



CNG, LPG, & Electric Hybrid Financial Incentives

Colorado

2021



Background

Redmark:

- ❖ #1 provider of advanced fuel vehicles & fueling station services in the Rocky Mountain Region
- ❖ 30 years of AFV fleet industry experience: upfits of thousands of vehicles for hundreds of fleets (regionally and nationally)

Overview:

- ❖ Background
 - ❖ CO Tax Credits
 - ❖ CO Cash Rebates
 - ❖ Other CO Incentives
 - ❖ Federal Incentives
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Redmark Offerings

Fleet Vehicle Services

Ford QVM & eQVM Vehicles | CNG/LPG Upfits | HEV/PHEV Upfits | Repair & Maintenance | CSA Tank & Vehicle Inspections

Fueling & Charging Station Services

CNG & LPG Station Services, Upgrades & New Builds | Electric Charging Systems | Modular/Mobile Fueling | Fuel for Work Partnership

Specialty Support

National Parts Supply | Roadside & Backup Fueling & Charging | Training | CNG Trailer Maintenance & Repair | Truck Accessories



Financial Incentives

Colorado

Various financial incentives are available in Colorado for the purchase or lease of electric vehicles (battery and fuel cell), renewable natural gas, and certain hybrid vehicles.

- ❖ Cash grants are available from programs managed by RAQC, CEO and CDOT
 - ❖ Tax credits are available from the State of Colorado
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AFVs – Colorado Grants (VW settlement funds)

Eligible Vehicles & Equipment

Vehicles	Equipment	Charging Equipment	Eligible Fuels
<ul style="list-style-type: none">Class 8 Local Freight Trucks (Heavy-Duty) Greater than 33,000 lbsClass 4-7 Local Freight Trucks (Medium-Duty) Between 14,001 and 33,000 lbsClass 4-8 School & Intra-facility Shuttle Buses, Between 14,001 and 33,000 lbs			<p>https://cleanairfleets.org/programs/alt-fuels-colorado</p>

Eligible Vehicles & Equipment

Vehicles	Equipment	Charging Equipment	Eligible Fuels
<ul style="list-style-type: none">Additional funding may be available for associated electric vehicle charging stations (Level II & III only) if the vehicle or piece of equipment being purchased is electric. Please review the Program Guide for eligibility details. All chargers must be networked in order to report charging data to the program.			
<p>Charging infrastructure not associated with an eligible vehicle purchase is not eligible for funding through this program (Please visit the Charge Ahead Colorado page to learn about funding for stand-alone electric vehicle charging stations).</p>			

Additional Information

Fuels eligibility:

- All electric
- CNG vehicles, **fueled with 100% RNG**

Applications: funding rounds are conducted three times per year via applications filed by fleets. A pre-2009 diesel vehicle must be scrapped for each grant for an AFV.

Funding: 110% of incremental cost.

Off-highway equipment eligibility:

- Railroad Freight Switchers
- Airport Ground Support Equipment
- Heavy Forklifts, greater than 8,000 pound lift capacity
- Port Cargo Handling Equipment (yard trucks)

EVs & Charging – Colorado Grants

<https://cleanairfleets.org/programs/charge-ahead-colorado>

	RAQC	CEO
Funding	Electric vehicles (EV) and Charging Stations – Level 2 and Level 3	Charging Stations – Level 2 and level 3
Area of Operations	Fleets and entities located in the seven county Denver Metro Area (Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas and Jefferson Counties).	Entities located in Colorado outside of the seven county Denver Metro Area.
EV Funding Available	RAQC will fund 80% of the incremental cost differential between an EV and the comparable gasoline vehicle up to \$8,260. This funding is only available for leased vehicles. Please inquire in you have questions.	CEO is not funding EVs.
Charging Station Funding Available	<p>RAQC and CEO will fund 80% of the cost of a charging station up to the following set maximums:</p> <ul style="list-style-type: none"> • Level 2, Fleet Only Charging Stations: \$6,000 • Level 2, Dual Port Station: \$9,000 • Level 3, Multiple Connection Standard Station: \$30,000 (The Colorado Energy Office will provide an additional \$5,000 for Level 3 charging station projects outside of the seven county Denver Metro Area.) • Level 3, Ultra-fast Multiple Connection Standard Station (minimum 100kW+): \$50,000 (one award available per organization per round) <p>Please see the Application Guide for more information on charging station types.</p>	
Funding Priority	Priority is directed to those organizations that are excluded from existing state tax credits and incentives. For both charging stations and EV funding, eligible applications include local governments, school districts, State agencies, and non-profit agencies. Apartment/condominium complexes and businesses that own multi-vehicle parking facilities for fleet, public or guest / visitor are also eligible for charging station funding.	Funding is directed to private non-profit or for-profit corporations, state agencies, federal agencies, public universities, and public transit agencies, in addition to local governments, landlords of multi-family apartment buildings and homeowner associations (as defined more specifically in C.R.S. Article 33.3 of title 38).

