It's Going to be a Bumpy Ride, Especially in Louisiana: Why Louisiana Needs to Rethink its Funding for Road Maintenance and Development

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INTRODUCTION

It is no secret that Louisiana has terrible roads. An estimated 47% of Louisiana’s major roads are in poor or mediocre condition. However,

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what people may fail to realize is the economic cost that Louisiana’s
deficient roads have on Louisiana residents. From 2015 to 2019,
Louisiana’s lack of adequate roadway safety features resulted in an
estimated $2.3 billion in economic losses for Louisiana residents. The
economic costs of wrecks resulting from deficient roads include work and
household productivity losses, property damage, medical costs,
rehabilitation costs, legal costs, congestion costs, and emergency
services.

There are multiple reasons why Louisiana has such poor roads. One
main reason is a lack of funding to fix and maintain the roads. As of 2019,
Louisiana had $14.87 billion in unmet transportation and infrastructure
needs. The causes of these shortfalls include increased construction costs,
increased fuel efficiency of vehicles, increased demand for hybrid and
electric vehicles, and a lack of an increase in the gasoline tax. The
increases in fuel efficiency and electric and hybrid vehicle demand will
continue to cause significant decreases in Louisiana’s gasoline tax
revenue—Louisiana’s main revenue source for road maintenance and
development.

Louisiana is also particularly susceptible to the severe consequences
of climate change. As a coastal state, Louisiana faces the ever-looming
threat of hurricanes, which are increasingly frequent and intense as global
temperatures rise. Louisiana is also an agricultural state; climate change
could deeply impact Louisiana’s agricultural market. For these reasons,

2. Id.
3. Id.
4. Id.
6. Id.
7. Id. at 7.
Louisiana lawmakers must be acutely aware of climate change when passing any legislation by incentivizing environmentally friendly actions when possible.

The catastrophic events resulting from global warming are not specific to Louisiana; many other states across the United States address this issue too.\(^{10}\) Louisiana’s current solution for producing more road and highway funding in a world rapidly shifting to electric and hybrid entails imposing a $110 yearly road usage fee on Louisiana drivers who drive electric vehicles and a $60 yearly road usage fee for those who drive hybrid vehicles.\(^{11}\)

Louisiana’s current solution, however, falls short in many ways. For one, this plan fails to cover Louisiana’s expected funding deficits from the hybrid and electric vehicle influx.\(^{12}\) It also fails to tax drivers in proportion to the driver’s road usage. Finally, it may disincentivize environmentally friendly purchases—i.e., hybrid and electric vehicles.

Part I of this Comment provides a history of Louisiana’s roads and how the State has historically funded them. This Part also analyzes the impact of Louisiana’s poor road conditions on Louisiana’s residents, while providing a background on hybrid and electric vehicles, their impact on road funding availability for both the federal and state governments, and how other states address the same issue. Then, Part I evaluates climate change’s significant impact on Louisiana, followed by a discussion on how Louisiana should incentivize environmentally friendly purchases to mitigate climate change effects on the State.

Part II of this Comment provides an analysis of the gasoline tax itself and the advantages and disadvantages of continuing to rely on it as a main source of funding for Louisiana’s roads. Further, Part II analyzes Louisiana’s current solution to address its lack of road maintenance funding. Part II also addresses the deficiencies of Louisiana’s current solution. Part III offers potential solutions and analyzes them in the context of Louisiana. Finally, Part IV provides a specific recommendation to address Louisiana’s poor roads and the lack of funding to remedy the situation.

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12. WAGUESPACK ET AL., supra note 5.
A. Federal Gasoline Tax

Congress implemented the first ever gasoline tax in 1932 at one cent per gallon.\(^{13}\) Initially, Congress earmarked the funding from this tax for general deficit reduction—a result of the Great Depression.\(^{14}\) It was not until 1956, with the creation of the Highway Trust Fund (HTF), that Congress raised the tax to three cents per gallon and earmarked the funding solely for the expansion and formation of the interstate highway system.\(^{15}\) The HTF receives 82%—about $36 billion—of its funding through the gasoline tax, with the remaining portion coming from taxes on tires and heavy vehicles.\(^{16}\) Aided by the gasoline tax, the United States propelled itself into the transportation age through the construction of highways connecting cities across the country.\(^{17}\) Congress raised the federal gasoline tax to 18.4 cents per gallon in 1993, which to this day remains unchanged.\(^{18}\)

Congress believed the HTF would be completely self-funding from the gasoline tax.\(^{19}\) The HTF, however, has been unable to fund itself as well as originally expected.\(^{20}\) Since 2008, the federal government has transferred $144 billion from the general treasury fund to the HTF as a result of the HTF’s funding shortfalls.\(^{21}\)

14. Id.
15. Id.
20. Id. at 5.
21. The Highway Trust Fund Explained, supra note 16.
Jobs Act transferred $118 billion to the HTF, but these funds are estimated to only cover the HTF’s shortfalls through 2026.\textsuperscript{22}

There are three main reasons behind the HTF’s shortfalls: increasing inflation, rising fuel efficiency, and the growing prevalence of alternative fuel sources.\textsuperscript{23} Despite these factors, Congress has not raised the federal gasoline tax.\textsuperscript{24} Because of inflation, the tax has lost approximately one-third of its purchasing power since its last raise.\textsuperscript{25} Vehicles have become significantly more fuel efficient over the last 20 years, with fuel efficiency having risen from approximately 20 miles per gallon in 2000 to 25.4 miles per gallon in 2020.\textsuperscript{26} With the steady increase in fuel efficiency, tax revenues correspondingly decrease per mile driven because drivers purchase less fuel per mile driven. Additionally, electric and hybrid vehicles have become more prevalent, which further exacerbates the issue.\textsuperscript{27} While these vehicles currently hold a small portion of the automobile market, sales of electric and hybrid vehicles continue to rise.\textsuperscript{28}

