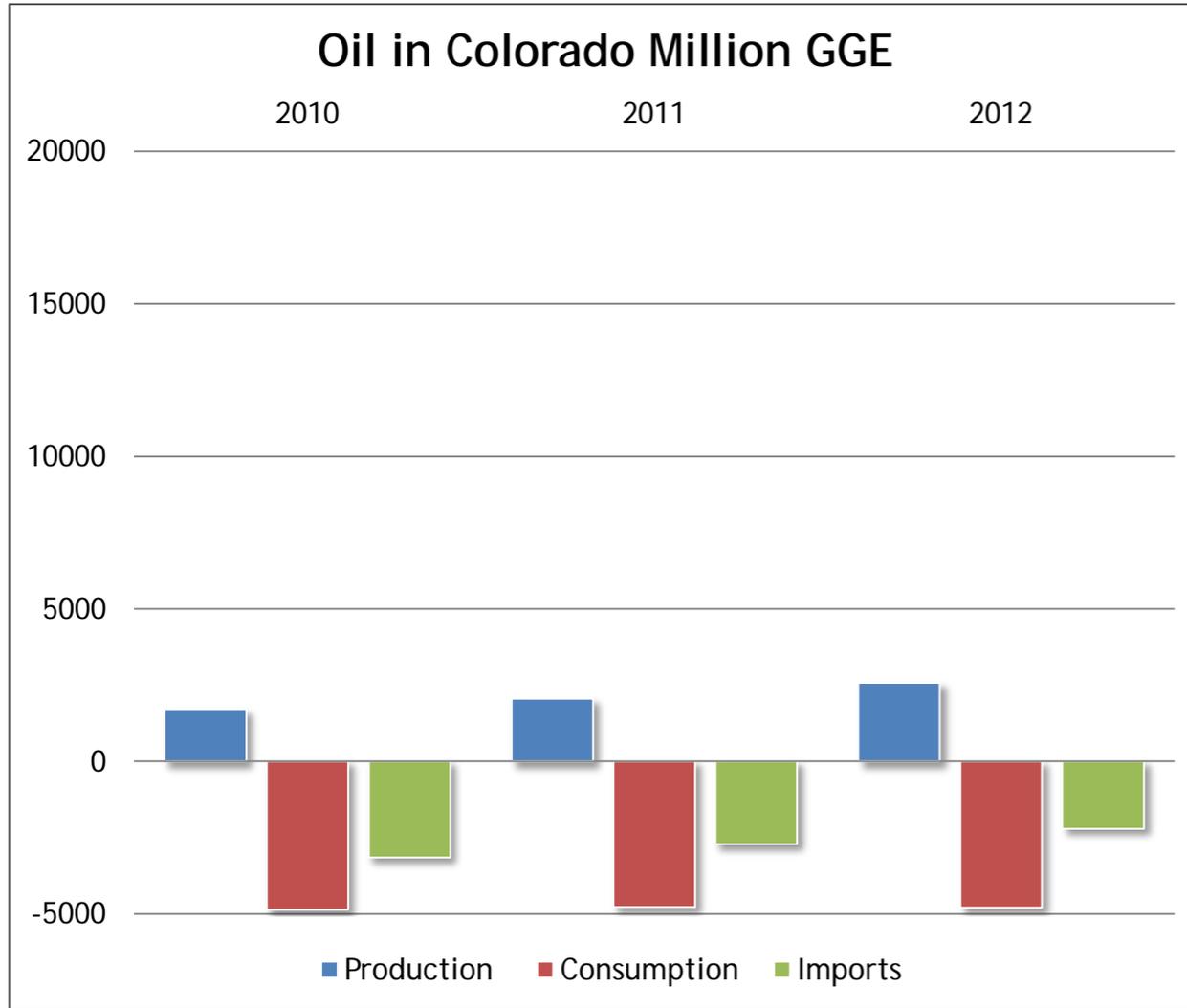


Natural Gas Vehicle Benefits



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Natural Gas Vehicle Benefits



