Utah FOUNDATION Research Report

Report Number 713, March 2013

FUELING OUR FUTURE, 2013-2040:
POLICY OPTIONS TO ADDRESS UTAH'S FUTURE TRANSPORTATION NEEDS

HIGHLIGHTS

- According to the Unified Transportation Plan, Utah's priority transportation needs by 2040 will total approximately $54.7 billion, while current funding sources will amount to $43.4 billion.
- Fuel taxes are a convenient source for transportation funds, but fixed rates lose purchasing power over time due to inflation and increasing vehicle efficiency. Inflation losses can be avoided by indexing rates for inflation or regular increases. Fuel tax increases could garner $3-$7 billion in additional revenue over 30 years (in 2010 dollars), depending on how they are implemented.
- Applying the state sales tax to fuel could generate $10-$20 billion in additional revenue over 30 years, depending on how fuel prices change and how the tax is levied. This would be more volatile than cents-per-gallon fuel taxes, because revenue would vary with changes in fuel prices.
- Transit funding options include: increasing transit sales taxes by 0.25% percent across the UTA service area ($3.8 billion), a 1% increase in hotel taxes ($139 million), a 1% increase in the rental car tax ($71 million), or the enactment of a transit property tax of 0.1% across counties in the UTA service area ($5.8 billion).
- Some states have implemented pilot programs to test whether a vehicle miles traveled tax would be beneficial. A mileage tax would more directly tax wear and tear on roads without losing ground to increased vehicle efficiency. Such a tax could replace current fuel taxes and produce up to $6 billion in additional revenue over 30 years.

The mission of Utah Foundation is to promote a thriving economy, a well-prepared workforce, and a high quality of life for Utahns by performing thorough, well-supported research that helps policymakers, business and community leaders, and citizens better understand complex issues and providing practical, well-reasoned recommendations for policy change.

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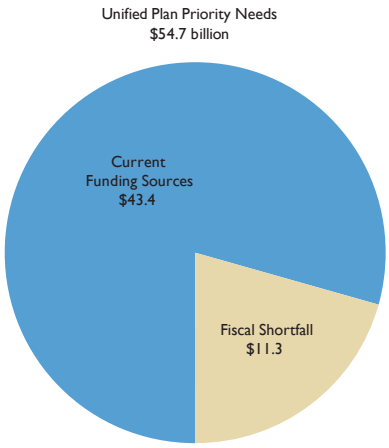
Funding Utah's transportation needs is a significant economic and fiscal challenge for state policymakers. Over the next three decades, Utah's population is set to increase by over 60% from 2.8 million to 4.5 million.[1] Coupled with this significant growth is the possibility of an increase in vehicle miles traveled. For example, from 1990 to 2010, vehicle miles traveled outpaced the population increase by 18%.[2] In order to manage these increases, Utah's transportation infrastructure will require considerable attention and investment.

While in the past the state relied on the Transportation Fund to support transportation projects, this has changed within the last two decades. In 1997, the Utah State Legislature created the Centennial Highway Fund, opening the door to use significant amounts of sales tax revenue from the General Fund for transportation. The use of non-traditional funding sources outside of the Transportation Fund provides a strong example of the state's challenges in adequately funding transportation. Despite the addition of these funding sources, funds will not be sufficient to meet population, highway and transit growth. This situtation is further compounded by the decline in revenue from food sales tax revenue, as well as the 2007-2009 recession.

The context of the federal fiscal situation and availability of federal funds must also be considered. This is in addition to challenges faced by cities and counties, as transit is funded mainly by local option sales taxes and rider fares. According to the Unified Transportation Plan, Utah's transportation needs by 2040 will total approximately $54.7 billion, while current funding sources will amount to $43.4 billion. Although the Unified Transportation Plan shows needs of $70 billion over the period, transportation planning officials state that $54.7 billion is the currently accepted goal for high-priority projects, leaving a fiscal shortfall of roughly $11.3 billion in unfunded projects.[3] Generating sufficient future funding through additional revenues will be needed to meet the plan.