\textbf{B. Louisiana Gasoline Tax}

Funding shortfalls are not limited to only the federal HTF. The Louisiana Transportation Trust Fund (TTF) provides the majority of funding for road and bridge construction and maintenance in Louisiana.\textsuperscript{29} Louisiana established the TTF on January 1, 1990.\textsuperscript{30} The TTF consists of revenues from state gasoline taxes, receipts from the Federal Highway Trust Fund vehicle license taxes, aviation fuel sales taxes, miscellaneous fees and fines, and interest earnings.\textsuperscript{31} Of all the states, Louisiana relies

\begin{thebibliography}{99}
\item 23. \textit{Id.}
\item 24. \textit{Id.}
\item 25. \textit{Id.}
\item 27. \textit{Id.}
\item 28. \textit{Id.}
\item 29. WAGUESPACK ET AL., \textit{supra} note 5.
\item 30. \textit{Id.}
\item 31. \textit{Id.}
\end{thebibliography}
most on the gasoline tax to fund its road maintenance, with over 70% of
the TTF’s state funding coming from the gasoline tax.\footnote{Steve E. Morello, \textit{The Future of Transportation Funding}, PURDUE RD. SCH. (Mar. 16, 2022), https://docs.lib.purdue.edu/cgi/viewcontent.cgi?article=4522&context=roadschool [https://perma.cc/7HH2-3LMK].} Despite
Louisiana’s heavy reliance on the gasoline tax, Louisiana holds the longest
standing and unchanged gasoline tax rate since its implementation in

The Louisiana Legislative Auditor performed an audit in 1992 to
evaluate the sufficiency of the TTF.\footnote{Id.} This audit determined that just two
years after its enactment, the TTF was already unable to cover the costs
associated with Louisiana’s road construction and maintenance needs.\footnote{Id. at 4.}
Since then, the TTF remains an insufficient source to fund Louisiana’s
road systems because its main source of revenue—the gasoline tax—has
remained static since 1990.\footnote{Id.}

The increased fuel efficiency of vehicles further contributes to the
shortfalls in the TTF’s revenue.\footnote{Nehiba, supra note 33, at 5.}
Since the gasoline tax’s implementation
in 1990, Louisiana’s per-mile gasoline tax revenues have fallen by half
when considering both the increased fuel efficiency and inflation.\footnote{WAGUESPACK ET AL., supra note 5, at 5.}
The increase in fuel efficiency and prevalence of electric vehicles is expected
to make the problem worse, causing an expected $563.6 million decrease
in Louisiana’s gasoline tax revenues from 2023 to 2032—assuming
electric vehicles account for 30% of the new vehicles sold in Louisiana

\textbf{C. Louisiana Roads}

Overall, Louisiana ranks 35th in terms of overall highway efficiency
State’s pavement quality and the number of structurally deficient

\begin{itemize}
  \item[32.] Steve E. Morello, \textit{The Future of Transportation Funding}, PURDUE RD. SCH. (Mar. 16, 2022), https://docs.lib.purdue.edu/cgi/viewcontent.cgi?article=4522&context=roadschool [https://perma.cc/7HH2-3LMK].
  \item[34.] WAGUESPACK ET AL., supra note 5.
  \item[35.] Id.
  \item[36.] Id. at 4.
  \item[37.] Id.
  \item[38.] Nehiba, supra note 33, at 5.
  \item[39.] WAGUESPACK ET AL., supra note 5, at 5.
\end{itemize}
bridges. In comparison to neighboring states, Louisiana “has twice as much urban Interstate pavement in poor condition as Arkansas and four times as much as Mississippi.” Louisiana ranks 49th in urban interstate pavement condition and 43rd in rural interstate pavement condition.

“It is estimated that roadway features are likely a contributing factor in around one-third of all fatal traffic crashes.” Louisiana’s poor roads have cost Louisiana residents billions of dollars since 2019. Traffic congestion alone costs Louisiana drivers an estimated $3 billion per year in the form of lost time and wasted fuel. In Louisiana’s urban cities, such as Baton Rouge and New Orleans, the average driver wastes around 26 gallons of fuel per year and loses as many as 60 hours sitting in traffic. These costs are not limited to Louisiana residents. The State of Louisiana also loses significant amounts of money when sued as a result of its poor road conditions; in 2018, Louisiana paid over $42 million to “clear the slate of 110 final outstanding lawsuit judgments” against it resulting from wrecks in Louisiana.

From 2015 to 2019, approximately 3,738 people died from car crashes in Louisiana—an average of 748 deaths per year from car crashes alone. In 2019, Louisiana held the 8th highest vehicular fatality rate in the

41. Id.
42. Id.
43. Id.
44. Modernizing Our Roads and Bridges: The Problem with Transportation Funding in Louisiana, supra note 1.
45. Id.
47. Id.
48. Id.
50. Modernizing Our Roads and Bridges: The Problem with Transportation Funding in Louisiana, supra note 1.
nation. In 2021, this number increased to 997. Among the states, Louisiana ranks 43rd in highway fatality rates. It is imperative for the health and safety of all those that use Louisiana’s roads that Louisiana fixes and properly maintains its roads to prevent future wrecks from occurring and make Louisiana a safer place to live.

D. History of Electric Vehicles

Many people believe the electric vehicle to be a new invention; however, the first design was actually developed in the 1800s. While it is hard to pinpoint the inventor of the electric car and the exact timing of its conception, the first invention of practical electric cars is attributed to French and English inventors in the second half of the 1800s. The first ever successful electric car introduced to the United States market made its debut around 1890. Electric vehicles actually gained some popularity in the late 1800s in the United States, until Henry Ford produced the Model T. The Model T was a gasoline-powered vehicle offered for only $650, as opposed to the electric competitors that sold for $1,750. The Model T, in combination with the invention of the electric starter, quickly led to the decline in popularity of the electric vehicles. By 1935, the electric car essentially disappeared.

