Three Strikes and You’re Out: Louisiana’s Alternative Fuel Usage Tax Credit Whiffs Tax Policy . . . Again

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INTRODUCTION

In 2009, the Louisiana Legislature—keeping up with the nation’s “green” movement—enacted Louisiana Revised Statute 47:6035, a refundable tax credit for conversion of vehicles to alternative fuel usage (CVAF).1 By enacting the CVAF, the legislature attempted to incentivize both individuals and corporations “to invest in qualified clean-burning motor vehicle fuel property,” with the goal of reducing.polluting emissions.2 What was initially meant as a boon for Louisiana citizens actually created an unintended loophole for certain vehicles, while costing Louisiana an estimated $200 million in revenue over the CVAF’s lifetime.3

Specifically, the problem was whether flex-fuel vehicles, those propelled by a blend of conventional and alternative fuels such as ethanol, qualify for the credit.4 By default, most flex-fuel vehicles have the ability to be propelled by gasoline or diesel.5 As a result, taxpayers could elect the credit for vehicles that may never actually employ alternative fuels, thus creating the possibility for a tax benefit without an investment in alternative fuels.6

In 2012, taxpayers petitioned the Louisiana Department of Revenue to clarify whether flex-fuel vehicles were eligible for the credit, resulting in a ruling—which has since been repealed—stating that flex-fuel vehicles did qualify, and further, that the CVAF creates a “rebuttable presumption” that any alternative fuel vehicle listed on the Louisiana Department of Energy’s website would qualify for the

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2. Id.
This ruling was met with cataclysmic opposition by Governor Bobby Jindal, which was directed at Louisiana’s then Secretary of the Department of Revenue. To resolve this obvious loophole, thus limiting Louisiana’s exposure to revenue loss, the executive branch issued its own ruling, which repealed the ruling by Department of Revenue and set forth a solution: The CVAF would only be available for flex-fuel vehicles with separate fuel storage and delivery systems for the alternative fuel and without the ability to be propelled by gasoline or diesel. Adhering to the executive branch’s scheme, the legislature amended the CVAF to exclude from the credit’s qualification vehicles that possess the capability to be propelled by both gasoline and an alternative fuel. The effect of the amendment was to restrict the scope of potential vehicles qualifying for the CVAF—and the population of taxpayers realistically eligible for qualifying for the credit—in such a way that the CVAF is now discordant with the reason for its enactment. This amendment was a knee-jerk reaction to a single problem, made without proper analysis of applicable law or policy.

There are numerous issues surrounding the amendment to Louisiana’s poorly enacted incentive device, particularly when a tax policy analysis is performed, which specifically identifies efficiency and equity issues. Additionally, Louisiana’s lack of alternative fueling stations is a disincentive to purchase cost-intensive alternative fuel vehicles, and the CVAF alone is insufficient as a counterbalance. Furthermore, realistic application indicates the CVAF’s regressive nature. Therefore, the CVAF’s amendment fails to correct its true problems, especially when considering the implications of tax policy.

By addressing the critical aspects of proper tax policy and formation, this comment argues that the CVAF is not viable as an incentive device to reduce polluting emissions because it is inequitable and inefficient. Layering the discussion of proper tax

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8. The controversy surrounding the CVAF eventually led to the resignation of the Secretary of the Department of Revenue only one day after Governor Jindal’s opposition. State’s revenue secretary abruptly resigns after rule on tax breaks rejected, THE TIMES-PICAYUNE (June 15, 2012), http://www.nola.com/politics /index.ssf/2012/06/states_revenue_secretary_abrup.html, archived at http://perma .cc/PX5E-EVAK.


policy with a comparison of how other jurisdictions have approached this issue, this comment blueprints how equity and efficiency within a tax scheme must factor into the development of a tax credit. This comment examines whether these types of tax credits are sensible, using Louisiana’s CVAF as an example.

Part I of this comment explains the background for current local and national policy regarding alternative energy sources and the reduction of polluting emissions. Then, Part II outlines Louisiana’s CVAF and its 2013 amendment. Part III presents a discussion of the tax policy behind the enactment of tax credits within a tax scheme, and Part IV of this comment compares different ways of instituting incentive devices to promote alternative fuel usage and discusses other options to accomplish the policy behind the CVAF. Part V of this comment discusses the equity implications of Louisiana’s current credit, while inquiring into the prudence of tax credits of this nature. Finally, Part VI offers an equitable solution to Louisiana’s Credit by applying ideas discussed throughout this comment.

I. BACKGROUND

Pollution is a global phenomenon; specifically, difficult issues exist regarding air pollution. The best remedy to combat pollution’s harmful effects on health, the environment, and property is widely debated. Domestically, the national policy of the United States is that pollution should be prevented, and if impossible to completely prevent, it should, at the very least, be reduced at the source. In stressing this policy, Congress further informs that pollution source reduction is essentially different than, and preferential to, the mere management and control of pollution. Preventing pollution at the outset affords vital economic and health benefits, among other things. Here, the adage of “an ounce of prevention is worth a pound of cure” is illustrative of the United States’ policy on pollution prevention—eliminate the source of

12. Forms of pollution include air, water, noise, land, radioactive, and thermal; however, this comment focuses on air pollution, specifically air pollution from vehicles.


14. See id.


pollution outright, if possible, rather than implementing procedures that only mitigate a source’s pollution—yet the real issue is discovering what type of prevention works best.