Other Colorado Grants

DOLA:

- To complement the electric and RNG grants described on the prior two slides, additional funding for public sector organizations may be available for fleets (primarily those based outside of the Front Range air quality nonattainment areas) through DOLA's Impact Assistance Program.
 - Entities eligible for DOLA funding include municipalities, counties and special districts.
 - <https://cdola.colorado.gov/funding-programs/energy/mineral-impact-assistance-fund-grant-eiaf>

COGS:

- For fleets that are based outside of the Front Range region, electric and RNG vehicle incentives may be available in their region through the Colorado's Councils of Government.
 - A list of the 11 Regional COGs and their websites can be found here:
<https://www.colorado.gov/pacific/coloradoregions/about-21>

CDOT:

- Grants are available for the purchase of electric and RNG transit vans and buses to be operated by authorized transit agencies in the state of Colorado. More information is available here:
<https://www.codot.gov/news/2019/april/transit-buses-in-colorado-get-cleaner-through-vw-settlement>

EVs – Colorado Tax Credits

<https://www.colorado.gov/pacific/sites/default/files/Income69.pdf>

Credit Amounts for Purchases of Qualifying Electric and Plug-in Hybrid Electric Vehicles and Trucks

		Tax year beginning on or after:	1/1/2017	1/1/2020	1/1/2021	1/1/2023
		but prior to:	1/1/2020	1/1/2021	1/1/2023	1/1/2026
Classification	Gross Vehicle Weight Rating (GVWR)					
Light duty passenger vehicle	N/A		\$5,000	\$4,000	\$2,500	\$2,000
Light duty electric truck	greater than 8,500, but not more than 10,000 lbs.		\$7,000	\$5,500	\$3,500	\$2,800
Medium duty electric truck	greater than 10,000, but not more than 26,000 lbs.		\$10,000	\$8,000	\$5,000	\$4,000
Heavy duty truck	greater than 26,000 lbs.		\$20,000	\$16,000	\$10,000	\$8,000

Credit Amounts for Leases of Qualifying Electric and Plug-in Hybrid Electric Vehicles and Trucks

		Tax year beginning on or after:	1/1/2017	1/1/2020	1/1/2021
		but prior to:	1/1/2020	1/1/2021	1/1/2026
Classification	Gross Vehicle Weight Rating (GVWR)				
Light duty passenger vehicle	N/A		\$2,500	\$2,000	\$1,500
Light duty electric truck	greater than 8,500, but not more than 10,000 lbs.		\$3,500	\$2,750	\$1,750
Medium duty electric truck	greater than 10,000, but not more than 26,000 lbs.		\$5,000	\$4,000	\$2,500
Heavy duty truck	greater than 26,000 lbs.		\$10,000	\$8,000	\$5,000

- Electric and plug-in hybrid electric vehicles and trucks must meet all of the following criteria to qualify for the credit.
- For purchases and leases, the motor vehicle or truck must be new and not previously titled or registered in any jurisdiction.
 - The motor vehicle or truck must be titled and registered in Colorado.
 - The motor vehicle or truck must have a maximum speed of at least 55 miles per hour.
 - The motor vehicle or truck must be propelled to a significant extent by an electric motor.
 - The motor vehicle or truck's battery must have a capacity of at least 4 kWh.
 - The motor vehicle or truck's battery must be capable of being recharged from an external power source.

Note: Additional tax credits are available for vehicle conversions and transportation network companies. Hydrogen powered fuel cell electric vehicles are eligible for the EV tax credits.