51. LOUISIANA TRANSPORTATION BY THE NUMBERS: MEETING THE STATE’S NEEDS FOR SAFE, SMOOTH AND EFFICIENT MOBILITY, supra note 46.
55. Id.
56. Id.
57. Id.
58. Id.
59. The electric starter, invented by Charles Kettering, allowed gasoline powered vehicles to be started with a simple turn of a key rather than being started by a hand crank, which was seen as a major downside to gasoline powered vehicles; Id.
60. Id.
Interest in electric vehicles in the United States resurfaced in the 1960s and 1970s as a result of gasoline shortages and rising oil prices. In response, Congress passed the Electric and Hybrid Vehicle Research, Development and Demonstration Act of 1976. This Act authorized “the Energy Department to help support research and development in electric and hybrid vehicles.” Many vehicle manufacturers also began looking into gasoline alternatives around this time. General Motors developed an electric car, which it debuted at an Environmental Protection Agency Symposium in 1973. American Motor Company manufactured electric Jeeps for the United States Postal Service, which were used in a test program in 1975. However, the electric vehicles produced during this time came with many issues, such as a low maximum speed of 45 miles per hour and only a 40-mile range; accordingly, they failed to attain any market share at that time.

Interest renewed again in the 1990s as new federal and state regulations, such as California’s emissions regulations, began to pass. During this time, General Motors developed the EV1, an electric vehicle with an 80-mile range and the ability to accelerate from 0 to 50 miles per hour in seven seconds. However, the costs to produce this vehicle were high, which prevented the EV1’s ability to be available to the public for purchase. General Motors ultimately discontinued the EV1 in 2001.

In the early 2000s, two events spurred a significant shift. The first occurred in 2000 when the Toyota Prius became available worldwide. The Prius enjoyed significant success, bolstered in part by celebrity support. The second event occurred in 2006—the founding of Tesla. Tesla announced it would produce a luxury electric vehicle with a range of up to 200 miles, which had not yet been seen. In 2010, the Department
of Energy loaned Tesla $465 million to set up a Tesla facility in California. Since then, Tesla has proven very successful, spurring other automobile manufacturers to produce electric vehicles. The popularity of electric vehicles is only expected to grow; some (people/analysts) even forecast electric vehicles will make up 30% of all new vehicle sales by 2030.

Not only are more hybrid and electric vehicles being introduced to the market, but gasoline-powered vehicles are also becoming more efficient. In 2000, the average fuel efficiency was approximately 20 miles per gallon. By 2020, this average fuel efficiency was 25.4 miles per gallon. In 2021, the sedan/wagon category of vehicles rose to an average of 31.7 miles per gallon. Every vehicle type, except for the pickup truck, has more than doubled in fuel efficiency since 1975.

Naturally, all of the technological improvements in automobiles result in people using less gasoline to fuel their vehicles. While positive for reducing carbon emissions, this presents an issue with revenue sources for transportation funding since the vast majority of funding for the United States’s roads, at the federal and state level, comes from a gasoline tax.

While some estimate electric cars in Louisiana may not become prevalent very quickly, this is not necessarily the case in the rest of the country. For example, California implemented a regulation prohibiting the production of new gasoline-powered vehicles by 2035. If the rest of

77. Id.
78. Id.
81. Id.
82. Id.
84. Id.
85. Waguespack, et. al., supra note 5.
the country becomes less reliant on gasoline, this will result in fewer gasoline purchases by people driving through Louisiana.

E. Climate Change in Louisiana.

There is another important backdrop to consider: climate change. As a coastal state, Louisiana residents remain aware of the threat of hurricanes. In August 2021, Hurricane Ida ravaged much of southeast Louisiana, leaving thousands of individuals without power for extended periods of time. Hurricane Ida killed 26 Louisiana residents, nine of which resulted from excessive heat exposure due to the extended power outages. One distinguishing feature of Hurricane Ida is how quickly it formed from a small blip on the radar to a category four hurricane within the span of three days, giving Louisiana residents little time to prepare. Studies suggest climate change has caused this type of rapid intensification of hurricanes to become more common. Four hurricanes in the last five years that struck the United States have been characterized by this rapid intensification, two of which—Hurricanes Laura and Delta—struck Louisiana.

Hurricanes cause billions of dollars in damages in Louisiana. Hurricane Katrina—potentially the worst natural disaster in the history of the United States—killed an estimated 1,392 people. Overall, Hurricane

89. Id.
90. Gibbens, supra note 8.
91. Id.
92. Id.
Katrina caused approximately $190 billion in damages across the United States.\textsuperscript{95}

Climate change is also expected to significantly impact Louisiana’s agricultural production.\textsuperscript{96} The rising temperatures are likely to reduce rice and corn production in Louisiana—two of the crops Louisiana produces the most.\textsuperscript{97} Further, rising sea levels constantly threaten Louisiana’s coastline.\textsuperscript{98} Louisiana’s coastline was created by sedimentary deposits from the mouth of the Mississippi River.\textsuperscript{99} Because this sediment compacts over time, the land sinks approximately one inch every three years.\textsuperscript{100} Typically, the river would overflow its banks and deposit new sediment, but human activity now prevents that from happening.\textsuperscript{101} Because of this, Louisiana loses approximately 25 square miles of land each year.\textsuperscript{102} Rising sea levels, as a result of climate change, will only exacerbate this issue.\textsuperscript{103} Because of climate change’s effects on the state, Louisiana must incentivize environmentally friendly practices in Louisiana residents, which requires careful analysis and balancing of interests, considering Louisiana’s current main source of revenue funding its roads.