A. Effects of Air Pollution

The World Health Organization estimates that two million premature deaths are caused by air pollution annually.18 Each year in the United States alone, 50,000 to 100,000 deaths are attributed to air pollution.19 Air pollution harms humans by causing illnesses, which include cardiovascular and respiratory diseases, as well as many forms of cancer.20 The negative effects of air pollution can be seen through climate change and the reduction of the Earth’s ozone layer. Climate change, which can be attributed partially to air pollution,21 negatively impacts health. Higher global temperatures could increase summer deaths from heat waves and increase risks of drowning, disease, and hunger from flooding.22 Finally, ozone depletion, which can also be attributed to air pollution,23 allows increased amounts of ultra violet radiation through to the Earth’s surface, which significantly increases rates of skin cancer and could result in 300,000 new cases of skin cancer each year.24

18. “Air pollution, which is closely associated with urbanization and industrialization in developing countries, seriously impinges on the health of children and adults alike . . . For most children in the large cities of developing countries, breathing the air may be as harmful as smoking two packs of cigarettes a day.” DAVID HUNTER ET AL., INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 16 (4th ed. 2011) (quoting The World Bank, World Development Report 1999/2000 141 (2000)).
19. Id.
20. ALEXANDER GILLESPIE, LEGAL COMMENTARIES WITH POLICY AND SCIENCE CONSIDERATIONS, CLIMATE CHANGE, OZONE DEPLETION AND AIR POLLUTION 88 (2006). (The different forms of air pollution that cause injury are commonly referred to as carcinogens.).
21. See HUNTER, supra note 18, at 4.
22. See id.
23. Id. at 6. Like climate change, ozone layer depletion occurs from a higher concentration of pollutants, known as chlorofluorocarbons, existing in the stratosphere.
24. Id. at 6 (for example, rates of skin cancer may increase by two percent for every one percent loss in ozone coverage).
1. Transportation Sector Emissions

The Industrial Revolution’s improvement upon the engine created a limitless demand for energy. As demand for energy increased, polluting emissions created by the consumption of that energy increased. For example, the transportation sector consumes more than a quarter of commercially produced energy, and it is the fastest growing sector of CO2 emission production. Experts estimate that the transportation sector will account for over 30% of global greenhouse gas emissions by 2020. Remarkably, cars alone make up half of this sector’s total CO2 emissions.

Road transportation presents its own separate concern within the transportation sector due to massive increases in the world’s motor vehicle fleet. Currently, almost 40 million vehicles are produced annually, with estimates of nearly one billion vehicles by 2030. As the transportation sector increases, energy demand increases, which creates an endless cycle of producing polluting emissions—for these reasons, incentives like the CVAF are enacted in an attempt to contest the increasing amounts of vehicle pollution.

B. “Poverty is The Biggest Polluter”:

Reducing pollution and poverty while increasing alternative fuel usage are interdependent goals. The challenges of poverty may drive an environmentally unsustainable use of resources and can

25. Emissions of the transportation sector are created by cars, trucks, trains, boats, airplanes and any other types of vehicles engaging in the transportation of humans or things.
26. Gillespie, supra note 20, at 44.
27. Id.
28. Id. at 43.
29. Id.
30. Id. “The CO2 emissions from the United States transport[ation] alone sector amount to 5% of total global CO2 emissions.”
31. Id.
32. Gillespie, supra note 20, at 43.
33. Id. 40 million vehicles produced annually represents “more than one new car every second.”
35. Hunter, supra note 18, at 20.
result in pollution.\textsuperscript{36} For example, the poor cannot always afford the newest technology (which is presumably the least polluting), specifically alternative fuel vehicles, and must use older vehicles that produce much higher levels of polluting emissions. The inability to purchase results in the inability to qualify for the CVAF, which is only eligible for a taxpayer who purchases alternative fuel technology.\textsuperscript{37} The resulting effect is a total exclusion of a highly polluting subset of the population, which, according to the policy of the CVAF, one would presume that an effective credit would target. Moreover, many non-wealthy, but not impoverished, individuals cannot afford to spend their disposable income to reduce their pollution, which is especially true regarding high-cost products such as vehicles.\textsuperscript{38} The average cost of an alternative fuel vehicle is higher than its gasoline counterpart; however, the real issue is that the impoverished cannot afford new cars, period.\textsuperscript{39} In Louisiana, the average median household pre-tax income from 2009 to 2012 was $40,660, meaning that, on average, half of the state’s income producing drivers earn less than $40,000.\textsuperscript{40} Accordingly, new alternative fuel vehicles are likely out of contention for at least half of income producing drivers in Louisiana.

\textbf{C. The Push for Alternative Energy Investment}

The use of alternate energy sources, such as clean-burning alternative fuels, is one way to prevent pollution at its source.\textsuperscript{41} Congress has already instituted many incentives, such as federal tax credits,\textsuperscript{42} to encourage a variety of emission reduction practices

\textsuperscript{36} Id. “Environmental degradation, in turn, reduces the amount and quality of resources available, pushing the poor to use increasingly marginal resources and further perpetuating this destructive spiral.” Id.

\textsuperscript{37} See discussion infra Part V.A.


\textsuperscript{39} See id.


\textsuperscript{41} LA. REV. STAT. ANN. § 47:6035(B)(1) (2009) (amended 2013). Clean-burning alternative fuels have comparatively lower polluting emissions than gasoline or diesel.

in the transportation sector because that sector generates a high portion of polluting emissions. Many states have followed this trend by offering their own incentive devices; like, for example, Louisiana’s subsidy promoting alternative fuel usage.

However, legislation drawn to reduce air pollution through incentivizing investment in alternative energies through a tax credit will fail—miserably—without properly considering tax and public economic policy. As one scholar notes, “Because energy policy is made in a political setting, it rarely comports with principles of economic or public finance theory, and more often than not, energy tax policy may compound existing distortions, rather than correct them.”

II. LOUISIANA’S TAX CREDIT FOR ALTERNATIVE FUEL VEHICLES

Louisiana originally enacted a tax credit to promote alternative fuel usage in 1991. However, this credit was much less generous, only providing a credit for up to 20% of the cost to convert the vehicle to run on alternative fuels or, if the vehicle was purchased with the capability to be propelled by alternative fuels from the manufacturer, up to a $1,500 credit. By enacting the CVAF, Louisiana’s legislature reaffirmed its intent to encourage the use of alternative fuels as a means to reduce air pollution, while more than doubling the amount of the tax credit. The legislature chose to continue the use of a tax subsidy to incentivize the investment in and usage of clean-burning motor vehicle fuel property.