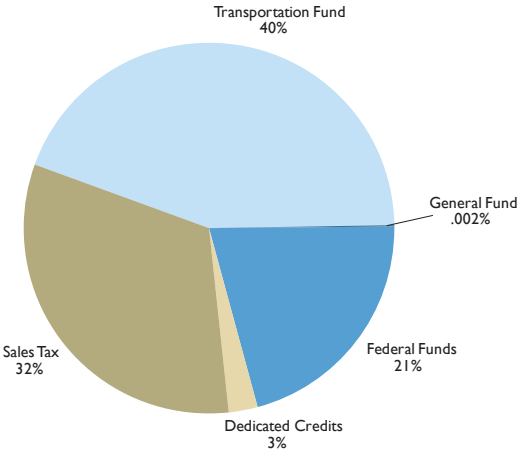
This research provides information on potential funding sources that may be considered as policy makers formulate funding options to meet Utah's near-term and long-term highway and transit needs. Many of the revenues described in this report are currently utilized in other states, at the federal level, or even in other countries. Some are adaptations of

Figure 1: Transportation Funding (in billions)



Source: Utah's Unified Transportation Plan 2011-2040.

Figure 2: Utah Department of Transportation FY 2013 Estimated Revenue (percentages by source)



Source: Utah Department of Transportation.

current revenues collected by Utah's state and local governments, while others are innovative original ideas. This report also addresses the costs that users of highways and transit impose on the system, and whether there is a relationship between use and cost. Finally, financing mechanisms such as bonding for highways and transit are addressed, but the primary focus of this report is on funding options.

It is not the purpose of Utah Foundation to advocate for any specific solution to this funding dilemma; the information contained in this report is designed to provide a baseline of understanding about potential funding solutions so that policy makers, advocates, and citizens can make informed decisions that will produce the best possible solution to Utah's critical transportation problems.[4] However, in order to fully fund Utah's future transportation needs, lawmakers will need to implement policies to increase revenues.

TRANSPORTATION FUNDING

Funding infrastructure is a significant item in federal, state and local governments' budgets. In fiscal year 2007 (the most recent year for which combined state and national data are available), combined U.S. public highway spending was about $146 billion for highway construction, operations, maintenance, administration and safety. Nearly 25% of this funding came from the federal government, with the rest provided by state and local governments. Combined spending for mass transit was $46.8 billion. Of this, nearly 20% came from the federal government, with the rest generated by state and local governments.[5]

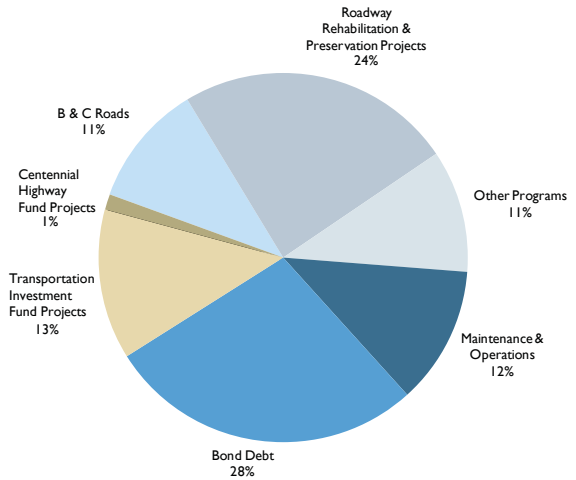
Funding for Roads and Highways

In FY 2013, the Utah Department of Transportation (UDOT) will receive an estimated $1.2 billion in revenue. Funding for highways and roads comes from several sources: state and local sales taxes, General Fund appropriations, federal funding, and the Transportation Fund, which includes revenue from motor fuel taxes, permits, registration fees, vehicle control fees and the highway use tax. The largest UDOT expenditure is for bond debt service, followed by roadway rehabilitation and preservation projects, Transportation Investment Fund construction and development projects, maintenance and operations, class B & C roads and other programs.

