



COLORADO

Department of Personnel
& Administration

1525 Sherman St.
Denver, CO 80203

December 31, 2015

To: Senate Transportation Committee & the House Transportation and Energy Committee and
the Joint Budget Committee

From: June Taylor, Executive Director, DPA 

Subject: **Fiscal Year 2015 Vehicle Acquisition Report**

This report is being sent to the Transportation Committee of the Senate and the Transportation and Energy Committee of the House of Representatives and the Joint Budget Committee pursuant to Section 24-30-1104(2) (c) (II), C.R.S., which states: By January 1, 2008, the executive director shall adopt a policy to significantly increase the utilization of alternative fuels and that establishes increasing utilization objectives for each following year.

SUMMARY OF FISCAL YEAR 2015 VEHICLE ACQUISITIONS

In Fiscal Year 2014-15 the Department was able to place orders for (35) compressed natural gas (CNG) vehicles within previously approved budgeted appropriations. This represented 3.7% of all vehicle orders as of 12-8-15, and 6.5% of all non CDPS CSP orders.

The Department's revised goal was to order (250) CNG vehicles because of a new ½ ton original equipment manufacturer (OEM) CNG pickup that was anticipated available, as well as, a CNG sedan option in 2015. Due to the ½ not becoming available until 2016, and the sedan option not passing the 10 percent methodology, there was a significant reduction in the CNG purchasing potential. State Fleet Management (SFM) collaborates with each agency on CNG purchases to ensure the vehicle can perform adequately in the field.

The Department was able to place orders for (246) E85 Flexible Fuel Vehicles (FFV) subject to availability and because the increased cost compared to the dedicated petroleum vehicle was less than 10 percent at a cost of \$0 to \$1,100 per vehicle. This represented 34.1% of all vehicle orders.

In addition, a small number of hybrid vehicles were ordered this year (69) because the comparable life-cycle cost on the models ordered was less than 10 percent compared to their gasoline equivalents life-cycle. This represented 9.6% of all vehicle orders. As Hybrid vehicle platforms have become more common place, their associated cost has decreased and their on-



board technology has become more efficient. FY 2014-15 represented the fleet's first purchase of a plug-in hybrid for daily fleet use and will be a test bed for future expansion. The continued development of charging infrastructure will be an important hinge pin to expanded use.

The Department ordered (331) dedicated petroleum vehicles this year that represented 45.9% of all vehicle orders, with CDPS ordering (186) of those vehicles. Currently there are no CNG available models for patrol vehicles from the manufacturer. The remaining vehicle orders had no CNG options available from the OEM.

In addition the Department ordered (40) diesel vehicles for various agencies. This represented 5.5% of all vehicle orders.

DPA PROCEDURES & POLICIES ON ORDERING NEW VEHICLES

State Fleet Management's current vehicle ordering process is focused by Senate Bill 09-092, Senate Bill 13-070, and the Governor's focus on alternative fueled vehicles, emphasizing Compressed Natural Gas (CNG) vehicles.

Senate Bill 09-092 and S.B. 13-070 require that the state purchase natural gas capable vehicles whenever the incremental cost for the CNG vehicle is within 10% of the life cycle cost of the regular gasoline alternative. As a result, purchasing "Compressed Natural Gas" (CNG) vehicles will be the first option when replacing older inefficient vehicles wherever practicable. This will allow the state to take advantage of Colorado's vast reserves of natural gas, reducing our dependence on petroleum, creating new jobs, and reducing our carbon footprint. Because nearly all of the CNG models available can be purchased as dual fuel vehicles (i.e. they can utilize either CNG or gasoline), we have much greater flexibility in the placement of these vehicles.