A. Mechanics of the CVAF

Both individual and corporate taxpayers are eligible to qualify for the CVAF credit, and the credit is allowed per vehicle to be elected against individual or corporate income tax liability. Before earning the CVAF credit, a taxpayer must initially invest in

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43. See Gillespie, supra note 20.
45. Hymel, supra note 42, at 67 (quoting Salvatore Lazzari, CRS Issue Brief for Congress: Energy Tax Policy, at CRS-3, 1 (2005)).
47. Id.
qualified clean-burning motor vehicle fuel property. Qualified property includes equipment necessary for vehicles to operate on alternative fuels, but categorically excludes equipment necessary for vehicles to operate on gasoline or diesel. When consumed to produce energy, alternative fuels result in emissions that are “comparably lower than emissions from gasoline or diesel and which meets or exceeds federal clean air standards.”

After qualified property has been purchased, the taxpayer is allowed a tax credit of 50% of the “cost of the qualified clean-burning motor vehicle property.” This investment in qualified property is determined based on the type of property purchased. The investment amount can be the cost of the purchase and installation of necessary equipment to modify a gasoline or diesel propelled vehicle into one propelled by an alternative fuel. Alternatively, the investment amount can be the cost of a new vehicle that is equipped to be propelled by an alternative fuel, but that amount is limited to the portion of the vehicle attributable to the propulsion of the alternative fuel. However, in situations where a taxpayer is unable to, or elects not to determine the exact cost that is attributable to such originally equipped property, a taxpayer may claim the lesser of ten percent of the total vehicle cost, or $3,000.

51. Id.
53. L A. REV. STAT. ANN. § 47:6035(B)(1) (2009) (amended 2013). Per the statute, alternative fuels “include[] but are not limited to compressed natural gas, liquefied natural gas, liquefied petroleum gas, biofuel, biodiesel, methanol, ethanol, and electricity.” Id. (emphasis added).
54. Id.
56. See L A. REV. STAT. ANN. § 47:6035(B)(2) (2009) (amended 2013). If possible, each taxpayer would necessarily choose the method of investment resulting in the highest credit amount. This allows the taxpayer to maximize the credit’s utility, which comports with the incentive nature of this subsidy.
57. L A. REV. STAT. ANN. § 47:6035(B)(2)(a) (2009) (amended 2013). This investment calculation method additionally requires that the qualified property and its installation be paid by the vehicle’s owner; the installation must be performed by a technician certified by the United States Environmental Protection Agency to perform such modifications, and that the motor vehicle to be modified must be registered in Louisiana.
58. L A. REV. STAT. ANN. § 47:6035(B)(2)(b) (2009) (amended 2013). Portions “attributable to the storage of the alternative fuel, the delivery of the alternative fuel to the engine of the motor vehicle, and the exhaust of gases from combustion of the alternative fuel [comprise the amount invested], provided the motor vehicle is registered in Louisiana.”
59. L A. REV. STAT. ANN. § 47:6035(D) (2009) (amended 2013). To employ this alternate calculation, a credit under subsection (C) must not have been previously claimed, provided the vehicle is registered in Louisiana.
Also, the investment amount may be the cost of the equipment that is used to refuel alternative fuel vehicles.\textsuperscript{60}

Once a taxpayer qualifies, the credit is applied to the final amount of income tax liability owed to Louisiana. Generally, only taxable income is subject to the income tax, which is calculated by subtracting qualified deductions from the taxpayer’s total taxable income.\textsuperscript{61} Income tax liability is determined by applying a tax rate to that total taxable income.\textsuperscript{62} Any credits can then be applied to further reduce the taxpayer’s liability.\textsuperscript{63} Moreover, certain credits can be refundable, allowing a taxpayer with refundable credits in excess of their tax liability to receive that excess as a cash refund.\textsuperscript{64} The CVAF is a refundable tax credit.\textsuperscript{65}

\textbf{B. Ending the Abuse: The CVAF’s Loophole and the Legislature’s Near-sighted 2013 Amendment}

The CVAF’s definition of alternative fuels, specifically its lack of providing a sufficiently narrow definition, opened the door to an unapproved and unintended expansion of the credit.\textsuperscript{66} The initial cost of the CVAF for both corporate and individual taxpayers was projected at $336,000 over its first two years.\textsuperscript{67} However, the actual lost tax revenue grew exponentially over the CVAF’s first three years totaling $27.5 million, with estimated losses in 2013-2014 of another $20 million.\textsuperscript{68} This is significant compared to Louisiana’s 2012

\textsuperscript{60.} LA. REV. STAT. ANN. § 47:6035(B)(2)(c) (2009) (amended 2013). Qualified alternative fuel delivery equipment includes compression equipment, storage tanks, and dispensing units, provided such equipment is installed in Louisiana and no credit has been previously claimed on such property. This investment calculation method excludes equipment that delivers alternative fuels to vehicles “associated with exploration and development activities necessary for severing natural resources from the soil or ground.”

\textsuperscript{61.} JAMES J. FREELAND ET AL., FUNDAMENTALS OF FEDERAL INCOME TAXATION 42 (2009).

\textsuperscript{62.} Id.

\textsuperscript{63.} Id.

\textsuperscript{64.} Id.