State and Local Funding

State user fees include motor fuel tax, special fuel tax, vehicle registration fees, and a variety of other registration and user fees. Since 1961, the Utah Constitution has provided that the proceeds of any tax or fee related to the operation of a motor vehicle on a highway must be used "exclusively for highway purposes."[6] Thus, the highway user revenue collected from these taxes and fees is distributed to the UDOT from the Transportation Fund, and to cities, counties and state parks from class B & C road funds. These funds provide a portion of state fuel tax revenues to cities and counties for road maintenance and construction based on a formula including road mileage and population. The primary revenue sources for the Transportation Fund are motor fuel (gasoline) and special fuel (diesel) excise taxes. In FY 2013, it is estimated that these two taxes will provide $254 million and $106 million to the state budget, respectively. Together, these two taxes account for nearly 70% of Transportation Fund revenues, and 30% of total UDOT funding

Figure 3: Utah Department of Transportation FY 2013 Estimated Expenditures



Source: Utah Department of Transportation.

sources.[7] The remaining highway user revenues came from a variety of registration and other user fees, totaling $87 million in FY 2013.[8]

It is commonly said that about 17% of Utah's sales tax revenue is derived from auto related sales. According to the Legislative Fiscal Analysts Office, this percentage includes all tax revenue from the sale of transportation goods, manufacturing of transportation equipment, wholesales and retail sales of motor vehicles, auto repair, retail sales from fuel dealers, and private vehicle sales. According to Utah State Tax Commission data, this amounted to 16.6% of all taxable sales in 2011. A specified portion of the state sales and use tax is dedicated to be transferred to the Transportation Investment Fund (TIF). This statutorily required dedication is relatively new, and at times has also been controversial.[9]

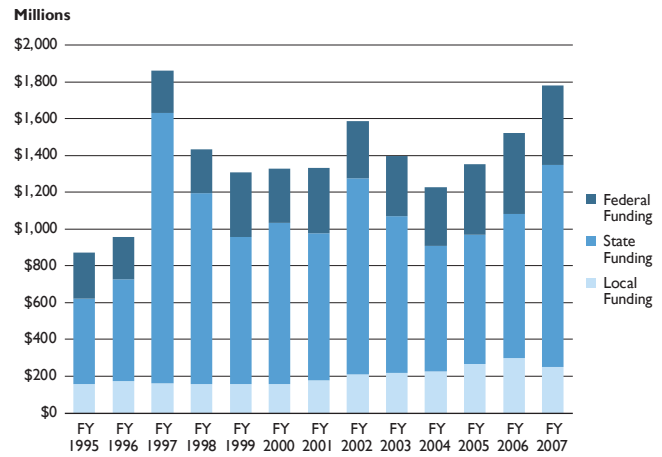
In 2006, the Utah State Legislature easily passed, and Governor Huntsman signed HB 112, which provided that a portion of the sales and use tax revenue should be deposited annually into the TIF. In 2011, the Legislature passed SB 229, a bill that sought to earmark a larger amount of the sales tax, thereby setting aside hundreds of millions of dollars to meet the state's highway funding needs. It sought to allocate 30% of the new growth in sales tax, until it capped at 17% of total sales tax revenue, into the TIF. Proponents of this legislation argued that when items that have a link to transportation are purchased, a portion of the sales tax should be considered transportation revenue. The bill passed both houses by large margins, but Governor Herbert vetoed the bill, arguing that it was "inappropriate to earmark anything of this size."[10] However, the veto was overridden by the Legislature. In FY 2011, the TIF sales and use tax earmark made up $191.7 million, or 8.5% of the state transportation funding sources.[11] This earmark will grow rapidly as 30% of state sales tax *growth* is set aside each year until around 2019, when the earmark is expected to reach its ceiling of 17% of all state sales tax revenue. After the ceiling is reached, the earmark will only grow as fast as overall sales tax growth.