SFM will need the cooperation and collaboration of every agency to successfully meet the requirements of S.B. 09-092, S.B. 13-070 and the Governor's expectations as we replace vehicles in FY 2015-16 and beyond. In the new vehicle ordering packet for agencies, specific instructions were included to guide them through the process, so the most effective vehicle can be purchased and put into service. If it is determined that the CNG model available will not meet the functional requirements of the department, the accompanying vehicle options will be to purchase a hybrid, or plug-in electric hybrid vehicle (if available) or another type of alternative fueled vehicle such as E85 flexible fueled vehicles (FFV). The last option will be to purchase a gasoline vehicle. If the available proposed CNG model will not work for the department then an additional form "Non-CNG Purchase Justification Form" must be completed and signed off on by the Executive Director of each agency.

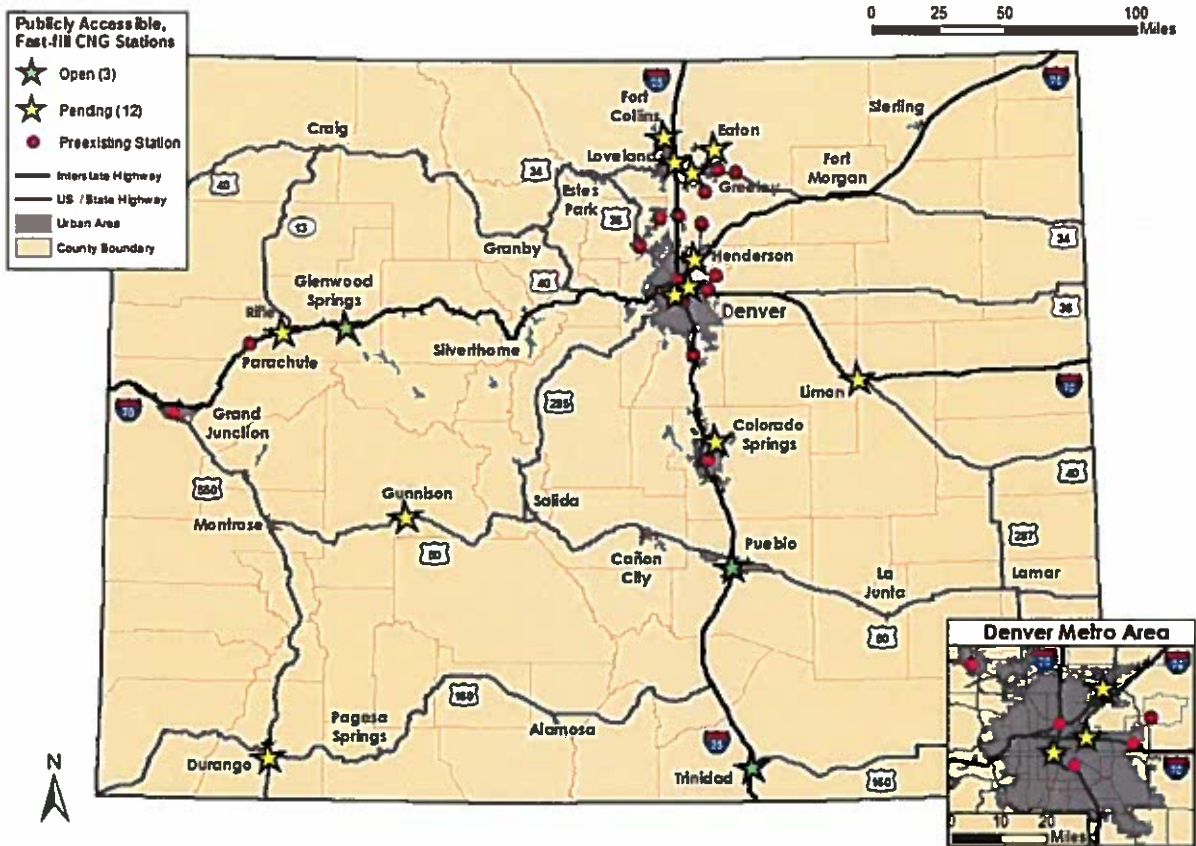


AVAILABILITY OF CNG STATEWIDE

As of December 8, 2015 there are 19 public access CNG fuel sites in operation statewide, and many more are under construction. The Colorado Energy Office through the ALT Fuels Colorado grant program has awarded 15 stations across the state. These stations are operational in Glenwood Springs, Pueblo, and Trinidad, and 12 additional stations will be completed within a year in Colorado Springs, Fort Collins, Commerce City, Greeley, Loveland, Rifle, Gunnison, Henderson, Eaton, Denver, Durango, and Limon. Over the next two years, the Energy Office anticipates awarding an additional 10 to 15 CNG stations at key locations along major transportation corridors throughout the state, in turn completing an intrastate network for CNG travel.