Note: 2012 state consumption numbers extrapolated from 2012 U.S. consumption and 2011 state share of U.S. consumption

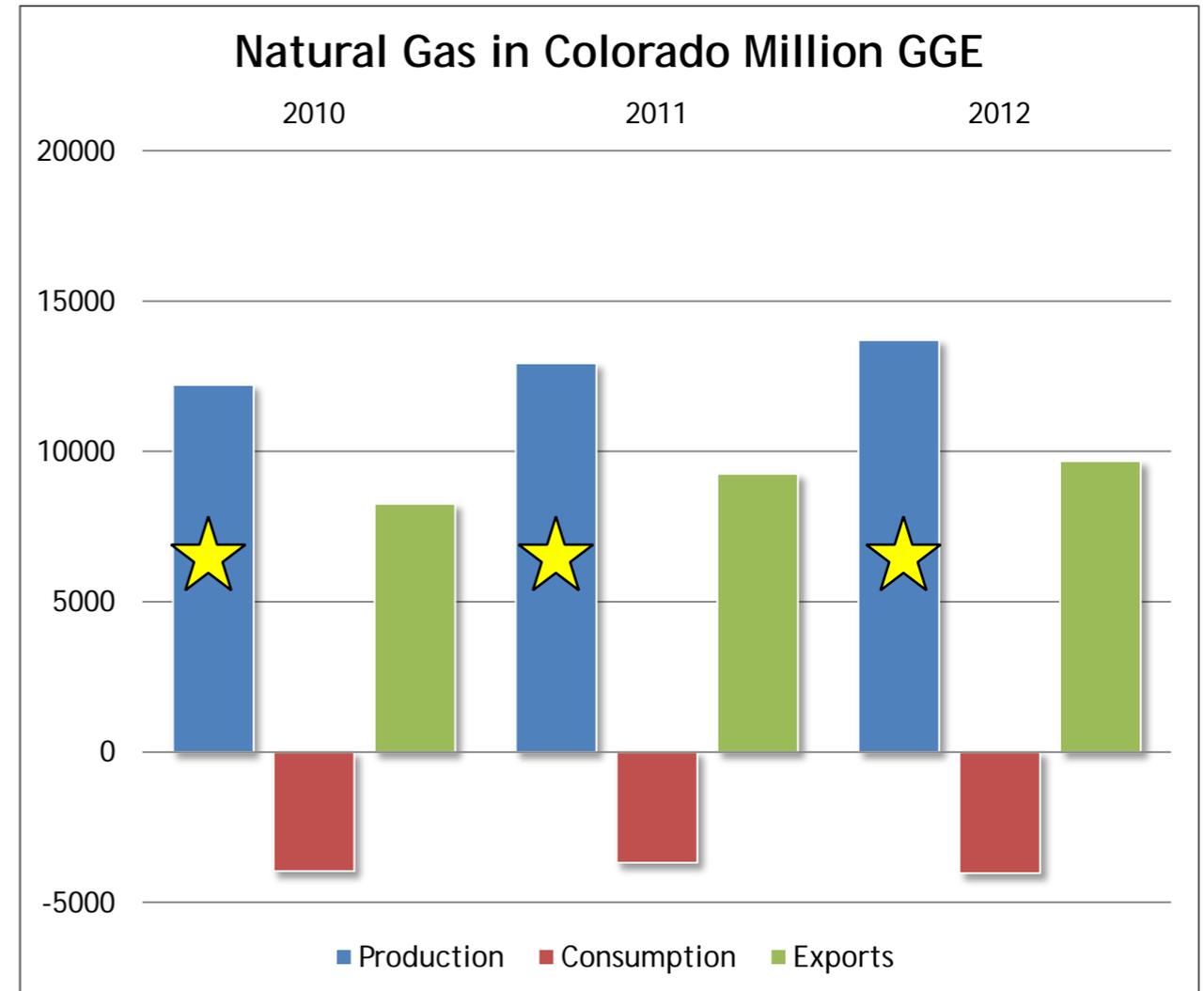
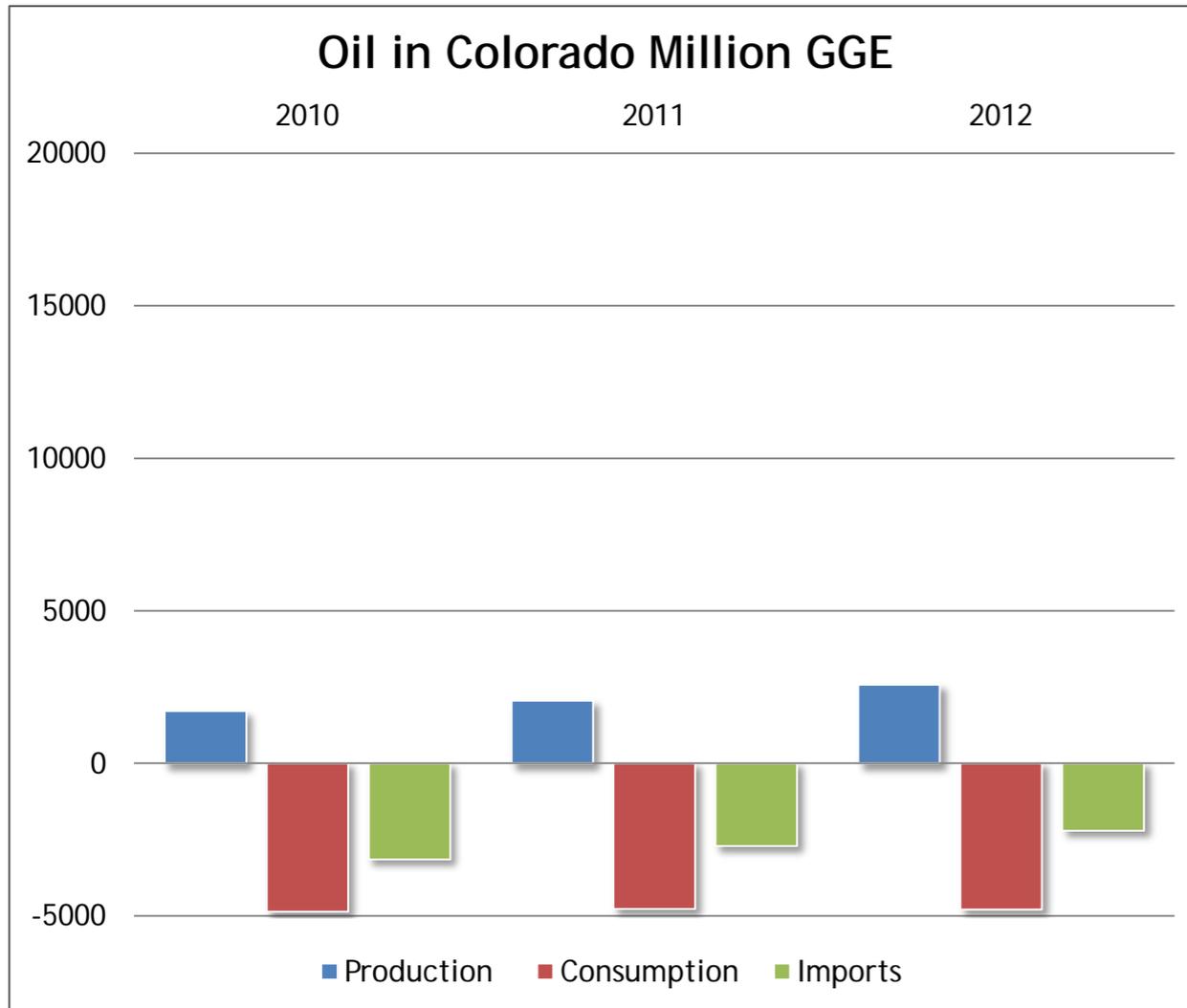
Oil and gas consumption: EIA SEDS