The Centennial Highway Fund (CHF) is a special revenue fund that was originally created to fund 11 years of highway projects throughout the state. Starting in FY 1997 and ending in FY 2007, the state designated 42 highway projects throughout the state, including Interstate-15 reconstruction. The CHF was initially created to fund highway projects that would not have been completed under existing funding constraints, and was done so by increasing the fuel tax from 19 cents per gallon (cpg) to 24.5 cpg. This 5.5 cent increase was earmarked for CHF projects. Registration fees were also increased and dedicated for CHF projects.[12] The establishment of the CHF paid for the $1.5 billion reconstruction of I-15 in the run-up to the 2002 Olympics, the nearly $700 million building of Legacy Parkway, and the $64 million widening of U.S. 6.[13] The final project was the 11400 South interchange on I-15 in 2010.

The Utah State Legislature also provides roads and highways ongoing appropriations from the General Fund. This is a relatively small portion of the transportation budget, totaling $1.6 million in FY 2011, or 0.1% of the transportation budget. Additional revenue is derived from a variety of local option sales and use taxes.

At the city and county level, local governments have historically relied on transfers of state fuel taxes, property taxes, and vehicle registration fees to finance road maintenance and improvements. However, traditional funding sources are no longer adequate. There is a great need for local governments to explore innovative methods that increase revenue and/or decrease costs. This is especially true for smaller municipalities that do not have the tax base of larger cities and counties and thus cannot supplement funding for their B&C roads.

Figure 4: Utah Highway Funding Sources (2007 dollars)



Source: The Pew Charitable Trusts.

Federal Funding

Federal funding has been a key component of highway and transit funding strategies at both the state and national levels. Federal aid for road building was provided as early as the 1800s, and was first given to Utah in the mid-1850s for building and improving roads and bridges. Currently, federal spending on highways and transit is principally financed through the Highway Trust Fund (HTF). The HTF was created as an accounting mechanism within the federal budget and receives revenues from taxes on gasoline, diesel fuel, and certain trucks and truck tires. It is divided into two accounts, one that primarily funds highways and highway safety programs, and one that funds transit programs.

The vast majority of revenues for the HTF, about 90%, is derived from excise taxes on gasoline (18.4 cpg) and diesel (24.4 cpg), most of which is credited to the highway account. The transit account receives 2.86 cpg, and 0.1 cpg is appropriated to a separate Leaking Underground Storage Tank Trust Fund.[14] The remaining revenue for the HTF comes from other sales and excise taxes. Total apportionments from federal funding to Utah's Transportation Fund have ranged from $240 to $344 million in the last decade.[15] In FY 2012, Utah received $344 million in federal funds, representing 27% of Utah's transportation funding sources; this decreased to 21% in FY 2013.[16] The amount of federal funding Utah has received for highway funding has remained quite stable since 1995, as is shown in Figure 4.

Historically, the HTF has been self-sustaining, but spending currently exceeds revenues. Since the HTF is prohibited by law from incurring negative balances, the portion of the trust fund devoted to highway projects has received $35 billion in transfers from the general fund since 2008 to allow the U.S. Department of Transportation to meet its obligations.[17] Because the federal gas tax has not been raised since 1993, its spending power has decreased by one-third, causing a significant decline in revenue. In July 2012, lawmakers

Figure 5: Utah Transit Authority Summary of Revenues (in thousands of dollars)

	2009	2010	2011
Operating			
Passenger Revenue	$33,531	$35,160	$39,694
Advertising	1,633	1,733	1,833
Total Operating	35,164	36,893	41,527
Non-operating			
Sales Tax Revenues	171,854	171,894	183,092
Federal Noncapital Assistance	60,198	59,138	59,320
Interest Income	9,389	3,827	3,672
Other	2,798	2,929	3,483
Total Non-Operating	244,239	237,788	249,567
Capital Contributions	275,609	159,774	44,985
Total Revenues	555,012	434,455	336,079

Source: Utah Transit Authority.

passed a bill to keep highway and transit funding at current levels for the next two years, principally by transfering money from the General Fund. In fiscal year 2015, there will be a sharp contraction in available funds, unless lawmakers increase the federal fuel tax or once again transfer from the General Fund, funding for highways and transit will be cut significantly.