In partnership with the CEO and Vision Fleet Services, a study was produced to provide guidance on a sample fleet at the Department of Corrections Motor Pool for FY 2014-15. The study researched best AFV options utilizing vehicle telematics to collect data and support the findings. The outcome of this report indicated that bi-fuel options are a strong AFV consideration due to their flexibility, range, and in hybrid-electric scenarios a substantial increase in fuel economy. These findings can be used to guide SFM in future vehicle purchases and acquisition efforts.





There are approximately 13 private access CNG fuel sites, but the state has not been able to secure agreements to use these facilities because of liability concerns in addition to being located in locked, secured areas on private property. However, State Fleet Management has engaged the City and County of Denver in conversations to access its CNG fueling facilities.

INFRASTRUCTURE STRATEGY

Governor Hickenlooper and Governor Fallin of Oklahoma worked together to develop the unprecedented, bi-partisan, multi-state CNG initiative to aggregate 22 states' fleet purchases to promote CNG vehicle technology, which will move the country closer to energy independence while increasing access to a low-cost source of energy with environmental benefits. The goal was to convince the auto industry that with increased demand for CNG vehicles, they will make



available more models capable of using CNG at a reduced cost due to the increased volumes. The results have continued to grow with new CNG vehicle offerings including the Ford T Series of Vans to add to previous years' offerings of the Ford F Series truck, and Chevrolet trucks and the Impala, as well as Dodge truck offerings. Furthermore, local governments and private fleets followed the Governors' example, signing onto a fleet MOU committing to support CNG throughout the state. As a major natural gas producer, Colorado benefits from these initiatives by supporting jobs, reducing emissions, and providing long term, low cost fuel for consumers and fleets.

The SFM works closely with the Colorado Energy Office, Department of Energy's Clean Cities Coalitions, Regional Air Quality Council (RAQC), National Renewable Energy Laboratory (NREL), political subdivisions, and representatives from CNG suppliers to discuss best practices and strategies to build CNG infrastructure statewide. Since CNG fuel sites require a baseline commitment from fleets in order to legitimize operations, it is imperative to the CNG industry that there are adequate concentrations of CNG vehicles in place at these fueling sites to guarantee a sustainable alternative fuels market at the local level. Colorado's fleet sets an example by purchasing natural gas vehicles for a number of local governments, private fleets, and other states thereby building demand for CNG far beyond state fleet vehicles.

In order to build demand for CNG fueling infrastructure, the State and other stakeholders must purchase CNG vehicles to demonstrate to fuel suppliers that we have vehicles in place capable of using CNG. Working closely with the departments and the Colorado Energy Office, SFM will provide thorough guidance on the placement of these vehicles, in tandem with other public and private fleets, so potential fuel volumes may be combined in support of Colorado's alternative fuels market.

Because nearly all of the CNG models available today are dual fuel vehicles (i.e. they can utilize either CNG or gasoline), we have much greater flexibility in the placement of these vehicles until the CNG infrastructure catches up in those areas of the State. Dedicated CNG vehicles will only be purchased if they currently operate in areas that have adequate CNG fuel sites. This will ensure state employees can safely complete their duties each day.