\textsuperscript{66.} LA. REV. STAT. ANN. § 47:6035(B)(1) (2009) (amended 2013). The CVAF’s definition was an illustrative list of alternative fuels, which essentially encompassed any type of alternative fuel including flex-fuels.


budget deficit of $6,686,217.69 More importantly, these amounts represent 11.3% of Louisiana’s average annual revenue loss from all tax incentives and exceptions combined over the same period.70 This highly unexpected loss of revenue was “fueled” in 2012 by the former Secretary of Revenue’s issuance of an emergency declaration attempting to define which vehicles were eligible for the CVAF credit, which included flex-fuel vehicles,71 the source of the loophole.72 At the time of the ruling, the potential impact of this loophole on the Louisiana budget was estimated at $200 million.73 In an effort to resolve this unintended gap, the executive branch issued a ruling to contemporaneously repeal the Louisiana Department of Revenue’s ruling and set forth a solution.74 The solution provided that the tax credit is only available for flex-fuel vehicles with separate fuel storage and delivery systems for the alternative fuel and that are also capable of being solely propelled by the alternative fuel.75 Although Governor Jindal repealed the emergency declaration, any tax credits applied for before the rejection were honored by the Louisiana Department of Revenue.76

<table>
<thead>
<tr>
<th>Year</th>
<th>CVAF’s Estimated Cost</th>
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70. Id. at 11.
71. See Flex-Fuel Vehicles, DEP’T OF ENERGY, http://www.fueleconomy.gov/feg/flextech.shtml, archived at http://perma.cc/2HCB-Y9AU (last modified Feb. 6, 2015). Flex-fuel vehicles have the ability to be propelled by ethanol blends of fuel, a type of alternative fuel, but they can also be fueled by regular gasoline using the same fuel storage tank.
73. Id.
75. Id.
76. Hilburn, supra note 72.
Consider this practical application illustrating the loophole caused by the CVAF’s vague drafting. After the CVAF’s enactment, a corporation maintaining a fleet of vehicles purchases 1,000 new flex-fuel vehicles, neither expending additional investment into alternative fuels nor intending to propel the vehicles solely by alternative fuels. The corporation then elects the CVAF for each flex-fuel vehicle purchased.\(^7\) This results in a credit of $3,000,000,\(^8\) yet fails to reduce emissions per the CVAF’s policy. Moreover, the corporation is not statutorily compelled to use alternative fuel in these flex-fuel vehicles. This unforeseen negative effect of the CVAF can be further expanded to individuals and any other corporate taxpayers. Further complicating the issue is the abundance and reasonableness of the price of flex-fuel vehicles in relation to other alternative fuel vehicles. Ultimately, each taxpayer purchasing flex-fuel vehicles, whether energy and pollution conscience or not, would be entitled to a “free” credit to continue using gasoline—thus, a total tax policy insufficiency.\(^9\)

The CVAF’s loophole further compounded Louisiana’s already problematic budget deficit. The legislature reacted in the 2013 Louisiana Legislative Session by proposing and subsequently amending the CVAF to prevent the subsidy from reducing necessary state revenue.\(^10\) The amendment essentially excluded flex-fuel vehicles from qualifying for the CVAF by adding further restrictions to flex-fuel vehicles.\(^11\) Under the amended CVAF, flex-fuel vehicles

<table>
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<tr>
<th>Year</th>
<th>Amount</th>
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<tbody>
<tr>
<td>2009</td>
<td>$ 0</td>
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<td>2010</td>
<td>$ 164,000</td>
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<tr>
<td>2011</td>
<td>$ 172,000</td>
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<tr>
<td>2012 – Lifetime(^\d)</td>
<td>$ 200 MILLION</td>
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\(^7\) Once the loophole was discovered, the revenue loss estimates were adjusted to project losses based on current the year.
\(^8\) L.A. REV. STAT. ANN. § 47:6035(D) (2009) (amended 2013). In this example, the corporate taxpayer would elect to take the lesser of ten percent or $3,000 under subsection (D) of the CVAF.
\(^9\) $(3,000,000 = $3,000 \times 1,000)$.
\(^10\) This violates the basic economic policy that there is no such thing as “free bread.” The state shoulders a burden in exchange for nothing, which does not further any economic principle or policy benefit.
\(^12\) Id. The amendment in its entirety is as follows:
can only qualify if the vehicle has only one fuel storage and delivery system and no longer retains the ability to be propelled by gasoline or diesel. The amendment is largely problematic because it focuses only on the loophole, which was the immediate threat to the state, and completely disregards necessary tax policy considerations that must be met in order for a credit to be efficient, equitable, and ultimately viable.

III. TAX POLICY FOR DUMMIES: THE CHALLENGE TO MAINTAIN EQUITY & EFFICIENCY

A proper analysis of Louisiana’s tax credit, or any tax credit, requires an understanding of legislative drafting and knowledge of how legislators use policy as a tool to promote or regulate activities. As a rule, tax theory analysis demands that justice exists among taxpayers. Justice requires legislatures to continuously strive for a balance between the state and its taxpayers.

As such, a conflict between equity and efficiency lies at the center of tax policy. In balancing this conflict, justice entails fairness to the taxpayer while guarding the state's overall objective of maximizing revenue and minimizing cost. Tax credits, as component parts of the whole tax scheme, are governed by these same principles. Developing any component of a tax scheme necessitates considering not only tax policy but the policy of other interacting areas.

(C)(1)(a) The credit provided for in Subsection A of this Section shall be allowed against individual or corporate income tax for the taxable period in which the property is purchased and installed, if applicable, and shall be equal to fifty percent of the cost of the qualified clean-burning motor vehicle property.

(1)(b) “Nothing in this Section shall be construed to authorize a tax credit for the costs of a purchase of, or conversion of a vehicle to, a flexible fuel vehicle that is designed to run on an alternative fuel and either petroleum gasoline or petroleum diesel if the vehicle has only a single fuel storage and delivery system and retains the capability to be propelled by petroleum gasoline or petroleum diesel.

Id. (emphasis added).

83. Id.
86. Id. When implementing a tax credit, there must be a consideration to minimize not only the foregone revenue but also the costs incurred in maintaining and servicing the tax credit.
87. See id.
Consider, for instance, the relationship between tax and public economic theory. In the field of economic theory, the concept of fairness comprises the distribution of the tax burden across society, which is similar to justice in tax policy.\textsuperscript{89} Efficiency, in economic theory, concerns the social costs of raising revenue, which again serves as evidence of the parallelism between tax and economic policy.\textsuperscript{90} However, problems exist within this seemingly harmonized relationship.\textsuperscript{91} A tax with a desirable distribution of the burden may contemporaneously impose costs, among other things.\textsuperscript{92} Inevitably, legislatures face the perpetual challenge of balancing these policy tradeoffs to maximize the efficient allocation of resources while avoiding negative effects.