Transit-Specific Funding

Funding for transit in Utah is mostly derived from sales tax, federal funding, passenger revenues, with smaller contributions from other sources. Sales tax revenues have always been the largest operating revenue source for the Utah Transit Authority (UTA). In 2010, they contributed $171 million of UTA's $275 million total revenue, or 63%. Transit received $59 million in federal non-capital assistance revenue, which made up 22% of the transit budget. In 2011, UTA collected $39.7 million in passenger revenues, roughly 25% of operating revenues and 12% of total transit revenues. The final revenue sources were investment income ($3.7 million), advertising ($1.8 million) and other income ($3.5 million).

In FY 2010, the states allotted $13.6 billion for transit funding, while federal funds totaled about $10.1 billion. The seven states that provided the highest funding amounts, New York, California, Massachusetts, Pennsylvania, New Jersey, Maryland, and Illinois, collectively allotted $11.3 billion in state funding, or 83% of total state funding. In addition, about $5.3 billion, or more than half of all federal funds spent on transit, went to those same seven states. For those states that do provide transit funding, the revenue sources used by most were gas taxes, general funds, bond proceeds, motor vehicle and rental car sales taxes and general sales taxes. The State of Utah currently does not provide any state transit funding, relying on federal and local funds. The only other states that do not fund public transit are Alabama, Arizona, Hawaii and Nevada.[18]

Utah's heavy reliance on federal funds means it must compete for capital funding with other states. Capital funding is used for infrastructure items such as buses, garages, and light rail lines, as opposed to operating funding which is used for things such as operator salaries and fuel. The Federal Transit Administration (FTA) provides financing eligibility within its grant programs for the use of revenue bonds, such as fare box revenue bonds and grant anticipation notes, debt service reserve financing, and capital leasing. These types of funding and financing resources can be very complicated and competitive.