\textit{F. Current Methods to Address Road Funding Deficit}

The interaction between Louisiana’s loss in revenue for road maintenance and development, the growing popularity of hybrid and electric vehicles, and the ever-looming threat of climate change presents a difficult question: how can Louisiana generate more revenue for road funding and maintenance without disincentivizing environmentally friendly purchases, such as purchases of hybrid and electric vehicles? A sufficient solution would ensure taxpayers pay their fair share towards road maintenance and development based on their proportionate use of the roads while simultaneously generating enough revenue to properly maintain Louisiana’s roads.

The federal government has not yet passed legislation to account for the HTF’s shortfalls, but the federal government helped promote and fund

\begin{itemize}
\item \textsuperscript{95} \textit{Id.}\textsuperscript{,}\textsuperscript{\textit{What Climate Change Means for Louisiana, supra note 9.}}
\item \textsuperscript{96} \textit{Id.}\textsuperscript{,}\textsuperscript{\textit{Id.}}
\item \textsuperscript{97} \textit{Id.}\textsuperscript{,}\textsuperscript{\textit{Id.}}
\item \textsuperscript{98} \textit{Id.}\textsuperscript{,}\textsuperscript{\textit{Id.}}
\item \textsuperscript{99} \textit{Id.}\textsuperscript{,}\textsuperscript{\textit{Id.}}
\item \textsuperscript{100} \textit{Id.}\textsuperscript{,}\textsuperscript{\textit{Id.}}
\item \textsuperscript{101} \textit{Id.}\textsuperscript{,}\textsuperscript{\textit{Id.}}
\item \textsuperscript{102} \textit{Id.}\textsuperscript{,}\textsuperscript{\textit{Id.}}
\item \textsuperscript{103} \textit{Id.}\textsuperscript{,}\textsuperscript{\textit{Id.}}
\end{itemize}
the use of a “Vehicle Miles Traveled” (VMT) based fee.\textsuperscript{104} A VMT fee taxes the number of miles a vehicle travels within a specific state.\textsuperscript{105} This method presents a fairer solution because it charges the driver based on the amount the driver uses the roads; so, drivers, in theory, would pay their equal share of the road maintenance. As of 2022 the federal government gave grants to California, Delaware, Hawaii, Kansas, Minnesota, Missouri, New Hampshire, Ohio, Oregon, Texas, Utah, Washington, and Wyoming, allowing these states to explore these alternate funding methods to the gasoline tax.\textsuperscript{106} In 2022, eight states considered bills to either change existing VMT tax systems or implement pilot programs establishing this type of tax.\textsuperscript{107}

Oregon was the first state to implement a VMT tax.\textsuperscript{108} Oregon’s Senate established “OReGO,” Oregon’s VMT system, in 2013, and officially launched it in July of 2015.\textsuperscript{109} As of now, this program only runs voluntarily.\textsuperscript{110} Under OReGO, participating drivers can receive a credit for any gasoline taxes they pay.\textsuperscript{111} Oregon administers part of the program “through private sector account managers.”\textsuperscript{112} These account managers enroll people in the program, collect mileage and fuel consumption data, provide volunteer support, and remit mileage data to the Oregon

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{106} State Road Usage Charge Toolkit, supra note 104.
\item \textsuperscript{107} Elaine S. Povich, States Consider Mileage Tax as Nation Shifts Towards EVs, GOVERNING: THE FUTURE OF STATES & LOCALITIES (Oct. 11, 2022), https://www.governing.com/finance/states-consider-mileage-tax-as-nation-shifts-towards-evs [https://perma.cc/7BRG-PJGH]. The eight states that considered these bills are Hawaii, Massachusetts, Minnesota, Tennessee, Utah, Vermont, Virginia and Washington.
\item \textsuperscript{108} OREGON’S ROAD USAGE CHARGE: THE OREGO PROGRAM FINAL REPORT (Or. Dep’t of Trans. 2017), https://www.oregon.gov/odot/Programs/RUF/IP-Road%20Usage%20Evaluation%20Book%20WEB_4-26.pdf [https://perma.cc/YC2N-325H].
\item \textsuperscript{109} Id.
\item \textsuperscript{111} Id.
\item \textsuperscript{112} OREGON’S ROAD USAGE CHARGE: THE OREGO PROGRAM FINAL REPORT, supra note 108.
\end{itemize}
\end{footnotesize}
Department of Transportation (ODOT).\textsuperscript{113} OReGO consists of two types of account managers: ODOT Account Managers (OAM) and Commercial Account Managers (CAM).\textsuperscript{114} The OAMs are government-managed systems that do not use location technology in their administration.\textsuperscript{115} The CAMs are privately managed accounts that utilize GPS tracking to more accurately determine the amount of miles driven within Oregon.\textsuperscript{116}

There are two different types of VMT taxes, both of which OReGO implements.\textsuperscript{117} One is a simple approach, wherein a driver is taxed per mile, determined by the weight of the vehicle and calculated by looking at the vehicle’s odometer.\textsuperscript{118} This is the OAM option in OReGO, which can be done either at a yearly inspection or by an electronic transfer of information sent by the vehicle to a central computer.\textsuperscript{119} The second type of VMT tax uses a GPS tracker placed in the vehicle to determine what state a vehicle is in and whether that vehicle is on a public road.\textsuperscript{120} This is the CAM option in OReGO.\textsuperscript{121}

While some states implemented a VMT tax with some success, it has been unsuccessful in others, including Minnesota and Vermont.\textsuperscript{122} However, these two programs were intended to assess a mileage-based fee on electric vehicles only.\textsuperscript{123}

