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Report No. 17-10

Use of Natural Gas Fuels to Operate Motor Vehicles Is Increasing in Florida

at a glance

Natural gas fuels such as compressed natural gas, liquefied natural gas, and liquefied petroleum gas are increasingly being used to operate motor vehicles in Florida. From 2012 to 2016, Florida's consumption of natural gas as a motor fuel increased 326% and the state is now 15th in the nation in the use of natural gas motor fuel. Most natural gas fuel suppliers and consumers expect the industry to grow, given favorable fuel prices. However, these stakeholders are concerned about the limited number of refueling stations in Florida and the cost to convert vehicles to operate on natural gas fuel.

Florida does not currently tax natural gas fuels. Other states do tax these fuels; however, it is difficult to compare tax rates across states because states do not uniformly adopt national measurement standards.

Some states, including Florida, offer incentives to consumers for the use of natural gas fuel. Florida offers businesses rebates to convert vehicles to natural gas or to purchase vehicles operating on natural gas. Incentives offered by other states include loans, reduced fees, and other benefits for operating natural gas fuel vehicles.

Scope

[Chapter 2013-198](#), *Laws of Florida*, requires the Office of Program Policy Analysis and Government Accountability (OPPAGA) to review the taxation of natural gas fuel used to power motor vehicles, including

- evaluating growth trends in the use of natural gas fuel;
- surveying consumers and suppliers of natural gas fuel;
- surveying other states on taxing and measuring natural gas fuel; and
- surveying other states on incentives provided to consumers of such fuels.

Background

Florida defines natural gas fuel as any liquefied petroleum gas (LPG) product, compressed natural gas (CNG) product, or combination thereof used in a motor vehicle.¹ This includes fuel commonly sold as natural gasoline, butane gas, propane gas, or any other form of LPG, CNG, or liquefied natural gas (LNG). This term does not include these fuels placed in a separate tank of a motor vehicle for cooking, heating, water heating, or electric generation.

Florida imports most of the natural gas fuel used in the state. While Florida is one of the five largest energy-consuming states, only

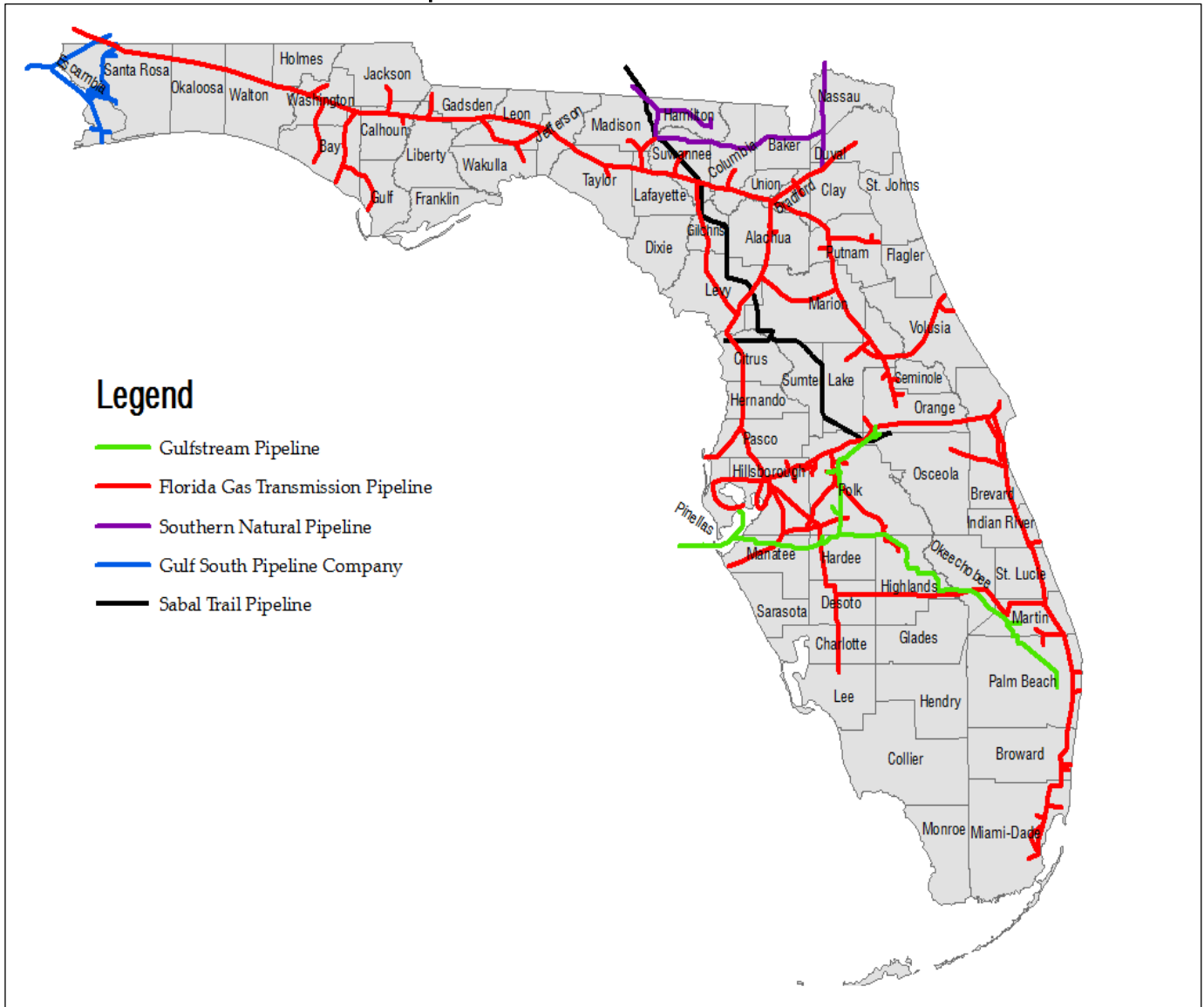
¹ Per ss. [206.01\(23\)](#) and [320.01\(1\)\(a\)](#), *F.S.*, a motor vehicle is defined