AFVs – Colorado Tax Credits

<https://www.colorado.gov/pacific/sites/default/files/Income70.pdf>

Qualifying Categories

Qualifying Category	Category Description
CNG, LNG, or LPG trucks	Trucks either manufactured or converted to operate on CNG, LNG, or LPG, including bi-fuel and dual fuel trucks that operate on CNG, LNG, or LPG either alternately or in combination with gasoline or diesel fuel
Idling reduction technologies	Idling reduction devices or systems recognized by the EPA and affixed to a tractor and advanced insulation that has an R value of at least R35 per inch
Aerodynamic technologies	Devices on the EPA Smartway Verified Technology list that minimize drag and improve air flow over a truck and trailer, not including tires

Credit Amounts for Purchases of Qualifying Trucks and for Qualifying Conversions

		Tax year beginning on or after:	1/1/2017	1/1/2020	1/1/2021
		but prior to:	1/1/2020	1/1/2021	1/1/2022
Classification	Gross Vehicle Weight Rating (GVWR)				
Light duty passenger vehicle	N/A		\$5,000	\$4,000	\$2,500
Light duty truck	less than or equal to 14,000 lbs.		\$7,000	\$5,500	\$3,500
Medium duty truck	greater than 14,000, but not more than 26,000 lbs.		\$10,000	\$8,000	\$5,000
Heavy duty truck	greater than 26,000 pounds GVWR		\$20,000	\$16,000	\$10,000

There are both general and specific requirements for a truck, conversion, or modification to qualify for the credit. Credits may be claimed only with respect to trucks that meet the following criteria.

- For purchases or leases, the truck must be new and not previously titled or registered in any jurisdiction.
- In the case of conversion, the conversion must be EPA certified.
- The truck must be titled and registered in Colorado or base plated in Colorado if registered via IRP.
- The truck must have a maximum speed of at least 55 miles per hour.
- The truck, conversion, or device must qualify under one of the categories listed in the table.

AFVs – Colorado Tax Credits (cont.)

<https://www.colorado.gov/pacific/sites/default/files/Income70.pdf>

Credit Amounts for Leases of Qualifying Trucks

		Tax year beginning on or after:	1/1/2017	1/1/2020	1/1/2021
		but prior to:	1/1/2020	1/1/2021	1/1/2022
Classification	Gross Vehicle Weight Rating (GVWR)				
Light duty passenger vehicle	N/A		\$5,000	\$4,000	\$2,500
Light duty truck	less than or equal to 14,000 lbs.		\$7,000	\$5,500	\$3,500
Medium duty truck	greater than 14,000, but not more than 26,000 lbs.		\$10,000	\$8,000	\$5,000
Heavy duty truck	greater than 26,000 pounds GVWR		\$20,000	\$16,000	\$10,000

- **Limitations on Credit Amounts:** The amount of credit that can be claimed for the purchase of any qualifying truck is limited to the difference in manufacturer's suggested retail price (MSRP) between the qualifying truck and a comparable truck that runs on either gasoline or diesel fuel. The credit claimed for converting a truck to a qualifying truck is limited to the cost of conversion.
- **Leasing Details:** In order to be considered a lease that qualifies for the credit, the lease agreement must be for an initial term of at least two years.
- **Assignment of Credits:** A purchaser, lessee, or owner who obtains financing for the purchase, lease, or conversion of a qualifying vehicle may, by mutual agreement with the financing entity, assign the credit to the financing entity. In the case of assignment, the financing entity must compensate the truck purchaser, lessee, or owner for the full amount of the assigned credit.
- **Refrigerated trailers:** tax credits for these units operating on an alternative fuel are available through calendar year 2021.
- **Aerodynamic or idling reduction technology devices:** The credit is 25% of the cost for the purchase and installation of the devices, subject to certain limitations through calendar 2021. The maximum credit allowed for any single device is \$6,000. Additionally, the total credit amount a taxpayer can claim for all aerodynamic devices they purchase during a given tax year is \$50,000. The total credit amount a taxpayer can claim for all idling reduction devices they purchase during a given tax year is \$6,000.