There are four states—Iowa, Kentucky, Oklahoma, and Pennsylvania—attempting to generate revenue lost from the gasoline tax by taxing the public charging stations for electric and hybrid vehicles.\textsuperscript{124} Thirty other states, including Louisiana, opted to enact another type of road usage fee that charges a flat rate on all electric and hybrid vehicles.\textsuperscript{125} The Louisiana Legislature passed House Bill 1031, which enacted Louisiana R.S. § 32:461, effective January 1, 2023.\textsuperscript{126} This statute assesses a road usage fee in the amount of $110 per year on all electric vehicles and

\begin{itemize}
\item \textsuperscript{113} Id.
\item \textsuperscript{114} Id.
\item \textsuperscript{115} Id.
\item \textsuperscript{116} Id.
\item \textsuperscript{117} Id.
\item \textsuperscript{118} Id.
\item \textsuperscript{119} Id.
\item \textsuperscript{120} Id.
\item \textsuperscript{121} Id.
\item \textsuperscript{122} Povich, supra note 107.
\item \textsuperscript{123} Id.
\item \textsuperscript{124} Id.
\item \textsuperscript{125} Igleheart, supra note 10.
\item \textsuperscript{126} H.B. 1031, 2022 Leg., Reg. Sess. (La. 2022).
\end{itemize}
$60 per year on all hybrid vehicles.\textsuperscript{127} Seventy percent of this fee’s revenue is distributed to the Department of Transportation and Development (DOTD) for road and bridge preservation projects.\textsuperscript{128} The remaining 30% is distributed to the Parish Transportation Fund.\textsuperscript{129}

States implement a myriad of different strategies to address a lack of funding for road maintenance. The next section analyzes the benefits, downfalls, and overall adequacy of many of these strategies utilized across the United States.

II. ANALYSIS

From an economic perspective, the gasoline tax is considered an efficient tax because individuals are, in theory, taxed in proportion to the wear and tear their vehicle causes on the road.\textsuperscript{130} The logic is that “gasoline usage can be reasonably correlated to the weight of vehicles and the mileage they travel.”\textsuperscript{131} Heavier vehicles cause more wear on the roads but are generally less fuel efficient.\textsuperscript{132} So, the driver of a heavier vehicle pays more in a gasoline tax per mile driven to make up for their heavier use of the roads.\textsuperscript{133} Further, the gasoline tax taxes out-of-state drivers using Louisiana’s roads when out-of-state drivers purchase gasoline within Louisiana. However, a combination of inflation, increased fuel efficiency, and the growing prevalence of electric and hybrid vehicles makes the gasoline tax in Louisiana an insufficient option for covering costs to maintain and fix Louisiana’s roads.

Louisiana’s road usage fee system does have some merit to it. First, the amounts that the Louisiana Legislature assesses on electric and hybrid vehicles are close to the difference, on average, that the driver saves by not paying as much in the gasoline tax.\textsuperscript{134} The average Louisiana driver drove approximately 14,951 miles in 2019.\textsuperscript{135} For a gasoline-powered car

\textsuperscript{127} Id.
\textsuperscript{128} Id.
\textsuperscript{129} Id.
\textsuperscript{130} Williams, supra note 17.
\textsuperscript{131} Id.
\textsuperscript{132} Id.
\textsuperscript{133} Id.
\textsuperscript{135} See id. This figure was obtained by dividing the total miles traveled in Louisiana found in table 5.4.1. by the number of registered drivers in Louisiana found in table 6.2.2.
that gets 25 miles per gallon, the driver would purchase 598.04 gallons of gasoline per year, which equates to $119.61 paid in gasoline taxes.\(^{136}\) If another driver drives a standard 2019 Toyota Prius, which gets on average 52 miles per gallon, that driver would purchase 287.52 gallons of gasoline for the year, equating to $57.50 paid in the gasoline tax.\(^{137}\) This means that the driver of the hybrid vehicle spends $62.11 less than the gasoline-powered vehicle driver on gasoline taxes. This is very close to the $60 road usage fee assessed on hybrid vehicle drivers by Louisiana.\(^{138}\) Further, the electric vehicle driver pays $0 in the gasoline tax, so the electric vehicle driver’s savings would be equal to the amount of the gasoline tax paid by the driver of the gasoline powered vehicle—$119.61. This number, again, is very close to the $110 road usage fee assessed on electric vehicle owners.\(^{139}\) When considering the average number of miles driven by Louisiana drivers, the amounts assessed are fairly accurate.

Louisiana’s road usage fees are also expected to make up for the loss in revenue for the future increase in hybrid and electric vehicles.\(^{140}\) However, this assumes that electric vehicles will make up only 30% of the automotive market by the year 2030.\(^{141}\) If electric and hybrid vehicles comprise more than 30% of the automotive market by that point, then this may not be the case.

While Louisiana’s current system of road usage fees has benefits, it also falls short in many ways. First, it fails to cover the full deficit expected; even with the newly implemented road usage fees, Louisiana still expects a budget shortfall of $322.9 million by the year 2032.\(^{142}\) Simply put, Louisiana needs to implement legislation that produces more revenue.

Second, Louisiana’s current solution will unfairly double charge many drivers by forcing them to pay both a gasoline tax and a road usage fee. For example, the fuel efficiency of the hybrid Toyota Highlander is 36 miles per gallon,\(^{143}\) whereas the Mitsubishi Mirage, a fully gasoline-

\(^{136}\) This figure was obtained by multiplying the average miles driven by the Louisiana gasoline tax rate, which is $0.20 cents per gallon. Nhiba, \textit{supra} note 33.


\(^{139}\) Id.

\(^{140}\) WAGUESPACK ET. AL., \textit{supra} note 5.

\(^{141}\) Id.