as any vehicle, machine, or mechanical contrivance which operates on state roads.

minimal amounts of natural gas fuels are produced within the state. Most of the natural gas produced in Florida comes from the Jay Field in Northwest Florida. However, the majority of natural gas used in Florida is imported via five pipelines. (See Exhibit 1.)

Two of these pipelines transport the most fuel to the state: the Florida Gas Transmission Pipeline, which runs from Texas to Miami, and the Gulfstream pipeline, an underwater link from Mississippi and Alabama.²

**Exhibit 1
Florida Obtains Natural Gas From Five Pipelines**



Source: OPPAGA analysis of data from Boardwalk Pipeline Partners, Florida Trend, Kinder Morgan, and Sabal Trail Transmission.

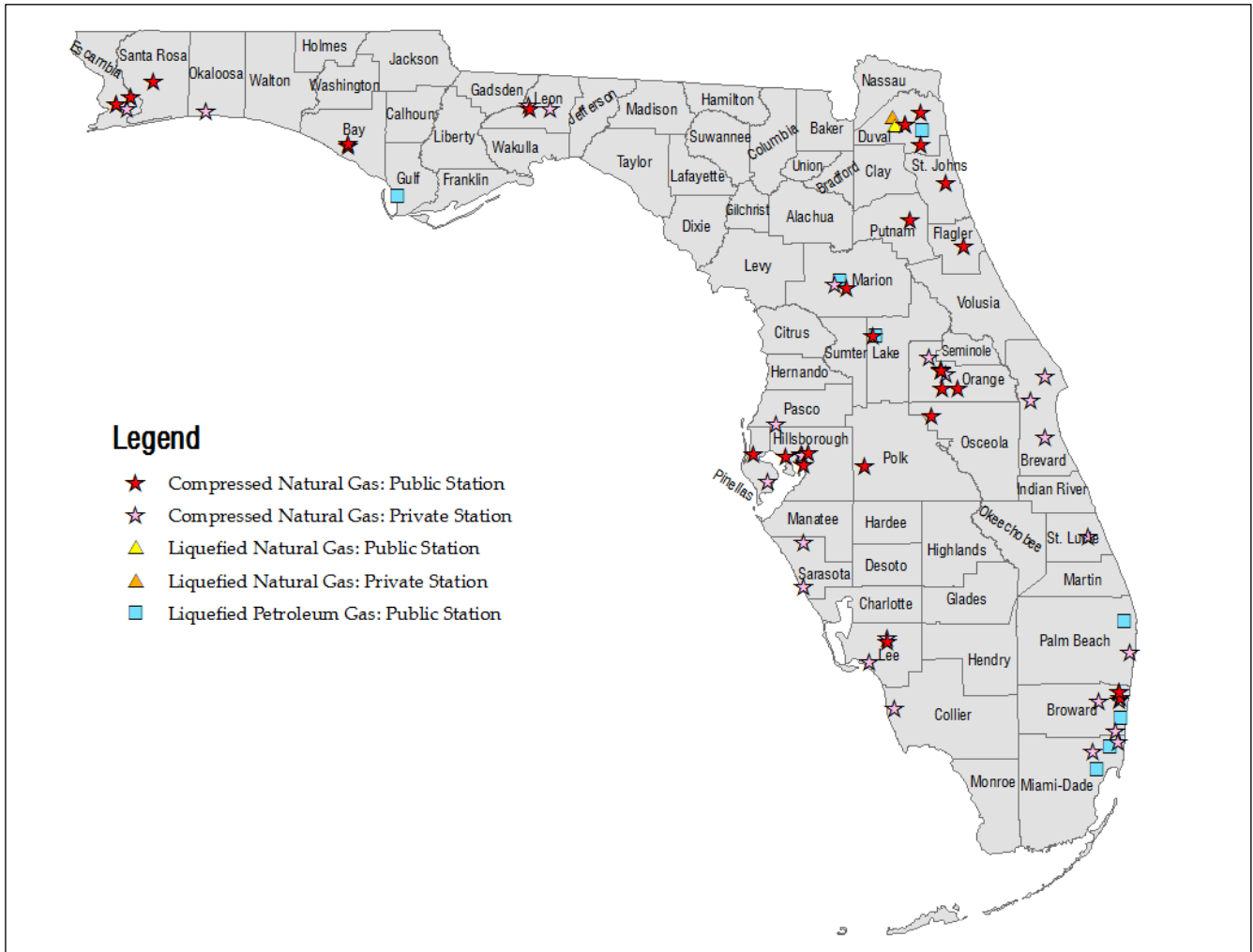
² LPG is also imported to Florida, and industry representatives