Because this comment discusses an income tax credit, it is worth noting that the income tax plays a pivotal role in the analysis of taxation and public economic policy.\textsuperscript{93} Issues with efficiencies and externalities often arise in connection with public economic topics like the CVAF.\textsuperscript{94} The optimal income tax, of which tax credits are a component, is efficiently distributed through perfect resource allocation.\textsuperscript{95}

\textbf{A. Efficiencies and Externalities}

Efficient subsidies directly accomplish their policy goal. To accomplish its goal, the CVAF must actually incentivize taxpayers to purchase alternative fuel vehicles in order to reduce polluting emissions. In reality, perfect allocation of resources rarely occurs, which is due to externalities.\textsuperscript{96} Externalities are positive or negative side effects caused by specific activities, which distort the actual measure of costs or benefits the activity produces.\textsuperscript{97}

\begin{itemize}
\item \textsuperscript{89} See also Sugin, supra note 85.
\item \textsuperscript{90} ROSEN, supra note 88. See also Sugin, supra note 85, at 229.
\item \textsuperscript{91} Sugin, supra note 85.
\item \textsuperscript{92} Id. These costs could include unforeseen administrative difficulty in implementation, or the costs could be societal in nature, where the tax creates unforeseen burdens depending on taxpayer circumstances.
\item \textsuperscript{93} J. A. Mirrlees, a Nobel Prize winning mathematician and economist, authored the seminal work in this area, a technical analysis of optimal income taxation primarily focused on the tradeoff between distribution and distortion of income. See generally James A. Mirrlees, \textit{An Exploration in the Theory of Optimum Income Taxation}, 38 REV. ECON. STUD. 175 (1971).
\item \textsuperscript{94} Id., at 207–08.
\item \textsuperscript{95} Eric M. Zolt, \textit{The Uneasy Case for Uniform Taxation}, 16 VA. TAX REV. 39, 63 (1996).
\item \textsuperscript{96} Id. at 69.
\item \textsuperscript{97} See id. The action of one party makes another party worse or better off, and the first party neither bears the cost nor receives the benefits. See also JONATHAN
Externalities can arise either from the production or consumption of goods.\textsuperscript{98} Tax policy can be used to adjust inefficiencies caused by externalities that distort the perfect allocation of resources.\textsuperscript{99} The key to maintain this balanced efficiency when using tax policy is to limit the government’s action to the extent of the externality. Therefore, the CVAF must be measured against the negative externality it attempts to correct—air pollution.\textsuperscript{100}

1. Negative Externalities

Negative externalities occur when an actor’s production or consumption of a good harms others without compensation for the harm caused.\textsuperscript{101} Within the energy and transportation sectors, pollution is the primary example of a negative externality.\textsuperscript{102} In the absence of regulatory intervention, pollution emitting players within these sectors are only accountable for their own costs—essentially the production process and resulting materials which subsequently emit the pollution—while society at large is forced to endure the social and environmental costs of the polluter’s activities.\textsuperscript{103} The government could intervene to remedy the negative externality by taxing the polluter’s actions\textsuperscript{104} or by incentivizing pollution reducing behavior.\textsuperscript{105}

Within these sectors, legislatures use tax policy to achieve social, economic, environmental, or financial goals consisting largely of taxes or subsidies. Taxes imposed discourage specific behavior through financial penalties, while subsidies are incentive

\textsuperscript{98} For purposes for this comment, only externalities resulting from consumption is relevant because the CVAF is a subsidy targeted at consumers of vehicles.

\textsuperscript{99} See Zolt, supra note 95.

\textsuperscript{100} See infra Part III.A.1.

\textsuperscript{101} Gruber, supra note 97, at 124.

\textsuperscript{102} Zolt, supra note 95. For example, consider a city like Chicago that is crippled by gridlock during traffic hours by suburban commuters. The local residents and businesses suffer the harmful effects of the pollution produced by the commuters without reparation by the polluters. This imposes future health expenditures on the local citizens.

\textsuperscript{103} Zolt, supra note 95, at 69–70.

\textsuperscript{104} Id. at 70.

\textsuperscript{105} Id. See also A.C. Pigou, The Economics of Welfare 192–93 (1960). (English economist Arthur Pigou was the first to advocate using tax policy to manage externalities).
devices that encourage behavior. Arguably, subsidization through governmental vouchers is less efficient than through tax credits due to the administrative costs in determining which projects receive the voucher. However, this is only true where the subsidization is relatively equal to the negative externality it attempts to regulate.

Louisiana’s CVAF is a subsidy that incentivizes the investment in and use of clean-burning alternative fuels in an attempt to regulate air pollution, a large-scale negative externality. Because the CVAF is available for each polluting taxpayer to reduce their emissions, the CVAF is efficient in that it is equal in size to the corresponding negative externality. Perfect implementation of the CVAF should correct the market inefficiencies that air pollution causes.

Ultimately, the CVAF encourages investment in certain assets and not others, causing distortionary effects in and of itself. In a perfect market, any implementation and use of the CVAF is efficient, and even beneficial. This result is due to the reduced air pollution that alternative fuel vehicles generate, providing benefits to the environment and in turn, to peoples’ health. It is administratively impossible to evaluate the actual amount of pollution reduction the CVAF provides when implemented on an individual taxpayer basis. However, some factors that must be considered to determine if efficiency really is being accomplished by the CVAF include whether a taxpayer’s previous vehicle was more polluting and was actually replaced by the new alternative fuel vehicle or whether the aggregate reduction in pollution attained by a particular taxpayer correlates to the cost of the credit. Other factors relating to equity cause the CVAF’s real failures.