Oil and gas production: COGCC



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Natural Gas Vehicle Benefits

Environmental Benefits

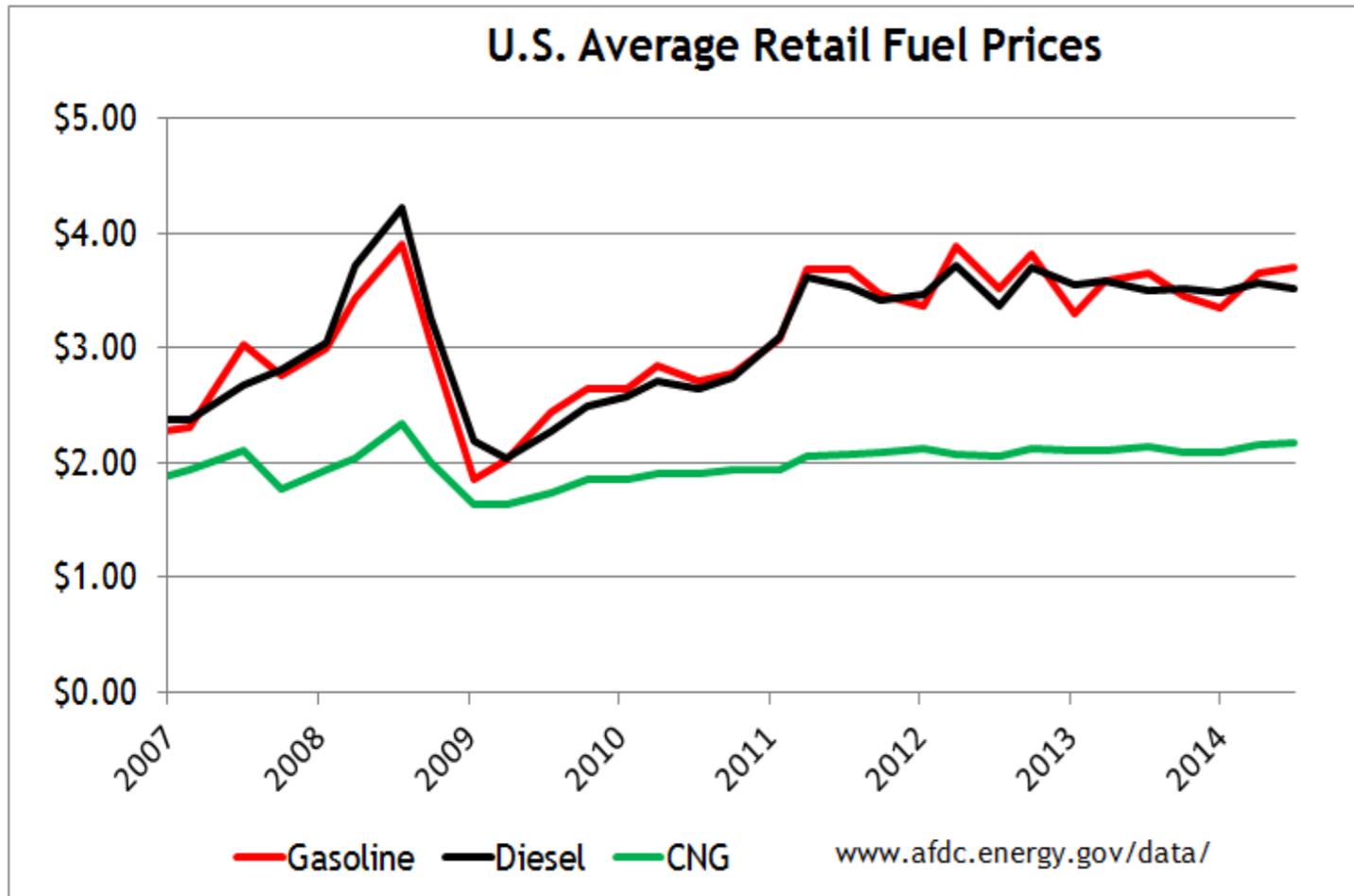
Light-duty NGVs show moderate GHG reduction (6-11%)