estimate that 75% of Florida’s imported LPG comes in by rail, with the remaining 25% coming in by transport truck.

As of July 2017, natural gas fuel in Florida was sold at 68 fueling stations. The stations included 36 known public fueling stations and 32 known

private fueling stations. These stations are primarily concentrated in urban areas. (See Exhibit 2.)

Exhibit 2 Florida Has 36 Known Public Natural Gas Fuel Stations and 32 Known Private Stations



Source: OPPAGA analysis of U.S. Department of Energy Alternative Fuels Data Center July 2017 data.

Since 2014, Florida has not taxed natural gas as a motor fuel. Prior to 2014, Florida natural gas fuel vehicle owners and operators were required to purchase an annual decal from the Department of Revenue, in lieu of the excise taxes imposed by s. 206.87, *Florida Statutes*.³ These annual decals cost between \$199.10 and \$380.10 per motor vehicle operating on state roads, depending on the size and weight of the vehicle. In addition to the decal fee, the sale of natural gas fuels was also subject to state sales and use tax imposed under Ch. 212, *Florida Statutes*.

However, the passage of Ch. 2013-198, *Laws of Florida*, in 2013 exempted natural gas fuel from statewide taxes and decal requirements from January 1, 2014 through December 31, 2018.⁴ The law further states that beginning January 1, 2019, natural gas fuel will be taxed at \$0.21 per motor fuel equivalent gallon, and vehicle owners and operators will no longer be required to purchase decals from the Department of Revenue.^{5,6} The Legislature’s Office of Economic and Demographic Research estimated that when the exemption took effect in Fiscal Year 2013-14, there would be an insignificant negative impact on revenues to the General Revenue Fund, a loss of \$300,000 to state trust funds, and an insignificant negative impact to local governments.

State and federal entities regulate and set standards for the natural gas fuel industry. The Department of Agriculture and Consumer Services (DACS) inspects facilities where LPG is sold or stored and investigates accidents involving LPG or related equipment. The

department also licenses individuals and businesses that store, transport, and dispense LPG for the operation of motor vehicles and the conversion of diesel-powered vehicle engines to operate on either natural gas or LPG.⁷ Businesses that install, service, and repair other natural gas fuel appliances and containers not used for the propulsion of motor vehicles must also obtain these licenses. (See Exhibit 3.) OPPAGA analysis of DACS licensure data found that since 2012 the number of active licenses has remained relatively consistent.

**Exhibit 3
DACS Issues Four Natural Gas Fuel-Related Licenses¹**

License	Description	Number of Active Licenses in 2016
Category I Liquefied Petroleum Gas Dealer	Distribute LPG and/o install, service, and repair LPG or natural gas appliances and equipment	323
Category II Liquefied Petroleum Gas Dispensing Unit	Sell LPG to the ultimate consumer	1,457
LP Gas Installer A (Master Installer-All Areas)	Install natural gas fuel engines	283
Specialty Installer D (Carburetion/Conversion of Engines to Use Propane as Fuel)	Convert vehicles to use LPG	35

¹ Due to several license actions occurring for a given license in a given year, these numbers contain duplicates. Source: OPPAGA analysis of Department of Agriculture and Consumer Services data.