\(^{142}\) Id.

powered vehicle, has a fuel efficiency of 39 miles per gallon.\textsuperscript{144} Under Louisiana’s current solution, the hybrid Toyota Highlander owner pays more in gasoline tax than the Mitsubishi Mirage owner, but the Highlander owner also pays a road usage fee. This type of double charging unevenly distributes the burden of paying for the roads among drivers. These situations must be avoided when navigating solutions to this issue.

Third, road usage fees for hybrid and electric vehicles may disincentivize purchases of such vehicles. Louisiana lags behind other states in terms of purchasing rates of hybrid and electric vehicles in the country.\textsuperscript{145} The current Louisiana legislation may slow this transition by making it more expensive for consumers to purchase hybrid or electric vehicles. While currently small, the road usage fees will likely increase at some point in order to produce enough revenue.\textsuperscript{146} Therefore, in the long run, it is likely these road usage fees will disincentivize electric and hybrid vehicle purchases by Louisiana consumers. As previously addressed, Louisiana is exposed to disastrous effects of climate change.\textsuperscript{147} Therefore, Louisiana must abstain from passing legislation disincentivizing environmentally friendly purchases; Louisiana’s current solution does just that.

Further, the Louisiana Legislature’s solution does not account for some drivers using the road more than others. While the current road usage fees assessed on hybrid and electric vehicle owners are accurate when holding constant the number of miles driven per year, it is unreasonable to assume every driver in Louisiana drives the same mileage each year. Louisiana’s current solution fails to account for this variation in miles driven.\textsuperscript{148} Thus, a Louisiana driver who drives 20,000 miles per year would be charged the exact same as a driver who only drives 10,000 miles per year, despite the driver who drove 20,000 miles per year causing double the wear and tear on the roads.

Lastly, the road usage fee established in House Bill 1031 only accounts for drivers with vehicles registered in Louisiana.\textsuperscript{149} However, Louisiana has two major interstates: Interstate 10 and Interstate 20.\textsuperscript{150} The presence of these major interstates in Louisiana results in many out-of-

\begin{itemize}
\item \textsuperscript{145} Morello, supra note 32.
\item \textsuperscript{146} \textit{WAGUESPACK ET. AL.}, supra note 5.
\item \textsuperscript{147} \textit{What Climate Change Means for Louisiana}, supra note 9.
\item \textsuperscript{148} H.B. 1031, 2022 Leg., Reg. Sess. (La. 2022).
\item \textsuperscript{149} Id.
\item \textsuperscript{150} \textit{Louisiana Road Map}, LA. MAP, https://www.louisiana-map.org/road-map.htm [https://perma.cc/PV2F-UZCW] (last visited Jan. 25, 2024).
\end{itemize}
state electric and hybrid vehicles on Louisiana’s roads not paying the road usage fee. Further, many universities in Louisiana attract out-of-state individuals who use the roads, with vehicles unlikely registered in Louisiana. These out-of-state drivers cause wear and tear on Louisiana’s roads, but Louisiana’s current solution does not account for these out-of-state drivers driving hybrid and electric vehicles. Louisiana needs to implement legislation that accounts for these out-of-state drivers as much as possible.

III. POTENTIAL SOLUTIONS

This section sets forth solutions analyzed in the context of Louisiana, accompanied with a discussion of the pros and cons for each potential solution. Overall, this section analyzes five potential solutions: increasing the gasoline tax, establishing a road usage fee for all vehicles, implementing toll roads, implementing a VMT tax system, and taxing electricity.

A. Increasing the Gasoline Tax

Increasing the gasoline tax in Louisiana and linking it to inflation—so that the purchasing power of the gasoline tax does not erode over time—may provide a fiscally sufficient, but short-term solution. While it would raise more revenue for state road funding, it would also make gas prices more expensive, thereby pushing consumers away from gasoline-dependent vehicles and towards more fuel-efficient vehicles—i.e., hybrid and electric vehicles. However, in the long run, this solution may result in lower income individuals shouldering more of the gasoline tax for one main reason: the high costs of electric and hybrid technology. The purchase price of hybrid vehicles was approximately $7,411 more than a gasoline-powered compact car in April of 2021. Electric vehicles are even more expensive than that, with an average sticker price of $51,532 for an electric vehicle in April of 2021—$28,734 more than the cost of a gasoline-powered compact car. While this premium is often considered offset by gasoline savings, the upfront costs present a barrier for lower
income individuals to purchase these electric vehicles. Whereas higher income individuals would be able to purchase electric vehicles and avoid high gasoline prices, lower income individuals may be stuck with higher gasoline prices and no practicable means to avoid them.

B. Road Usage Fees for All Vehicles

Another potential solution is to establish a road usage fee for all vehicles, not just electric vehicles. This road usage fee could be based on the weight and fuel efficiency of the vehicle to ensure each individual pays their fair share of the tax. Since this road usage fee would apply to all vehicles, it would not disincentivize the purchase of electric and hybrid vehicles because each taxpayer would pay for their proportionate share of road maintenance based on their vehicle’s weight and fuel efficiency.

This solution, however, contains several limits. For example, it does not account for out-of-state drivers. Further, this solution fails to account for those who drive more than others. It would be unfair for a person who drives 30,000 miles per year to pay the same amount as a person who drives 5,000 miles per year.

This issue also does not account for individuals buying gasoline and, thereby, paying the gasoline tax. While this may incentivize consumers to purchase electric and hybrid vehicles to avoid the costs of gasoline, the issue of lower income individuals being perpetually double-charged and unable to purchase these vehicles still exists.