Replacing older diesels with NGVs can reduce GHGs by 33%, NOx by 90%, and VOCs by 43%

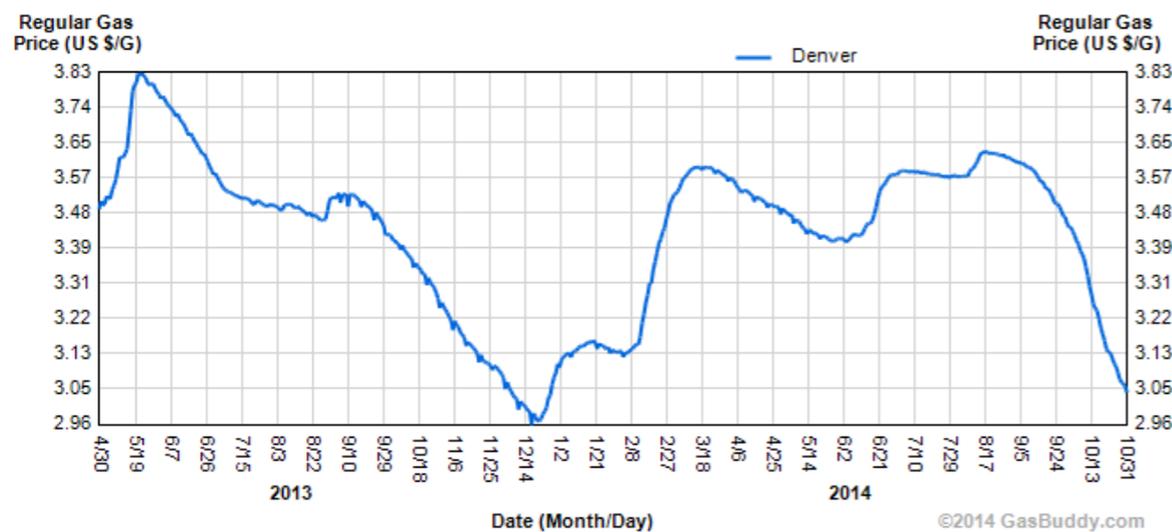
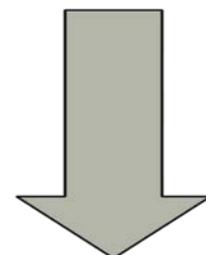


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Natural Gas Vehicle Benefits



- ~32% of CNG price at the pump is commodity cost, versus 56% for gas/diesel
- In July of 2013, the average private retail price of natural gas in the Rocky Mountain region was \$1.61/gge while gasoline was \$3.62 and diesel was \$3.79.



Reduced volatility and lower fuel costs



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Why Not More Vehicles?

Incremental Vehicle Cost

- Tax Credits
- RAQC - ALT Fuels Colorado
- Increased vehicle production

Range Anxiety

- CEO - ALT Fuels Colorado
- 8 stations to be built in 2015
- 20-30 in next 4 years

Information

- Refuel Fleet Coaches
- www.refuelcolorado.com





ALT Fuels Colorado Grant Programs



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Program Goals

1. Foster the establishment of a sustainable, statewide alternate fuels market in Colorado, with an emphasis on Compressed Natural Gas (CNG)
2. Remove barriers to the adoption of alternate fuel vehicles (AFVs)
3. Address the lack of fueling infrastructure currently available for AFVs in the state
4. Reduce the initial costs of AFVs and alternate fuel infrastructure by providing incentive to offset incremental costs



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Key Principles

Reduction of NO_x and other criteria pollutants.

Development of publicly accessible station corridors along major statewide transportation routes.

Local government and community support.



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Market Implementation Plan

How do we get a sustainable market?

Medium- and heavy-duty fleets are best sources of demand

Stations along major transportation corridors are essential

Building working relationships with local governments, fleets, utilities, and others



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Congestion Mitigation & Air Quality Funding

\$30M over four years; \$10M in first year with roughly even installments over following three years.