The federal government maintains standardized measurement criteria for natural gas fuel. The National Conference of Weights and Measures (NCWM) meets annually to

³ State or local government agencies were not required to obtain and purchase a decal from the Department of Revenue, per s. 206.877, *F.S.*

⁴ Natural gas fuel is currently exempt from statewide taxes on motor fuels found in Ch. 206, *F.S.*, and sales and use taxes found in Ch. 212, *F.S.*

⁵ Section 206.9955, *Florida Statutes*, establishes \$0.21 per motor fuel equivalent gallon as the base tax rate effective on January 1, 2019. However, statutes require the Department of Revenue to annually adjust the portions of the tax established under subsections (d) and (e)1 by the percentage change in the average of the Consumer Price Index issued by the U.S. Department of Labor for the most recent 12-month period ending September 30.

⁶ A motor fuel equivalent gallon is defined in s. 206.9955, *F.S.*, as follows: CNG – 5.66 pounds or 126.67 cubic feet; LNG – 6.06 pounds; and LPG – 1.35 gallons.

⁷ Two additional state agencies regulate subsectors of the natural gas industry. The Department of Revenue licenses retailers of natural gas fuel, as specified in Ch. 206, Part V, *F.S.* The Public Service Commission has jurisdiction over all aspects of the operation of investor-owned local natural gas distribution companies, including the authority to regulate rates for natural gas distributed by pipeline, which could then be purchased by industrial customers, such as power plants or motor fuel processors. The commission also regulates the safety of all local natural gas operations.

determine uniform standards of measurement for the various types of natural gas, including those used as motor vehicle fuel.⁸ These standards are then adopted and published by the U.S. Department of Commerce’s National Institute of Standards and Technology. NCWM’s adopted standard measurements for the sale of natural gas fuel are described below.

- *One Gasoline Gallon Equivalent* is equal to 5.660 pounds of CNG.
- *One Diesel Gallon Equivalent* is equal to 6.384 pounds of CNG or 6.059 pounds of LNG.

The standard measurements developed by NCWM for the sale of LPG are the pound, metered cubic foot (1 ft³ at 60°F), or gallon (231 in³ at 60°F).

Findings

Stakeholders report that a range of factors contribute to increased natural gas consumption in Florida

Florida’s consumption of natural gas as a vehicle fuel increased between 2012 and 2016. Data from the U.S. Energy Information Administration shows that Florida ranked 25th in the nation for consumption of natural gas as a vehicle fuel in 2012, consuming 84 million cubic feet of natural gas as vehicle fuel.⁹ At that time, Florida consumed far less than the other most populous states (California, New York, and Texas). Florida also consumed less natural gas fuel than two out of five other states in the southeast region: Georgia and Alabama.

By 2016, Florida’s consumption of natural gas as a vehicle fuel increased to 358 million cubic feet, increasing the state’s consumption to 15th in the nation. This is a 326% increase from consumption levels the year before natural gas fuels were exempted from taxation. However,

⁸ NCWM is a professional nonprofit association of state and local weights and measures officials, federal agencies, manufacturers, retailers, and consumers.

⁹ While the U.S. Department of Energy tracks the use of natural gas as a motor fuel, it does not do so for LPG. Consequently,

Florida still consumes less natural gas than California, Texas, New York, and Georgia. (See Exhibit 4.)

Exhibit 4 Florida Has Increased Its Use of Natural Gas as Motor Fuel but Consumes Less Than Several Other States

State	Natural Gas Consumed (millions of cubic feet)	Rank	Percentage Increase From 2012 to 2016
2012			
California	14,671	1	-
New York	3,854	2	-
Texas	2,207	3	-
Georgia	1,104	5	-
Alabama	193	19	-
Florida	84	25	-
Louisiana	11	36	-
South Carolina	9	37	-
Mississippi	1	44	-
2016			
California	19,395	1	32.2%
Texas	4,672	2	111.7%
New York	3,606	3	-6.4%
Georgia	1,703	5	54.3%
Florida	358	15	326.2%
Alabama	320	18	65.8%
Louisiana	176	25	1,500.0%
Mississippi	73	34	7,200.0%
South Carolina	44	38	388.9%

Source: OPPAGA analysis of data from the U.S. Energy Information Administration.

Consumers and suppliers cited several factors that may facilitate natural gas fuel industry growth and predict that growth will likely continue. To gather information about factors that could affect the growth of the natural gas fuel industry, OPPAGA conducted surveys for all entities who applied for DACS’s Natural Gas Fuel Fleet Vehicle Rebate Program (consumers) and all active DACS natural gas fuel license holders (suppliers).¹⁰ Since the fuel supplier surveys were sent to all active license holders shown in Exhibit 3, survey responses initially included businesses not in the targeted industry of natural gas fuel; responses from businesses

LPG use is not accounted for in this data.