Federal Incentives

● Alternative Fuel Excise Tax Credit

- A tax incentive is available for alternative fuel sold for use to operate a motor vehicle. A tax credit in the amount of \$0.50 per gallon is available for the following alternative fuels: natural gas and propane. The tax credit is based on the gasoline gallon equivalent (GGE) or diesel gallon equivalent (DGE). For taxation purposes, one GGE is equal to 5.75 lbs of propane and 5.66 lbs of compressed natural gas. One DGE is equal to 6.06 lbs of liquefied natural gas.
- For an entity to be eligible to claim the credit they must be liable for reporting and paying the federal excise tax on the sale or use of the fuel in a motor vehicle (e.g., fleet operating its own private station or the public-access station operator). Tax exempt entities such as state and local governments that dispense qualified fuel from an on-site fueling station for use in vehicles qualify for the incentive. Eligible entities must be registered with the Internal Revenue Service (IRS). The incentive must first be taken as a credit against the entity's alternative fuel tax liability; any excess over this fuel tax liability may be claimed as a direct payment from the IRS.
- For more information about claiming the credit, see IRS Form 4136, which is available on the [IRS Forms and Publications](#) website.

● Alternative Fuel Infrastructure Tax Credit:

- Fueling equipment for natural gas, propane and electricity, is eligible for a tax credit of 30% of the cost, not to exceed \$30,000. Permitting and inspection fees are not included in covered expenses. Fueling station owners who install qualified equipment at multiple sites are allowed to use the credit towards each location. Consumers who purchase qualified residential fueling equipment prior to December 31, 2021, may receive a tax credit of up to \$1,000. Unused credits that qualify as general business tax credits, as defined by the IRS, may be carried backward one year and carried forward 20 years. For more information about claiming the credit, see IRS Form 8911, which is available on the [IRS Forms and Publications](#) website.

Example Fleet Economics 2021

Colorado

CNG

- ❖ Light-duty
- ❖ Medium-duty
- ❖ Heavy-duty

HEV or PHEV

- ❖ Medium-duty
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Light-duty CNG Truck (such as F-250 in field operations)

Savings range:	Low Case	Medium Case	High Case
CNG system option cost	\$11,500	\$11,500	\$11,500
Miles driven per year	10,000	15,000	20,000
Years in fleet	5	5	5
Average MPG	16	16	16
Cost savings vs gasoline*	\$0.40 per gal	\$0.50 per gal	\$0.60 per gal
Maintenance cost savings	\$0.00 per mile	\$0.00 per mile	\$0.00 per mile
Operating savings	\$1,250	\$2,344	\$3,750
2021 tax credit	\$3,500	\$3,500	\$3,500
Net cost:	\$6,750	\$5,656	\$4,250

*Assumes fleet volume purchase discount for CNG/RNG.

Medium-duty CNG Truck (such as a medium range straight truck)

Savings range:	Low Case	Medium Case	High Case
CNG system option cost	\$30,000	\$30,000	\$30,000
Miles driven per year	20,000	35,000	50,000
Years in fleet	7	7	7
Average MPG	9	9	9
Cost savings vs gasoline*	\$0.40 per gal	\$0.50 per gal	\$0.60 per gal
Maintenance cost savings	\$0.02 per mile	\$0.02 per mile	\$0.02 per mile
Operating savings	\$9,022	\$18,511	\$30,333
RAQC grant**	\$33,000	\$33,000	\$33,000
2021 tax credit	\$5,000	\$5,000	\$5,000
Net cost:	-\$17,022	-\$26,511	-\$38,333

*Assumes fleet volume purchase discount for CNG/RNG. **Assumes CNG vehicle operates on RNG (renewable natural gas) and replaces a MY2009 or older diesel truck.

Heavy-duty CNG Truck (such as long-range Class 8 truck)

Savings range:	Low Case	Medium Case	High Case
CNG system option cost	\$65,000	\$65,000	\$65,000
Miles driven per year	50,000	75,000	100,000
Years in fleet	7	7	7
Average MPG	5	5	5
Cost savings vs gasoline*	\$0.40 per gal	\$0.50 per gal	\$0.60 per gal
Maintenance cost savings	\$0.04 per mile	\$0.04 per mile	\$0.04 per mile
Operating savings	\$42,000	\$73,500	\$112,000
RAQC grant**	\$71,500	\$71,500	\$71,500
2021 tax credit	\$10,000	\$10,000	\$10,000
Net cost:	-\$58,500	-\$90,000	-\$128,500

*Assumes fleet volume purchase discount for CNG/RNG. **Assumes CNG vehicle operates on RNG (renewable natural gas) and replaces a MY2009 or older diesel truck.