Approximately \$15M each to stations and vehicles; CEO leads administration and station grants; RAQC leads vehicle grants.

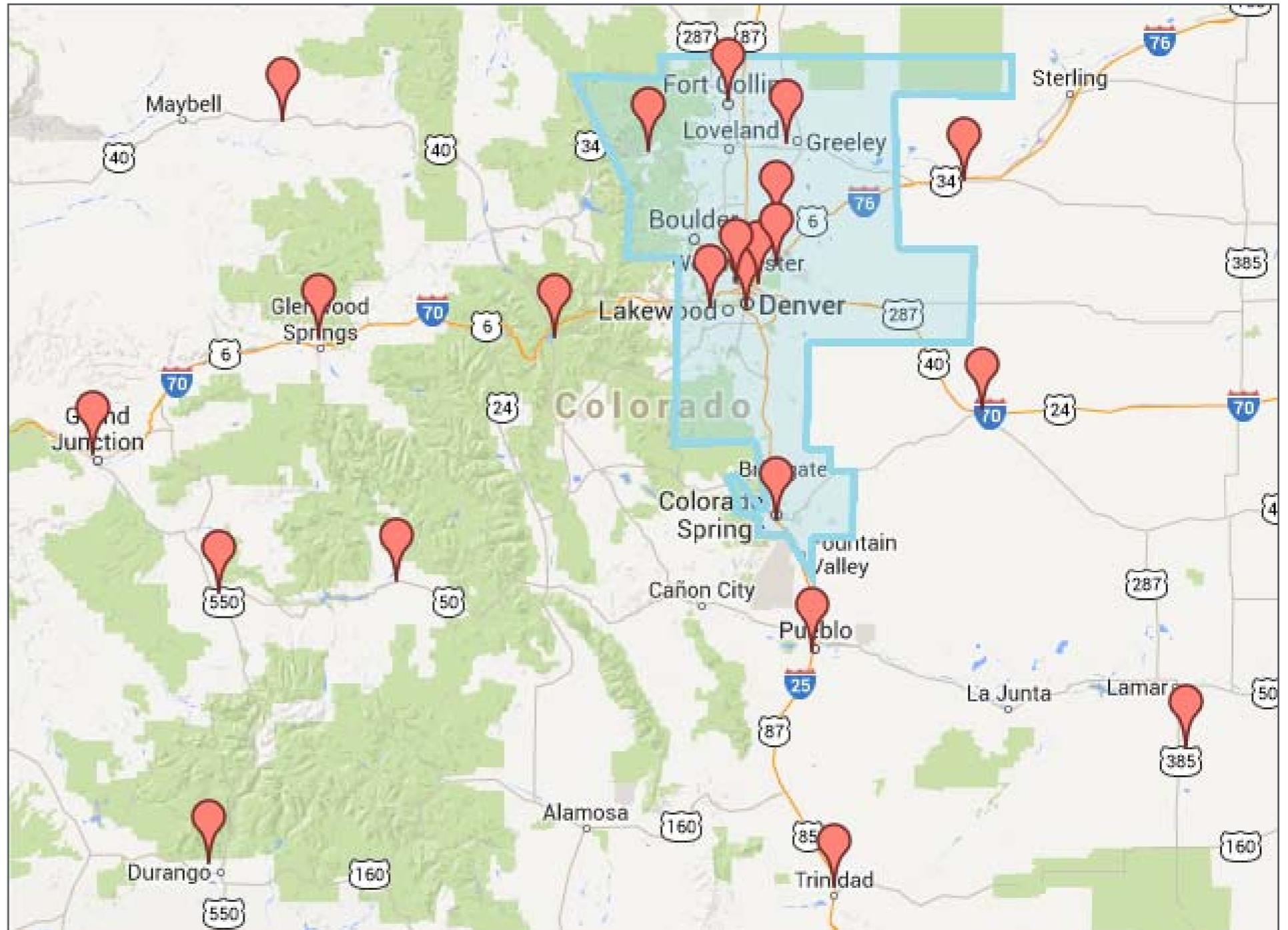
First year - \$7M to stations, \$3M to vehicles to jumpstart stations; latter years lean more toward vehicles.