Therefore, the CVAF might be flawed, yet effective, regarding efficiency, and the real question is how to design a better system. In short, even though regulated externalities like pollution create an inefficient market, legislatures must not assume that the tax

107. See discussion infra Part V.
109. Id.
111. Each individual is the cause of pollution; therefore, if each individual purchased an alternative fuel vehicle using the CVAF, there would be a directly measurable reduction in pollution. The CVAF is efficient in that sense.
112. While important to note, this comment excludes discussion of those distortionary market effects that are economic in nature.
113. See discussion infra Part V.
Corrective taxes impose additional concerns, and policy makers should initially compare what mechanisms could best address the inefficiencies present, whether considering tax or non-tax programs. Legislatures must consider other solutions that could accomplish the policy goals of the CVAF better, void of these inherent issues of tax policy.

IV. COMPARISON OF OTHER JURISDICTIONS’ APPROACHES

Generally, the devices used to promote alternative fuel usage in a jurisdiction fall within the categories of vouchers, subsidies (a la the CVAF), loans and leases, grants, rebates, exemptions, or other more narrowly tailored state-specific devices. For comparison, Louisiana has six such devices, while the federal government has 47, the highest of any jurisdiction. For purposes of this comment, only the most prominent devices will be discussed. Regardless of the type of device used, the most important aspect is the device’s goal and whether that goal is construed narrowly enough.

A. Devices Relating to the Development of The Alternative Fuel Sector

While the federal government has enacted every type of incentive device, the following are most informative for purposes of this comment. The Alternative Fuel Infrastructure Tax Credit provides that fueling equipment for natural gas, liquefied petroleum gas (propane), electricity, ethanol blends, or diesel fuel blends containing a minimum of 20% biodiesel, are eligible for a tax credit of 30% of the equipment’s cost, but not to exceed $30,000. Fueling station owners who install qualified equipment at multiple sites are allowed to use the credit towards each location. The credit, limited to $1,000, even extends to those...

114. Zolt, supra note 95, at 70.
115. Id. at 70–71.
116. This discussion highlights the approach taken by other major jurisdictions in furthering alternative fuel usage and the reduction of polluting emissions of vehicles, but does not attempt to cover all approaches within the United States.
118. Id.
119. I.R.C. § 30C (West 2013). Permitting and inspection fees are not included in covered expenses.
120. Id.
consumers purchasing residential fueling equipment. Another federal tax credit is the Alternative Fuel Excise Tax Credit, which is an incentive available for alternative fuel that is sold for use to operate a motor vehicle.

Texas uses a similar approach. As part of the Texas Emissions Reduction Plan, alternative fueling infrastructure grants are awarded, which provides grants for 50% of eligible costs, up to $500,000, to construct, reconstruct, or acquire a facility to store, compress, or dispense alternative fuels in areas failing to meet the state’s minimum air quality standards. Under the infrastructure grant, qualified alternative fuels include biodiesel, electricity, natural gas, hydrogen, propane, and fuel blends containing at least 85% methanol (M85). Importantly, the entity receiving the grant must agree to make the fueling station available to people and organizations not associated with the grantee during certain times. Texas’s Diesel Fuel Blend Tax Exemption provides that the biodiesel or ethanol portion of blended fuel containing taxable diesel is exempt from the diesel fuel tax.

California has 30 incentive devices; however, notably, the state employs zero tax-based alternative fuel incentives. The California Energy Commission additionally administers the Alternative and Renewable Fuel and Vehicle Technology Program to provide financial incentives for businesses, vehicle and technology manufacturers, workforce training partners, fleet owners, consumers, and academic institutions with the goal of developing and deploying alternative and renewable fuels and advanced transportation technologies. Most importantly, California’s

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121. See I.R.C. § 38 (a), (b) (West 2010); cf. 2007–43 I.R.B (similarly applied credits).
122. I.R.C. 6426 (West 2013). However, this tax credit is not allowed if an incentive for the same alternative fuel is also determined under the rules for the ethanol or biodiesel tax credits.
123. TEX. HEALTH & SAFETY CODE ANN. § 386.051 (West 2013).
124. Id.
125. TEX. HEALTH & SAFETY CODE ANN. §§386, 393, 394.
126. TEX. TAX CODE ANN. § 162.204 (West 2015). The biodiesel or ethanol fuel blend must be clearly identified on the retail pump, storage tank, and sales invoice in order to be eligible for the exemption.
128. California uses many different local grants for emission reduction of fleets of vehicles.
129. CAL. HEALTH & SAFETY CODE § 44270 (West 2013).
Alternative Fuel Vehicle and Fueling Infrastructure Grants provide funding for projects that reduce pollution emissions from vehicles.\(^{130}\)

**B. Narrowly Targeted Devices**

Narrowly targeted devices are solutions that use a direct means to accomplish their policy goal. The Federal Government instituted the Qualified Plug-In Electric Drive Motor Vehicle Tax Credit, which provides a tax credit for the purchase of specific electric vehicles.\(^{131}\) Texas provides a rebate towards the purchase price of alternative fuel vehicles, which includes vehicles propelled by compressed natural gas, liquefied petroleum gas, and electricity.\(^{132}\) California issues vouchers for the purchase of hybrid electric and zero emission vehicles,\(^{133}\) while issuing rebates for plug-in hybrid and zero emission light-duty vehicles.\(^{134}\)

**C. Common Themes**

Common themes in other jurisdiction include the use of tax subsidies, but these jurisdictions generally avoid tax credits simply for the general purchase of alternative fuel vehicles. For example, the credits for purchase of electric vehicles are sensible because this type of vehicle emits zero pollution. The credit is completely efficient in that regard while also encouraging investment in that particular alternative fuel.\(^{135}\) Furthermore, the drafting of those credits are clear and concise, which limits potential loopholes caused by vague, all-encompassing drafting. Among these jurisdictions, there is significant focus to incentivize the establishment of alternative fuel development and its infrastructure, with specific incentives aimed toward engaging businesses in that development. This allows the public to develop the alternative energy sector, rather than the government developing it using tax dollars. In contrast, Louisiana has no such infrastructure development device other than the CVAF, which is capped at $3,000—hardly enough to offset a material amount of infrastructure

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\(^{130}\) Id. at § 44220 (b).