EXEMPTIONS

SFM is required to purchase an alternative fuel vehicle if either the increased base cost of such vehicle or the increased life-cycle cost of such vehicle is not more than ten percent over the cost



of a comparable dedicated petroleum fuel vehicle. The executive director shall adopt a policy to allow some vehicles to be exempted from this requirement. Current exemptions include:

- Colorado Department of Public Safety law enforcement “patrol”, “undercover”, and “specialized” vehicles like crime scene labs and Haz Mat vehicles are exempted from this requirement until such time CNG vehicles are available and proven reliable and certified. However, CDPS is required to purchase CNG vehicles wherever practicable except for the exemptions listed above.
- Non-CDPS Law enforcement “certified patrol” vehicles used by state agencies are exempt from this requirement until such time CNG vehicles are available and proven reliable and certified for this function. At this time this will include Chevy Police Caprice and Impala models, Ford Police Interceptors, Police Dodge Chargers, Chevy Police Tahoes, Ford Police Expedition and Interceptor Utility, and Police Dodge Durango’s.
- This also covers vehicles that have specialized equipment affixed to the vehicle making it less suitable for general transportation. These vehicles are essentially a “tool on wheels” or “mobile shop” that would be difficult to accommodate CNG fuel tanks and be certified by the OEM. Examples include a drilling unit, water tanks, lab/research equipment, plumbing or telecommunications equipment, and patient and prisoner transport vehicles.
- Other unknown potential exemptions will be considered on a case by case basis only.

The table below identifies the number of acquisitions by fuel type configuration or hybrid vehicles by department for FY15.



FY 2014-15 ACQUISITIONS BY FUEL TYPE / HYBRID BY DEPARTMENT

Dept	Fuel Type / Hybrid					Total
	CNG	E85	Diesel	Hybrid	GAS	
CDPS	0	17	0	0	169	186
DOAG	0	5	0	0	6	11
DOC	6	60	10	35	30	141
DOE	0	0	0	0	1	1
CDPHE	0	7	0	7	5	19
DOHE	0	8	1	0	18	27
DOHS	2	10	0	7	15	34
DOL	0	2	0	0	0	2
DOLA	0	1	0	0	0	1
DOLE	0	3	0	3	4	10
DOMA	2	0	0	0	0	2
DONR	15	58	23	1	27	124
DOR	0	10	0	10	2	22
DORA	1	5	0	0	2	8
DOT	7	45	4	2	46	104
GOV	0	2	2	0	1	5
DPA	2	9	0	4	0	15
JUD	0	4	0	0	5	9
Totals =	35	246	40	69	331	721
	4.85%	34.12%	5.55%	9.57%	45.91%	

CNG & AFV VEHICLE ACQUISITIONS – FY 2007-08 to FY 2014-15

Since January of 2008 through 2012 only one (1) CNG vehicle was purchased because only two OEM dedicated CNG vehicles were available from model year 2006 to 2011. This limited the State's ability to purchase CNG vehicles during this time. Because of budget constraints largely in part to the economic crash in FY 2008-09, the State only approved vehicles to be replaced in FY 2010-11 and FY 2011-12 if they had an impact on life, health, or safety. Most of these vehicles were for the Department of Public Safety, State Patrol Division. CNG and AFV acquisitions resumed in FY 2012-13 with the purchase of 81 CNG vehicles, 153 CNG vehicles in FY 2013-14, and 35 CNG vehicles in FY 2014-15. See table below for a summary of vehicle acquisitions from FY 2007-08 to FY 2014-15.



The SFM Program was able to purchase a total of 1,742 alternative fueled vehicles capable of using E85 and regular gasoline from FY 2007-08 to FY 2014-15. Historically, E85 vehicles have always been less than 10% of the gasoline equivalent, and in some cases this option has been standard equipment at no additional charge. These vehicles are also commonly referred to as “flexible fuel vehicles,” or FFV’s.

SUMMARY OF VEHICLE ACQUISITIONS – FY 2007-08 to FY 2014-15

Fiscal Year	Total Acquisitions	CNG	E85	Hybrid	Diesel	Non AFV Acquisitions
2008	654	0	284	370	370	370
2009	895	0	303	592	592	592
2010	551	0	245	306	306	306
2011	241	0	98	143	143	143
2012	317	1	113	203	203	203
2013	566	81	220	265	265	265
2014	680	153	233	294	294	294
2015	721	35	246	69	40	331
Totals	4,625	270	1,742	2,242	2,213	2,504