¹⁰ OPPAGA was not able to survey private owners of natural gas vehicles, as the Department of Highway Safety and Motor Vehicles does not maintain complete data on all natural gas vehicles that are privately owned.

not in the targeted industry have been excluded from the analysis.^{11,12}

In general, consumers and suppliers responding to our surveys identified several factors that may have encouraged the growth in natural gas fuel consumption, including the fuel tax exemption and natural gas vehicle conversion incentive programs. Some consumers also noted other benefits of operating a natural gas vehicle, including cleaner emissions (16%) and reduced maintenance costs (8%).

Suppliers and consumers indicated that they expect their businesses to continue to grow, both in the total number of vehicles served and in gallons of natural gas fuel sold. Natural gas vehicle use appears to be an attractive option for consumers. Eighty-nine percent of consumer survey respondents indicated that their natural gas vehicle fleets have increased in size since 2012. In addition, 75% of consumers responding to our survey said that they anticipate the number of natural gas vehicles in their fleet will continue to increase over the next five years. Of those consumer respondents, 46% said their fleet would continue to increase slightly and an additional 29% predicted that their fleet size would increase greatly. Only 13% of all consumers responding to our survey indicated that they anticipate a decrease in their fleet size.¹³

Consumers and suppliers identified gas prices, infrastructure, and conversion costs as factors that could limit industry growth. While suppliers and consumers asserted that fuel costs impact the growth of the industry, they differed concerning the nature of this impact. Suppliers stated that although natural gas is currently less expensive than gasoline, fluctuations in gasoline prices make it difficult to predict how

popular natural gas fuel will be in the future. However, 59% of consumers indicated that the primary benefit of operating natural gas vehicles (versus diesel or gasoline vehicles) is fuel cost savings.

Suppliers and consumers also reported similar factors that may negatively impact the growth of the natural gas fuel industry, including access to fuel and conversion costs. Suppliers reported that while people may be interested in switching to natural gas fuel, they may be hesitant if they perceive that there is insufficient infrastructure and access to filling stations. Similarly, 29% of consumers identified the limited number of refueling stations in Florida as the greatest challenge to increased use of natural gas fuels. Conversion costs may also restrict growth, as suppliers reported that people may be discouraged from using natural gas fuel due to conversion costs; 24% of consumers identified this as a factor negatively impacting increased use of natural gas vehicles.¹⁴

Nationwide, most states tax natural gas fuel; several states offer incentives to consumers

While most states tax natural gas, inconsistent measurement standards make it difficult to compare taxes across states. As noted above, Florida currently exempts natural gas fuels from taxation. OPPAGA's review of regulations from 50 states and the District of Columbia found that in addition to Florida, Vermont, Arizona, and Alabama do not impose statewide taxes on any natural gas fuels. Taxes on the sale of natural gas fuels vary across the remaining 46 states. Most states (41) levy less than \$0.30 per gallon for CNG, LNG, and LPG. (See Exhibit 5.)

¹¹ We received 43 complete responses from suppliers in the targeted natural gas fuel industry.

¹² Businesses not in the targeted industry include those that sell LPG for uses other than vehicle fuels, for example, in a propane grill.

¹³ These 13% of survey respondents indicated that the decreased price of diesel, the lack of filling stations, and the lack of incentive dollars to offset vehicle conversion costs are the main reasons that their

natural gas fleet decreased since 2012. Two of 48 consumer respondents reported a decrease in fleet size since 2012.

¹⁴ DACS estimates the following per vehicle conversion costs: sedan - \$5,000 to \$7,000 for LPG and/or CNG; pick-up truck - \$9,000 to \$10,000 for LPG and/or CNG; school bus - \$7,000 to \$9,000 for LPG and \$25,000 for CNG; and heavy-duty truck - \$15,000 to \$19,000 for LPG and \$40,000 to \$90,000 for CNG.

**Exhibit 5
On Average, Most States Assess Less Than 30 Cents Per Gallon in Statewide Natural Gas Fuel Taxes**

Statewide Taxes	Compressed Natural Gas ²	Liquefied Natural Gas	Liquefied Petroleum Gas ³
\$0.00 to \$0.10/gallon	15	12	13
\$0.101 to \$0.20/gallon	9	13	11
\$0.201 to \$0.30/gallon	17	17	18
\$0.301 to \$0.40/gallon	6	7	4
\$0.401 to \$0.50/gallon	1	1	1
Above \$0.50/gallon	2	1	1
Not applicable	1	0	2
Average statewide taxes	\$0.1875	\$0.1970	\$0.1899

¹ Includes the District of Columbia.