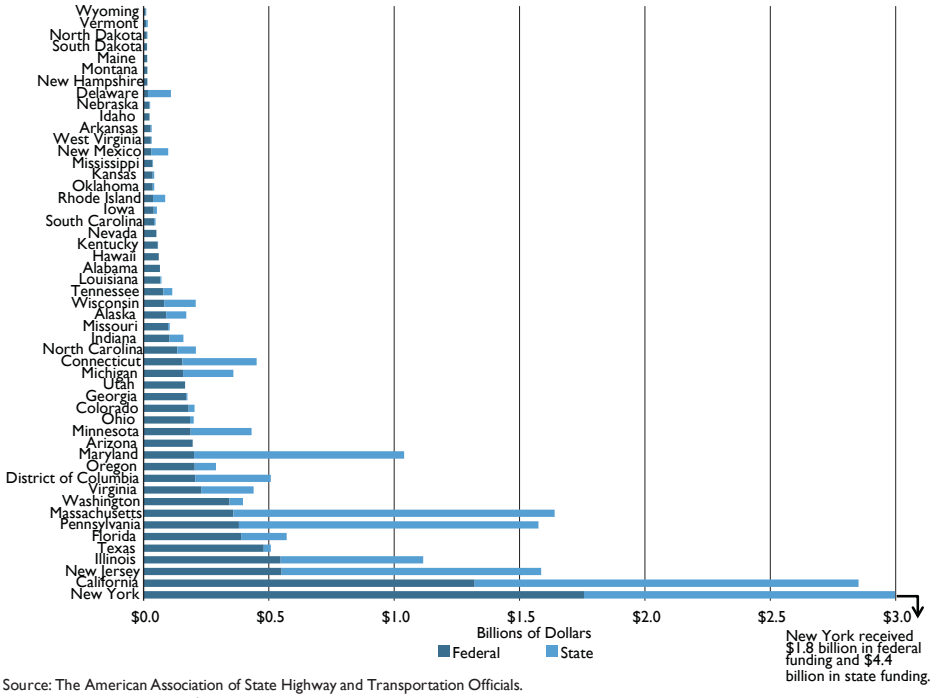
THE CHANGING PICTURE OF HIGHWAY/ROAD AND TRANSIT FUNDING

Highway/road and transit funding in Utah and throughout the United States is changing. Revenues that traditionally came from "user fees," including fuel taxes, vehicle registration fees and tolls, make up a decreasing share of costs. This requires states to use taxes, fees and bonds not directly related to highway use ("non-user fees"), to make up the difference. This is significant, because it means that revenue used to fund transportation is experiencing a decreasing relationship with its use. It should be noted that despite the declining purchasing power of the fuel tax, it is still a valuable and valid taxation policy, and will likely remain so throughout the next decade.

According to research done by the Pew Charitable Trusts, 51% of the nation's $193 billion set aside for highway construction and maintenance in 2007 was generated through user fees. This was down from 61% 10 years earlier. In 1967, user fees amounted to 71% of revenues spent on roads. Today, user fee revenue as a share of total highway-related funds is at an all-time low since the Interstate Highway System was created in 1957.[19] The remaining balance is from non-user fee sources, including revenue generated by income, sales and property taxes, as well as bond issues.

Reverberations are felt elsewhere when gas taxes fail to provide a sustainable stream of revenue. As of December 2011, at least three states, including Utah, Nebraska and Wisconsin, have enacted

Figure 6: Federal and State Funding for Public Transit



Source: The American Association of State Highway and Transportation Officials.
Note: Does not include local funding.

long-term diversions of general fund revenues to supplement their transportation trust funds. In Utah, for FY 2013 and beyond, 30% of sales tax revenue growth will be dedicated to transportation until a cap is reached at 17% of total state sales and use tax revenues. These diversions result in fewer resources for education and other public priorities. In 2013, 0.25 percentage points of Nebraska's 5.5% sales tax will be dedicated to highways for a period of 20 years. That same year in Wisconsin, 0.25% of all general fund tax revenue will be dedicated to transportation.[20]

Because of the declining sustainability of revenue from gas taxes, the Utah State Legislature has made one-time or ongoing additions from the General Fund or sales tax to support transportation funding nearly every year since FY 1998. The state has transferred nearly $1.6 billion into either the Centennial Highway Fund, the Transportation Investment Fund, or for various construction projects. These additions have been necessary, as the buying power of the gas tax has declined since it was last increased. It should be noted that one-time and ongoing funding has also been subtracted from these various transportation funds since FY 1998, amounting to $318.9 million. When the additions and subtractions are combined, $1.3 billion has been transferred to transportation funds since FY 1998.

THE UNIFIED TRANSPORTATION PLAN

According to projections of transportation needs, Utah's transportation infrastructure will require as much as $70.1 billion in revenue by 2040. However, the Unified Transportation Plan does not assume that there will be sufficient revenue to fund all needs. The plan carefully prioritized investments that would be most effective and necessary, and produced a more constrained estimate of $54.7 billion in revenue by 2040. Current funding sources are projected to amount to $43.4 billion, leaving a shortfall of roughly $11.3 billion in unfunded projects over the next thirty years.[21]

These projections were created for Utah's Unified Transportation Plan by a collection of Metropolitan Planning Organizations (MPOs), councils and government agencies, including: Cache MPO, Dixie MPO, Mountainland Association of Governments, Utah Department of Transportation, Utah Transit Authority and the Wasatch Front Regional Council. These groups estimate road capacity needs, as well as road maintenance and transit maintenance. Road capacity needs are projects that improve levels of service as defined by the American Association of State Highway Transportation Officials. Road maintenance, preservation, and operations include keeping existing and new infrastructure in good condition so that it functions efficiently and safely. Transit capacity needs include new infrastructure, maintenance facilities, and new fleet vehicles.[22]