\(^{135}\) Note that little, if any, extra investment in fueling infrastructure is needed for electric vehicles (not considering the plug-in charger for the home included in the purchase of the vehicle).
investment. In that regard, the CVAF is useless. Moreover, a lack of alternative fueling stations in Louisiana acts as a disincentive to invest in alternative energy, regardless of the CVAF in place. For alternative fuel use to be taken seriously, infrastructure must exist.

V. TAX EQUITY: THE REGRESSIVE NATURE OF THE CVAF

The concept of fairness in tax theory requires policymakers to consider the equity of a tax scheme. Inevitably, each individual policymaker’s ideals ultimately affect the equity of a tax scheme, and not all policymakers may view the fairness of a tax scheme similarly. Some policymakers, for example, may disagree that the CVAF is fair or even appropriate.

A. Horizontal and Vertical Equity Application

Generally, tax equity is comprised of vertical and horizontal concepts. Vertical equity is the fair distribution of the tax burden on people at different income levels, and horizontal equity is fair tax treatment of people at the same income level. Because eligibility for the CVAF requires taxpayers to invest money into alternative fuel property, a discussion of vertical equity is more appropriate. Accordingly, this section focuses on the fairness of the CVAF’s treatment of taxpayers at different income levels. Analysis of the CVAF reveals that it is regressive and unfairly beneficial to wealthy taxpayers due to the high costs of new alternative fuel technology, which is not an equitable result to Louisiana’s average taxpayer.

A regressive tax scheme decreases the tax rate as the taxable base increases, which results in a lack of vertical equity to taxpayers with lower taxable bases and should be avoided. While some regressive aspects of a tax scheme can function properly, tax credits are generally not among them. Tax credits return income, which, in the case of the CVAF’s investment requirement, benefit wealthy taxpayers much less than non-
wealthy taxpayers unable to purchase new alternative fuel technology. Therefore, a regressive tax credit is one that is more accessible to wealthy taxpayers and effectively decreases their tax rate through a return of income.

The purpose of the CVAF is to encourage pollution reduction through the use of alternative fuels, not to provide a tax reduction device to the wealthy if they invest in alternative fuels. Wealthy taxpayers comprise a much smaller segment of society, thus comprising a smaller segment of total drivers in the transportation sector causing pollution. Realistically, far fewer taxpayers are able to elect the CVAF, which is evidence of the regressive nature of the credit. However, any reduction of polluting emissions is particularly beneficial to low income taxpayers that suffer the harmful health consequences of pollution and its attributable health care costs.

Moreover, due to the relationship between poverty and pollution, the CVAF is focused towards the group of individual taxpayers polluting the least in the transportation sector overall, because wealthy taxpayers generally drive new, lower polluting vehicles, instead of higher polluting, older ones. Non-wealthy individuals are harmed the most due to the polluting emissions of their older gasoline propelled vehicles and by being unable to afford brand new alternative fuel vehicles. Thus, regarding the vertical equity of non-wealthy taxpayers, the CVAF is unfair and undesirable because it only benefits the wealthy.

However, this is not to propose that the CVAF as an incentive device is by itself inequitable. Because tax credits are most beneficial for non-wealthy taxpayers, the CVAF could be seen as an incentive directed at those high polluting individuals to reduce their emissions and receive income in return. However, the amount of subsidization provided by the CVAF, regardless of income levels, creates the high amount of vertical inequity. Greater vertical equity would be achieved if the credit were proportioned between wealthy and non-wealthy taxpayers. Notably, the higher polluters lack the resources required to invest in alternative fuels, which makes a tax credit useless as an incentive device. Incentivizing pollution reduction in the transportation sector should not be performed through a tax credit.

B. Caveat: The Cash for Clunkers\textsuperscript{143} Conundrum

In 2009, Congress authorized the trade-in of older and less fuel-efficient vehicles in exchange for a voucher worth up to $4,500 to be

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used toward the purchase of a more fuel-efficient vehicle.\textsuperscript{144} The Cash for Clunkers scheme was designed to remove higher polluting vehicles from the nationwide fleet, eliminating the possibility that removed vehicles could be resold and return to use.\textsuperscript{145} To that extent, the program allowed the resale of certain parts of the vehicle but required that the engine and drivetrain be immobilized, crushed, and then scrapped.\textsuperscript{146} The requirement of the scrapping process resulted in additional air pollution and environmental harm that nearly offset the program’s benefits relating to emission reduction.\textsuperscript{147} Therefore, devices used to incentivize pollution reduction by removing less-efficient vehicles from the fleet utilizing a scrapping policy should be focused on the highest polluting taxpayers because the polluting emissions associated with scrapping equal roughly 10-15\% of a vehicle’s lifetime emissions.\textsuperscript{148} One might consider “scrapping” the required scrapping policy in lieu of other considerations. For example, a threshold level of acceptable polluting emissions could be established, and any vehicles involved in such a program that emit emissions over that level could be totally scrapped while the remainder could be resold with emission modifications. Additionally, to the extent efficiencies can be maintained, recycling all aspects of the vehicles should be considered.\textsuperscript{149}

VI. PROPOSALS AND OTHER CONSIDERATIONS

CVAF is an ineffective and inequitable incentive device as a means of furthering the policy of reducing polluting emissions from vehicles through alternative fuel investment. The credit’s vague drafting imposed catastrophic costs upon a state already struggling with a budget deficit, which forced the current legislative amendment. To better encourage Louisiana taxpayers to reduce their vehicles’ polluting emissions, the CVAF should largely be modified to balance efficiency and improve vertical equity. First, the CVAF should include an annual expenditure cap. Second, the CVAF

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\item \textsuperscript{144} Marianne Tyrrell & John C. Dernback, The “Cash For Clunkers” Program: A Sustainability Evaluation, 42 U. Tol. L. Rev. 467, 467 (2011).
\item \textsuperscript{145} Id. at 478.
\item \textsuperscript{146} Id. See also 49 C.F.R. § 599.400–03 (2009).
\item \textsuperscript{148} Id.
\item \textsuperscript{149} However, it is necessary to have an understanding that the recycling process, in itself, can be harmful to the environment by creating many forms of pollution.
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should include an income phase-out threshold amount and prohibit corporate taxpayers from claiming the credit. Finally, the CVAF should be implemented as a voucher system to continue incentivizing corporate and wealthy individual taxpayers, while also allowing the impoverished, who typically pollute the most, to become eligible for the incentive.