Light-duty Hybrid Trucks

	Hybrid Electric (HEV)	Plug-in Hybrid Electric (PHEV)
Option cost	\$12,000	\$26,000
Miles driven per year	18,000	18,000
Years in fleet	5	5
Average MPG	20 (25% increase over gas)	24 (50% increase over gas)
Fuel cost savings	\$2,813	\$4,688
Operating savings*	\$1,244	\$2,088
Engine savings**	\$1,800	\$1,800
Net cost	\$6,144***	\$17,425***

*MPG improvement, brake maintenance savings and productivity savings (fewer fuel stops). **Assumes engine downsizing for the vehicle given HEV/PHEV system output. ***CO2 emissions lower by 20%-33%. Note: all data is estimates.

Medium-duty Hybrid Trucks

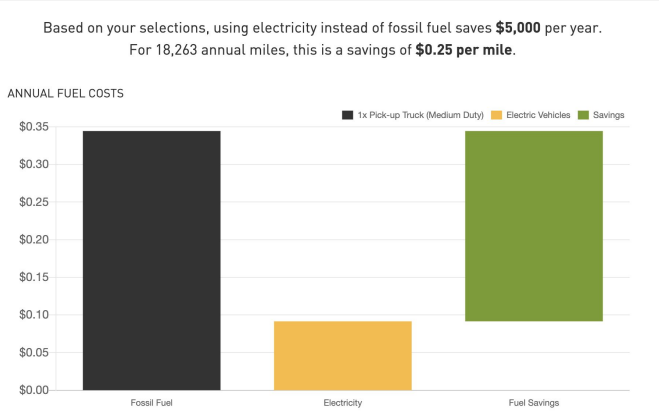
	Hybrid Electric (HEV)	Plug-in Hybrid Electric (PHEV)
Option cost	\$15,000	\$30,000
Miles driven per year	50,000	50,000
Years in fleet	7	7
Average MPG	10.80 (20% increase over gas)	12.15 (33% increase over gas)
Fuel cost savings	\$16,204	\$25,206
Operating savings*	\$4,939	\$8,828
Engine savings**	\$2,500	\$2,500
Net cost	-\$8,643***	-\$6,534***

*MPG improvement, brake maintenance savings and productivity savings (fewer fuel stops). **Assumes engine downsizing for the vehicle given HEV/PHEV system output. ***CO2 emissions lower by 20%-33%. Note: all data is estimates.

Resources: Fuel Savings Calculators

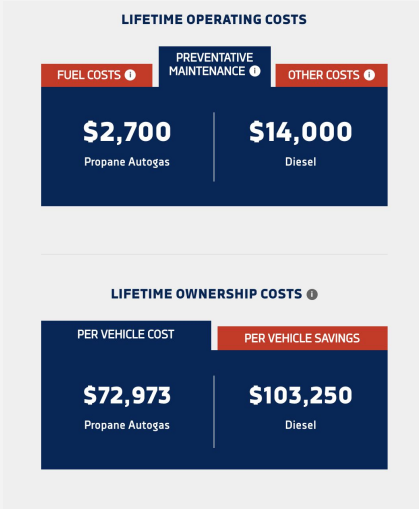
To explore possible fuel savings with different types and combinations of electric fleet vehicles, visit PG&E's new fuel savings calculator:

<https://fleets.pge.com/fuel-savings>



The Propane Education & Research Council (PERC) also offers an online calculator to explore the savings possible with LPG fleet vehicles:

<https://propane.com/for-my-business/fleet-vehicles/fuel-savings-calculator/>



Contacts

Financial Incentives

Regional Air Quality Council (RAQC)

Matt Goble, Program Coordinator

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Application materials available at:

<http://www.cleanairfleets.org>

Colorado Energy Office (CEO)

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Details about natural gas vehicles available at:

<http://www.refuelcolorado.com>

Contacts

Technology Resources

US Department of Energy Clean Cities Program/NREL

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Details about NGVs, EVs, and LPG
vehicles available at:

<http://www.afdc.energy.gov>



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