The projections in the Unified Transportation Plan provide a valuable explanation for the funding gap that will occur if current revenue trends continue. This plan also provides revenue projections if the state increases the fuel tax, local option fuel tax, and vehicle registration fees each decade. This report uses these projections as a baseline. In addition to making sure Utah meets its infrastructure needs, policy makers should also address policies that manage demand. It is important to consider whether there should be a connection between how Utah's transportation system is funded and those who use it. Revenue sources can be linked to user charges in part for distributional equity, but also to help manage demand. Put simply, this report evaluates whether the proposed policies require those who benefit from the public spending on transportation to help pay for it.

FUNDING OPTIONS

As explained previously, this report explores several funding options that could possibly fill the funding gap for transportation. These funding options are currently used by other states, by the federal government or by other countries, and include changes to fuel, property and sales taxes, as well as other funding options. For each, this report describes the revenue source and the experience of the location in which it is used, it weighs the costs and benefits of the source, and it analyzes features such as equity, practicality, transparency, revenue-generating capacity, political viability, and whether the benefits reflect use. A list of these funding options is provided in Figure 7.

Figure 7: Funding Options

State Motor and Special Fuel Excise Tax	
	Increase Motor Fuel Tax CPG
	Index Motor and Special Fuel Tax to CPI
	Index Motor Fuel Tax to Infrastructure Costs
	Index Motor Fuel Tax to the Price of Gasoline
Sales Sales Tax on Fuel	
	Including the current excise taxes
	Excluding the current excise taxes
Other State Options	
	Severance and Refinery Taxes
	Increase Motor Vehicle Registration Fees
	State Financing Mechanisms
Funding Options from the Local or Regional Levels	
	Increase Local Option Sales Tax for Transit
	Implement a Local Sales Tax on Fuel
	Increase Local Taxes and Fees
	Increase Transit Rider Fares
	Increase in County Transient Room Tax
	Increase Taxes on Vehicle Rentals
	Enact a Transit Property Tax
Other Local or Regional Options	
Funding Options from the Federal Level	
Vehicle Miles Traveled Tax	
Congestion Pricing	
Public Private Partnerships	

FUNDING OPTIONS AT THE STATE LEVEL

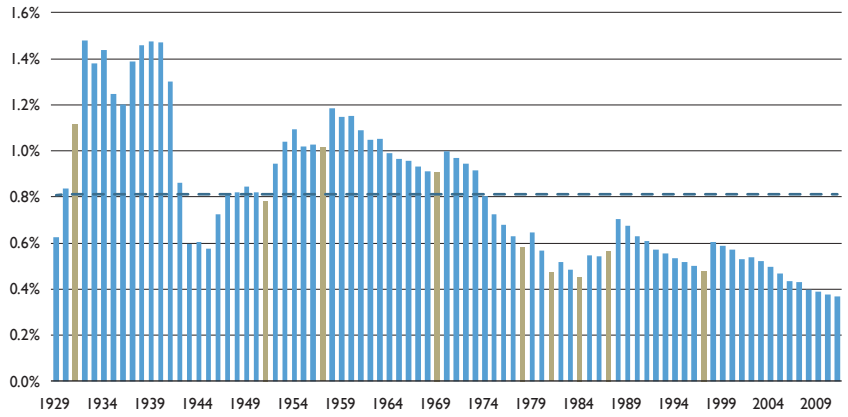
State Motor and Special Fuel Excise Tax

For almost a century, the motor fuel (gasoline) and special fuel (diesel) excise taxes have been the mainstay of highway finance in the United States. This funding method has the advantage of being roughly proportional to the distance traveled and thus has the desirable attribute of being a pay-as-you-go form of user charge. State fuel taxes for gasoline and diesel are the most important source of transportation funding under the control of state lawmakers.