² Minnesota taxes CNG on a cubic foot basis.

³ Oklahoma and Missouri require the purchase of flat fee decals instead of a tax per gallon of LPG for use as a motor fuel on state highways.

Source: OPPAGA analysis of state statutes and natural gas fuel program documents as of January 2017.

We could not directly compare the taxation of natural gas fuels across states because states currently do not use the same definition for a gallon of natural gas fuel, which is the unit of measurement that is the basis of statewide fuel taxes. Most states (44) and the District of Columbia use the National Council of Weights and Measures’ standards for the sale of natural gas fuel.^{15,16} However, only 19 of these states adopt and use NCWM standards as they are updated each year.¹⁷ As a result, even if taxes are equivalent dollar values, the total tax consumers pay will vary across states. For example, Arkansas and Oklahoma both tax LNG at the same level (\$0.05) on a per gallon basis.

¹⁵ The remaining five states (California, Massachusetts, Minnesota, North Dakota, and Wyoming) have standards in place for the unit of measurement at sale but do not use NCWM standards.

¹⁶ As of August 2017, Florida now uses the most recent NCWM standards for measurements of natural gas fuels.

¹⁷ The other 26 states use NCWM measurement standards, but it is possible that any of these 26 states could be using NCWM standards from earlier years.

However, Arkansas defines a gallon of LNG as 5.37 pounds, whereas Oklahoma defines a gallon of LNG as 6.06 pounds. (See Appendix A for more detailed information on which states use 2017 NCWM standards for natural gas fuels.)

States offer a range of tax alternatives and consumer incentives for using natural gas fuels. Certain states allow an alternative for paying natural gas fuel taxes when purchasing these fuels for operating non-farm vehicles on state highways. As of January 2017, seven states offer residents the option to purchase annual flat fee decals in lieu of paying taxes when purchasing CNG and LNG.¹⁸ Ten states also offer residents the option to purchase annual flat fee decals for the purchase of LPG.¹⁹ These annual decals usually vary in price according to vehicle weight. For example, depending on the weight of the vehicle, Mississippi charges from \$195 to \$3,000 per annual permit, while Washington charges from \$50 to \$250 per annual permit. (See Appendix A for additional information on fuel taxes and annual decals in individual states and the District of Columbia.)

In addition to the option to purchase flat fee decals, Florida and 16 other states offer incentives to consumers for the use of natural gas fuels. For example, Florida offers businesses incentives to convert vehicles to natural gas or to purchase vehicles operating on natural gas. The Natural Gas Fuel Fleet Vehicle Rebate Program awards rebates up to 50% of the eligible cost of a vehicle purchase, lease, or conversion with the rebate not exceeding \$25,000 per vehicle. The total allowable rebate to one entity is \$250,000 per fiscal year.²⁰ Incentives offered by other states include loans, reduced fees, and other benefits for operating natural gas fuel vehicles. (See Exhibit 6.)

¹⁸ These states are Arkansas, California, Mississippi, Missouri, Oklahoma, Oregon, and Washington.

¹⁹ Arkansas, California, Indiana, Kansas, Mississippi, New Mexico, Oregon, and Washington offer residents the option to purchase these annual decals for non-farm vehicles. In contrast, Oklahoma and Missouri require purchase of flat fee decals instead of a tax per gallon of LPG for use as a motor fuel on state highways.

²⁰ See OPPAGA Report [15-09](#), November 2015.

**Exhibit 6
States Offer a Variety of Incentives for Operating Natural Gas Fuel Vehicles**

Incentive	Description and Example States
<p>Loans</p>	<p>Mississippi offers loans of up to \$300,000 for vehicle retrofits, up to \$300,000 for new vehicles, and up to \$500,000 for refueling infrastructures. The loan terms are for 7 years (15 years for refueling infrastructures) at 0% interest.</p> <p>Nebraska offers loans through private vendors that may not exceed 5% interest while providing a maximum of \$500,000 to replace traditional fuel vehicles and fueling equipment with alternative fuel equipment.</p> <p>Alabama participates in third party lending to convert vehicles to CNG or LNG with a 10-year simple payback period.</p>
<p>Reduced vehicle license and/or assessment fees</p>	<p>Arizona and Washington offer reduced vehicle license/assessment fees for vehicles using natural gas fuel.</p>
<p>High Occupancy Vehicle lane privileges and rates</p>	<p>California, North Carolina, Utah, and Virginia allow drivers of CNG-powered vehicles with the proper documentation to use High Occupancy Vehicle lanes regardless of the number of passengers in the vehicle.¹</p>
<p>Use of state-owned fueling facilities</p>	<p>Oklahoma and Utah allow drivers of natural gas fuel vehicles to use a state alternative fueling station if there are no commercial or private fueling stations in a close geographic area (e.g., five-mile radius for Oklahoma drivers).</p>
<p>Parking privileges</p>	<p>Arizona drivers of dedicated natural gas fuel vehicles can park without penalty in parking areas designated for carpool operators.</p> <p>Nevada drivers of natural gas fuel vehicles with an appropriate decal can park in public metered parking areas without paying parking fees.</p>