A. Annual Cap on the CVAF

An annual cap of awarded credits would allow the Louisiana Legislature to limit the exact amount of forgone revenue the state is willing to risk. This cap would limit the exposure to loss caused by the abuse of the CVAF’s vague drafting. The CVAF’s amendment merely shut the door to one source of abuse, while leaving open the potential for future abuse with other forms of alternative energy vehicles. Louisiana should use the legislature’s initial CVAF cost projections as a template for the amount of the cap.

B. Income Phase-out

Including an income phase-out for the CVAF would prevent abuse by a significant number of taxpayers. This would result in achieving greater vertical equity. Because tax credits return income to taxpayers in greater need of the return based on public policy, a threshold phase-out is proper to prevent the return of income to wealthy taxpayers, which is an unnecessary drain from state revenue. It is common and perfectly sound policy for tax credits to include phase-out provisions. Moreover, a phase-out would affect a non-material number of polluting individual taxpayers, due to the distribution of wealth. The threshold would eliminate wasting any of the capped amount of the credit from being awarded to those wealthy taxpayers.

C. Voucher System

A voucher system provides maximum efficiency of the CVAF. Vouchers must be applied for and approved by the government. Appropriately, a cap on the total cash amount of vouchers annually awarded would prevent the CVAF from being a categorically granted incentive. Limited voucher funds forces the state to thoroughly consider each applicant, selecting those that would achieve the greatest reduction of polluting emissions, which corresponds with the CVAF’s policy goal.

Corporate and wealthy taxpayers would remain incentivized to invest in alternative fuels by being eligible for the CVAF vouchers,
which is an equitable solution to their ineligibility under the credit aspect of the CVAF. The state would award more vouchers to corporations with large fleets of vehicles, taking into consideration the amount of miles driven by the fleet and reducing the voucher amount awarded for vehicles that are driven minimally. Wealthy individual taxpayers would be similarly considered. Vouchers would be awarded to the highest polluting taxpayers, which follows the CVAF’s policy and is a component of efficiency. Low income individuals are categorically prohibited from eligibility under the current CVAF due to the high cost of alternative fuel technology. Because this class typically creates the most polluting emissions per driver, the state could issue vouchers to the applicants where an alternative fuel vehicle would result in the greatest polluting emission reduction, taking into consideration the nature and extent of the individual’s use of their vehicle. More consideration should be given to low income individuals in this class using their own vehicle to make a living that requires driving many miles, which results in the most pollution. Arguably, however, wealthy individual taxpayers would be given higher voucher priority over low income individuals, but independently from corporate taxpayers, due to the actual investment in alternative fuel technology made by those individuals. This comment neither concerns itself with that issue, nor reaches that conclusion. Ultimately, the greatest benefits of a voucher system include the ability for the state to issue the vouchers on a case by case basis and increasing eligibility of low income individuals by removing the economic barriers of the CVAF while avoiding the unnecessary return of income to wealthy taxpayers. These benefits greatly increase the efficiency and fairness of the CVAF.

D. Local Action the Best Implementation Strategy?

If reducing emissions is a major policy consideration, some proponents recommend that the bulk of regulatory action be taken by parish/county or city-level governments—i.e. local action. This is evidenced in jurisdictions such as California, a pioneer of promoting alternative fuel technology. Local action could be

150. For example, vehicles driven by corporate executives would not be included in the voucher award amount.
151. BENJAMIN J. RICHARDSON, LOCAL CLIMATE CHANGE LAW 8 (Benjamin J. Richardson ed., 2012).
initiated and implemented more quickly than the slower legislative speed of state and federal government.\textsuperscript{153} As a result of this quick implementation, state and federal governments could use each locality’s implementations as policy experiments that provide evidence on how best to draft similar legislation.\textsuperscript{154} Moreover, local authorities are more aware of, and may more easily identify, pollution issues within their own jurisdiction.\textsuperscript{155} However, local action has been met with criticism. The most predominant criticisms include local governments’ lack of financial resources and their officials’ lack of sufficient expertise and knowledge in pollution regulation or alternative fuels.\textsuperscript{156} Thus, this comment does not advocate local action as a solution, but instead wishes to identify the potential increase of the voucher’s efficiency while assigning its administrative cost proportionally if implemented locally, rather than state-wide.

CONCLUSION

Although the CVAF’s amendment corrected one glaring problem with the subsidy, the legislature overlooked the credit’s real issues under a tax theory analysis: flawed efficiency and inequity. These issues can be fixed, and the CVAF’s policy furthered, by imposing an annual limit and an income phase out threshold on the subsidy. Furthermore, the CVAF should include a provision implementing a voucher system similar to other jurisdictions. This would increase the eligibility of corporate taxpayers and individuals of any income level, which results in greater equity while focusing on most efficiently achieving the legislature’s policy goals. By implementing these solutions, Louisiana can maintain a viable incentive device; otherwise, the CVAF is a regressive tax credit that fails to accomplish its goal.

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  \item \textsuperscript{153} RICHARDSON, supra note 151, at 13.
  \item \textsuperscript{154} Id. at 13–14.
  \item \textsuperscript{155} See id.
  \item \textsuperscript{156} Id. at 14.

\textsuperscript{*} J.D./D.C.L., 2015, Paul M. Hebert Law Center, Louisiana State University. For this fortuitous opportunity, I am grateful to the editors of the \textit{LSU Journal of Energy Law and Resources}. Most of all I thank my parents and aunt for the endless encouragement and support—I appreciate you all.
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