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Statewide Alternative Fuels Interest

Expressed interest from fleets in the non-attainment area, cities and counties, and state agencies.



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ALT Fuels Colorado - Station Incentives

Front Range

- Over half of the state's existing stations
- Many within the Denver Metro Area

Statewide Corridor

- Overcoming range anxiety is crucial to vehicle adoption
- Key station locations
- 20-30 new CNG stations

Incentives

- 80% equipment capped at \$500,000 for CNG stations
- Additional \$50,000 grants available for co-located EV and propane stations



CEO Station Funding & Timeline

8 stations awarded within preliminary funding round

~3.4 million gasoline gallon equivalent (GGE) sales projected in first full year

January, 2015 - release second RFA for stations

Station rounds to be announced approximately every 6 months



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RAQC Vehicle Incentives

- \$9M for public/non-profit fleets and \$5.5M for private fleets over 4 years
- RAQC covers up to 80% of the incremental AFV (classes 2-8) cost up to the caps below
 - Private fleets may be eligible for state income tax credits

| Vehicle Duty Class | Public and Non-profit Fleets | Private Fleets |
|--------------------------------------|------------------------------|----------------|
| Light-duty AFV (6,001-10,000 lbs.) | \$7,000 | \$3,000 |
| Medium-duty AFV (10,001-26,000 lbs.) | \$25,000 | \$15,000 |
| Heavy-duty AFV (26,001 + lbs.) | \$35,000 | \$22,000 |



RAQC - Funding Round 1 Results

96 fleet vehicles funded

\$1.9 million in awards

| Fleet | County | Vehicles | Fuel Type |
|--|----------|-------------------|-------------|
| Black Hills Colorado Gas Utility Company | El Paso | 12 Utility Trucks | CNG bi-fuel |
| City and County of Denver | Denver | 5 Refuse Trucks | CNG |
| City of Fort Collins | Larimer | 2 Dump Trucks | CNG |
| Colorado Springs Utilities | El Paso | 6 Utility Trucks | CNG bi-fuel |
| Dillon Transport, Inc. | Weld | 20 Tractors | CNG |
| International School of Denver | Denver | 1 School Bus | CNG |
| Ryder Truck Rental | Denver | 20 Tractors | CNG |
| University Schools Foundation | Weld | 1 School Bus | CNG |
| Waste Management of Colorado, Inc. | Arapahoe | 20 Refuse Trucks | CNG |
| Weld County School District Re-1 | Weld | 2 School Buses | CNG |
| Weld County School District Re-3j | Weld | 1 School Bus | CNG |
| Weld Food Bank | Weld | 1 Delivery Truck | CNG |
| Western Disposal, Inc. | Weld | 5 Trash Trucks | CNG |

RAQC Vehicle Funding Timeline

| Round 3 Application Timeline | Date |
|------------------------------|-------------------|
| Application period opens | February 5, 2015 |
| Deadline for questions | February 19, 2015 |
| Applications due | March 3, 2015 |
| Awards announced | March 2015 |
| Begin purchasing vehicle | Spring 2015 |



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DOLA Alternative Fuels Incentives

Department of Local Affairs

Alternative Fuel Vehicles

100% of incremental
cost statewide
(excluding air
quality non-
attainment /
maintenance areas)

Facility Construction & Upgrades

25% minimum local
match, 50%
encouraged

Eligibility

Municipal and
County
Governments,
Special Districts



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Other Incentives for EV / EVSE

Charge Ahead Colorado

Electric Vehicles

80% of incremental cost up to \$8,260 within 7 county Denver Metro Area

Charging Stations

80% of project cost up to \$6,260 for level II and III EVSE statewide

Eligibility

Public, private, and non-profit groups



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