¹ Only dedicated natural gas (non-conversion) vehicles are allowed this incentive in North Carolina.
Source: OPPAGA review of statutes and other state documents for the 50 states and District of Columbia.

Appendix A

Natural Gas Fuel Taxation by State as of January 2017

Natural gas fuel taxes across states have two components: the dollar amount and the unit of fuel. As seen in Exhibit A-1, the amount charged varies widely across states, as do the standards utilized to measure a unit of fuel. The National Council on Weights and Measures (NCWM) annually updates their standards for natural gas fuel gallon equivalents. However, states do not consistently update their fuel measurement standards to these national standards, so the taxable units vary across states.

**Exhibit A-1
Fuel Tax Rates and Definitions of a Gallon Equivalent of Natural Gas Fuel Vary Across States**

State	Liquefied Petroleum Gas	Liquefied Natural Gas	Compressed Natural Gas	Cost of Annual Permit/Decal ¹	Use of 2017 NCWM Measurement Standards ²		
					State standards updated annually concurrent to NCWM updates	NCWM standards are adopted, but may be from earlier years	State standards are not based on NCWM standards
Statewide Tax Per Sale Unit							
Alabama	\$0.0000	\$0.0000	\$0.0000			X	
Alaska	\$0.0000	\$0.0800	\$0.0800			X	
Arizona ³	\$0.0000	\$0.0000	\$0.0000			X	
Arkansas	\$0.1650	\$0.0500	\$0.0500	\$164 to \$609	X		
California ⁴	\$0.0600	\$0.1017	\$0.0887	\$36 to \$168			X
Colorado ⁵	\$0.0900	\$0.0800	\$0.1200			X	
Connecticut	\$0.2600	\$0.2600	\$0.2600		X		
Delaware	\$0.2200	\$0.2200	\$0.2200			X	
District of Columbia	\$0.2350	\$0.2350	\$0.2350			X	
Florida	\$0.0000	\$0.0000	\$0.0000			X	
Georgia	\$0.2630	\$0.2630	\$0.2630			X	
Hawaii ⁶	\$0.0520	\$0.0400	\$0.0400			X	
Idaho	\$0.2320	\$0.3490	\$0.3200			X	
Illinois ⁷	\$0.5930	\$0.5930	\$0.5930		X		
Indiana ⁸	\$0.1100	\$0.3300	\$0.3300	\$100 to \$500 ⁹		X	
Iowa	\$0.3000	\$0.3250	\$0.3100			X	

State	Liquefied Petroleum Gas	Liquefied Natural Gas	Compressed Natural Gas	Cost of Annual Permit/Decal ¹	Use of 2017 NCWM Measurement Standards ²		
					State standards updated annually concurrent to NCWM updates	NCWM standards are adopted, but may be from earlier years	State standards are not based on NCWM standards
Statewide Tax Per Sale Unit							
Kansas	\$0.2300	\$0.2600	\$0.2400	\$46 to \$5,376 ⁹		X	
Kentucky ¹⁰	\$0.2460	\$0.2300	\$0.2300			X	
Louisiana	\$0.1478	\$0.2013	\$0.2013				X ¹¹
Maine	\$0.2190	\$0.1780	\$0.2430		X		
Maryland	\$0.3425	\$0.3425	\$0.3425			X	
Massachusetts ¹²	\$0.1030	\$0.1030	\$0.1030				X
Michigan	\$0.2630	\$0.2630	\$0.2630			X	
Minnesota ¹³	\$0.2135	\$0.1710	\$0.0025				X
Mississippi	\$0.1735	\$0.1800	\$0.1800	\$195 to \$3,000		X	
Missouri	N/A ¹⁴	\$0.0500	\$0.0500	\$75 to \$1,000	X		
Montana	\$0.0518	\$0.2775	\$0.0700			X	
Nebraska	\$0.2730	\$0.2730	\$0.2730			X	
Nevada	\$0.0640	\$0.2700	\$0.2100		X		
New Hampshire	\$0.2220	\$0.2220	\$0.2220		X		
New Jersey	\$0.3185	\$0.0000	\$0.0000			X	
New Mexico	\$0.1200	\$0.2060	\$0.1330	\$60 to \$1,100 ⁹		X	
New York	\$0.0000	\$0.0005	\$0.0005			X	
North Carolina	\$0.3430	\$0.3430	\$0.3430		X		
North Dakota	\$0.2300	\$0.2300	\$0.2300				X
Ohio	\$0.2800	\$0.2800	\$0.000			X	
Oklahoma	N/A ¹⁴	\$0.0500	\$0.0500	\$50 to \$150 ¹⁵	X		
Oregon	\$0.2308	\$0.3000	\$0.2500	\$60 to \$400		X	
Pennsylvania	\$0.4290	\$0.3860	\$0.5820			X	
Rhode Island	\$0.3300	\$0.3300	\$0.3300		X		
South Carolina	\$0.1600	\$0.1675	\$0.1675		X		