C. Toll Roads

Establishing toll roads in Louisiana presents a viable solution. Among the public, the implementation of toll roads is more popular than raising the gasoline tax, with 46% of people willing to pay a toll and only 27% of people supporting an increase in the gasoline tax.154 Toll roads used to be unpopular because many believed tolls slow traffic and cause congestion.155 However, with new technology, states like Colorado, Florida, Texas, and Virginia have implemented all-electric tolling that does not slow down traffic at all.156 The implementation of the toll roads

155. Id.
156. Id.
can be achieved through a “long-term public-private partnership ([P3]), in which DOTD selects a private entity to implement the toll road.”

However, current Louisiana law prevents P3 projects from establishing toll roads on any “existing free road or system of roads, bridge, tunnel, or overpass unless such road or system of roads, bridge, tunnel or overpass is improved or expanded.” This makes the process more expensive because establishing a toll road requires improving or adding to an existing road.

There are some opponents of permitting toll roads in Louisiana. Recently, Louisiana Representative Les Farnum pushed to remove the “unless such road or system of roads, bridge, tunnel or overpass is improved or expanded” language from Louisiana Revised Statutes section 48:2084.5(A), which is the current method through which any toll roads are established in Louisiana. Farnum’s reasoning for removing this language from the statute stems from current ideas considering establishing a toll road on Interstate 10. Farnum reasons that people can currently drive from San Diego, California to Jacksonville, Florida without hitting a toll, and he does not want Louisiana to be the first state to add a toll to Interstate 10. Farnum says “[it’s] just not a good message.” However, this concern regarding other states’ perception of Louisiana is minimal compared to the concern of Louisiana’s inability to repair and maintain its roads. Fortunately for now, the committee voted to defer the decision of whether to enact Farnum’s bill. If implemented, a toll road would properly balance many of the concerns that the Louisiana Legislature needs to address. A toll road would not disincentivize the purchase of hybrid and electric vehicles, because it does not discriminate between electric, hybrid, or gasoline powered vehicles. It would charge everyone the same based on how much they drove on a specific road. Adding a toll road would also allow Louisiana to charge out-of-state drivers for their use of Louisiana’s roads, whereas

157. Id.
159. Id.
162. Id.
163. Id.
164. Id.
some types of road usage fee would not achieve the same goal. However, adding a toll to every road in Louisiana is unreasonable, thus, toll roads alone would unlikely sufficiently solve Louisiana’s funding crisis—especially since implementing toll roads is costly. Further, with the Louisiana Legislature’s current resistance towards establishing toll roads, the future of Louisiana’s ability to set up tolls is in question. Accordingly, the chances of Louisiana seeing toll roads any time soon are slim.

D. Vehicle Miles Traveled (VMT) tax

Louisiana could also implement a VMT tax similar to Oregon. A VMT tax, in theory, would tax individuals evenly based on the amount of wear and tear their vehicle causes to the roads by considering both the miles traveled on the roads and the weight of the vehicle. Louisiana’s current solution, set forth in House Bill 1031, taxes all electric and hybrid vehicles the same regardless of the vehicle’s mileage and weight. Further, a VMT tax would not disincentivize the purchase of electric and hybrid vehicles because it would be assessed regardless of what powers the vehicle.

Louisiana could implement a system similar to the OAM system in Oregon, whereby the driver reports their yearly mileage through odometer readings and gets taxed based on that number. This version of the VMT tax comes with the benefit of very few privacy concerns associated with the GPS tracker used by Oregon’s CAM system.

However, the simple version of the VMT tax still brings concerns. A simple VMT tax does not differentiate between the vehicles traveled within a specific state—just the number of miles traveled by a specific vehicle. So, if Louisiana implemented a simple VMT tax, like the OAM in Oregon, a driver taking a month-long road trip across the United States with a Louisiana registered vehicle would be taxed for every mile driven across the United States. All of that tax goes to Louisiana, even though many of those miles were driven outside Louisiana. This simple VMT tax also taxes drivers on miles driven on private property that Louisiana does not maintain—not just Louisiana’s public roads. In these scenarios, this

165. Id.
166. Vehicle-Miles Traveled (VMT) Fees, supra note 105.
168. OREGON’S ROAD USAGE CHARGE: THE OReGO PROGRAM FINAL REPORT, supra note 108, at 23.
169. Id.
solution is not equitable, so this type of VMT tax is likely insufficient on its own.

Instead, Louisiana could implement a VMT tax similar to the OAM system in Oregon, wherein a GPS device determines the number of miles traveled within a certain state. This method accounts for many of the simple VMT tax’s shortcomings. It ensures people are not taxed for miles driven in another state because Louisiana could differentiate between miles driven in-state and miles driven out-of-state by utilizing the GPS tracker attached to the vehicle. This method also ensures people are not taxed for driving on private property, since the GPS system allows the state to determine how many miles were driven on the state’s public roads.

However, this second type of VMT tax raises constitutional concerns. Article 1 § 5 of the Louisiana Constitution provides that “[e]very person shall be secure in his person, property, communications, houses, papers, and effects against unreasonable searches, seizures, or invasions of privacy.” Louisiana courts, in interpreting this part of the Louisiana Constitution state that:

In ascertaining whether individuals have a reasonable expectation of privacy that is constitutionally protected, a court must determine not only whether the individual has an actual or subjective expectation of privacy, but whether that expectation is also of a type which society at large is prepared to recognize as being reasonable.

The determination of whether a person’s privacy interests have been infringed upon under the Louisiana Constitution is identical to the standard set forth under the Fourth Amendment of the United States’s Constitution. The United States Supreme Court previously held that the attachment of a GPS device to a vehicle and monitoring the vehicle’s movements over an extended period of time constitutes a “search” under the Fourth Amendment of the United States Constitution. The United States Supreme Court, in United States v. Jones, stated that a person does not have a reasonable expectation of privacy in their location on a public

171. OREGON’S ROAD USAGE CHARGE: THE OReGO PROGRAM FINAL REPORT, supra note 108.
172. LA. CONST. art. 1, § 5.
road because they can be seen while on the road. However, the Court still held that the attachment of a GPS to a person’s vehicle and monitoring the vehicle’s location for a period of four weeks is an unconstitutional search under the Fourth Amendment because the person was tracked on private property.

The same could be said for the second type of VMT tax. The GPS device can determine the vehicle’s location regardless of whether the vehicle is on private or public property, and it would be done in perpetuity. Therefore, it is likely that implementing this type of VMT tax on a non-voluntary basis is unconstitutional under the Louisiana Constitution and the Fourth Amendment of the United States Constitution. For this type of VMT tax to go into effect, the driver’s participation in such a program would likely need to be voluntary. Even if determined to be constitutional, the public remains highly concerned about privacy with this type of VMT tax, which presents a barrier to implementing this type of system in Louisiana.

E. Taxing Electricity

Louisiana could also levy a tax on the electricity used at public charging stations to charge electric vehicles in order to ensure that electric vehicle owners are paying their fair share of the road usage. This would operate similarly to the current gasoline tax on gasoline-powered vehicles, by ensuring electric vehicles contribute relative to the amount they use the roads. Most electric vehicle owners, however, charge their vehicle at home and not at a public charging station. Thus, this would not tax electric vehicle drivers at a rate proportionate to their road usage. However, adding these electric vehicle charging stations along major interstates through Louisiana and adding a tax to the charging pumps provides a viable method for taxing electric vehicle drivers passing through Louisiana and using its roads.

Taxing the electricity used to charge vehicles at home is also precarious because Louisiana would need to develop a method of

176. Id.
177. Id.
179. Povich, supra note 122.
differentiating between electricity used to charge the vehicle and electricity used to charge the home. Further, taxing the use of electricity directly to a consumer for “residential purposes” is currently prohibited in Louisiana, thus, taxing general electricity use in a home is not an option.181

IV. RECOMMENDATIONS

Louisiana needs to be concerned with one thing in the long-term when considering how to fund its roads: diversification. Louisiana must implement more revenue streams for its road funding. Linking the success of Louisiana roads to the success of the oil and gas industry no longer constitutes a wise choice with the uncertainty surrounding the future of the oil and gas industry.182

In the long-run, the Louisiana Legislature should take three different actions in order to properly balance these considerations: establish a VMT tax system similar to Oregon’s while phasing out the current road usage fee system; establish toll roads on major interstates to allow drivers to bypass major Louisiana cities; and raise the gasoline tax, linking it to inflation.

The first thing Louisiana should do is implement a VMT tax to replace its current fee system. The VMT tax will assess taxes on each vehicle, regardless of what powers the vehicle, so as to not disincentivize the purchase of electric or hybrid vehicles. The amount charged per mile should be based off of the weight of the vehicle to ensure that the amount of the tax paid is proportionate to the wear and tear caused on Louisiana’s roads. Like with Oregon’s VMT system, Louisiana residents who participate in the program but still pay for gasoline should qualify for tax credit(s) for any gasoline tax they pay. While privacy concerns may accompany this solution, the option to report odometer readings rather than utilize the GPS system circumvents this issue. Making this program voluntary and giving residents the option to report odometer readings rather than utilize GPS technology also circumvents constitutional issues.

Louisiana should also establish toll roads along Interstate 10 and Interstate 20 that would circumvent major cities. The major cities the toll roads should include are Shreveport and Monroe along Interstate 20 and Lake Charles and Baton Rouge along Interstate 10. These toll roads would


provide a revenue stream from mostly out-of-state drivers passing through Louisiana, ensuring that out-of-state drivers are taxed relative to their use of Louisiana’s roads. These toll roads would also reduce congestion in these major Louisiana cities, thereby reducing accidents and making the roads in Louisiana safer. To finance the initial costs of these toll roads, Louisiana should partner with a private entity to bear the majority of initial costs, with a plan to pay back the entity through the toll road revenues.

Louisiana should also increase the gasoline tax and link it to inflation. Increasing and linking the gasoline tax to inflation will effectively assess a tax on drivers whose vehicles are not registered in Louisiana but still use Louisiana’s roads, as is the case with many out-of-state college students. This will levy a tax on any Louisiana residents electing not to enroll in the VMT tax program.

While there still is the issue of burdening lower income residents with a higher gasoline tax without being able to afford a hybrid or electric vehicle, implementation of a VMT system that offers a credit for any gasoline taxes paid gives lower income residents a way to avoid higher gasoline prices. If a Louisiana resident wants to avoid the higher gasoline tax, but cannot afford an electric or hybrid vehicle, the resident has the option of enrolling in the VMT system and receiving a tax credit for any gasoline tax paid.

CONCLUSION

This Comment attempts to analyze the road and highway funding problems facing Louisiana while balancing concerns of equity for Louisiana’s citizens and climate change. The solution set forth in this Comment includes three steps: establish a VMT tax system, establish toll roads, and raise the gasoline tax while linking it to inflation. The combination of these solutions is equitable for Louisiana’s residents: it is careful not to disincentivize the purchase of electric and hybrid vehicles while carrying with it the potential to increase Louisiana’s funding for road and highway maintenance in a sustainable way, independent from the success of the oil and gas industry.

There really is no one simple solution to Louisiana’s highway funding problem. The roots of Louisiana’s shortfalls run deep, making one solution insufficient. There are also many roadblocks in implementing the recommendations set forth in this Comment. The Louisiana Legislature must find a way to diversify its funding sources for its roads. The success of Louisiana’s roads should be untethered to the success of the oil and gas industry. The gasoline tax is no longer viable, and, at least in Louisiana, it never has been. The Louisiana Legislature must balance the concerns
addressed in this Comment if Louisiana is to remain a competitive state in the national economy as well as a safe place to live and drive.