State	Liquefied Petroleum Gas	Liquefied Natural Gas	Compressed Natural Gas	Cost of Annual Permit/Decal ¹	Use of 2017 NCWM Measurement Standards ²		
					State standards updated annually concurrent to NCWM updates	NCWM standards are adopted, but may be from earlier years	State standards are not based on NCWM standards
Statewide Tax Per Sale Unit							
South Dakota	\$0.2000	\$0.1400	\$0.1000			X	
Tennessee	\$0.1400	\$0.1400	\$0.1300		X		
Texas	\$0.0000	\$0.1500	\$0.1500		X		
Utah	\$0.0000	\$0.1250	\$0.1250		X		
Vermont	\$0.0000	\$0.0000	\$0.0000		X		
Virginia	\$0.1620	\$0.1620	\$0.1620		X		
Washington	\$0.4940	\$0.4940	\$0.4940	\$50 to \$250 ¹⁶	X		
West Virginia	\$0.1990	\$0.1520	\$0.2360		X		
Wisconsin	\$0.2260	\$0.1970	\$0.2470		X		
Wyoming	\$0.2400	\$0.2400	\$0.2400			X	
Average tax per unit of fuel	\$0.1884	\$0.1969	\$0.1901				

¹ Information applies to non-farm vehicles only; permit/decal costs can vary depending on the weight and type of motor vehicle.

² NCWM-adopted standards for the sale of natural gas fuel are: LPG is sold by the pound, cubic foot, or gallon (231 cubic inches); LNG is sold in diesel gallon equivalents (DGEs), which is defined as 6.059 lbs. of LNG; CNG is sold in gasoline gallon equivalents (GGEs), which is defined as 5.660 lbs. of CNG, sold in DGEs, which is defined as 6.384 lbs. of CNG, or sold by mass (weight).

³ Does not include transaction privilege tax.

⁴ Includes only excise taxes.

⁵ Tax rates do not include environmental response surcharges or natural gas/liquefied petroleum inspection fees.

⁶ Does not include environmental response, energy, and food security tax.

⁷ Does not include decal fee.

⁸ Motor carriers in Indiana pay an additional \$0.11/gallon for CNG and LNG.

⁹ LPG only.

¹⁰ Kentucky tax rates include an environmental fee but do not include motor carrier surtax rates.

¹¹ Per Louisiana statutes, CNG is sold in GGEs, which is defined as 5.660 lbs. of CNG if the fuel price is listed in GGEs, and the fuel is supplied to the dispenser from a non-liquefied source. LNG is sold in DGEs, which is defined as 6.060 lbs. of LNG if the fuel price is listed in DGEs and the fuel is supplied to the dispenser from a liquefied source. LPG is sold in GGEs at an energy equivalent rate of 73% of gasoline if the fuel price is listed in GGEs and the fuel is supplied to the dispenser from a liquefied source.

¹² Includes only fuel excise taxes.

¹³ Does not include any applicable fuel surcharge taxes.

¹⁴ Missouri and Oklahoma require purchase of decals for use of LPG as a motor fuel.

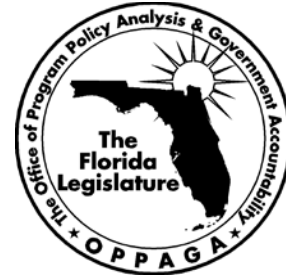
¹⁵ Decals for CNG and LNG vehicles are only for those vehicles weighing up to one ton.

¹⁶ Includes handling charge.

Source: OPPAGA analysis of 2017 National Institute of Standards and Technology Handbook 130 and OPPAGA review of statutes and other state documents for the 50 states and District of Columbia.

The Florida Legislature

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