In addition to the federal tax of 18.4 cpg on each of gasoline and diesel, every state levies additional taxes on both.[23] In Utah, the motor fuel tax was enacted in 1923 and was set at 3.5 cpg, and a special fuel tax on diesel was created in 1942 and set at 4.0 cpg. Both taxes are currently set at 24.5 cpg. Among the 50 states and Washington, D.C., Utah's gasoline tax is below the national average of 28.6 cpg, ranking the state 27th.[24] Utah's fuel taxes were last changed 15 years ago in 1997, when they were raised 5.5 cents from 19 cpg. This represents the longest stretch of time with no increase since 1952, and the third longest since the taxes were enacted. However, deflation during the Great Depression and recessions of the 1930s and 1940s effectively increased revenues during the 21-year stretch without a tax increase until 1952.

A recent report published by the Institute for Taxation and Economic Policy found that the states are collectively losing about $10 billion per year due to the increasing costs of construction that have occurred since the last time their gas tax rates were raised. After adjusting for transportation and cost growth, gas tax rates are about 17% lower than they were in 1990, and about 14% lower than they were in 2000.[25]

Figure 8: Utah Motor and Special Fuel Tax as a Percentage of Personal Income



Note: Tan bars signify years in which the fuel tax was increased; horizontal dotted line is the historical average.

Source: Bureau of Labor Statistics, calculations by Utah Foundation.

According to the U.S. Census Bureau, total state gas tax revenues nationwide in 2010 (not including sales taxes on gas) as a share of personal income were at a historically low level. As shown in Figure 8, this is especially true in Utah. In 2011, the motor and special fuel tax made up 0.4% of total personal income in Utah, the lowest point in the history of the gas tax. Between 1932 and 1941, the gas tax ranged from making up 1.3% and 1.5% of total personal income in Utah, the ten highest years for this tax burden in the state's history. Conversely, some of the lowest rates in history have been in the last seven years, when they have ranged from 0.4% to 0.5% of total personal income. This means that the state gas tax is a less significant component of families' household budgets than at any time in the more than 80 year history of the state gas taxes.

Increase Motor Fuel Tax

Several funding options are available to increase the revenue from the motor fuel tax. One is to increase the amount charged per gallon. Since the gas tax was enacted in 1929, the cpg rate has been increased by the Utah State Legislature ten times. The longest period of time in which there was no increase was between 1931 and 1951, when due to the Great Depression and rationing of gasoline during World War II, the state government let the fuel tax remain the same. The average amount of time between each increase is 7.7 years, with an average increase of 2.3 cpg (not adjusted for inflation).[26] The current amount of time since the state has increased the motor fuel tax currently stands at 15 years, double this average.

A major concern with setting motor fuel tax at a specific rate is that inflation diminishes the ability of the tax to generate revenue over time. It is estimated that because the fuel tax is not indexed to inflation, Utah lost $116 million in additional revenue between FY 1999 and FY 2008, following the 5.5 cpg authorized in 1997.[27] Due to inflation, the current rate of 24.5 cpg is equivalent to 17 cents in 1997, two cents below the tax rate at that time. Additionally, the U.S. Department of Energy predicts that fuel efficiency will improve substantially through 2025. Vehicles will be able to travel the same number of miles, but on fewer gallons of gasoline, significantly decreasing revenues. Without substantial increases in fuel tax rates per gallon, receipts are not likely to keep pace with costs.[28]

Motorists generally have a negative reaction to gas tax increases.[29] Opponents of the gas tax also argue that it is a regressive tax, meaning low- and middle-income families pay a much larger share of their income in gasoline taxes than do the wealthy.[30] According to research completed by the Institute on Taxation and Economic Policy, families in the lowest 20% income group pay about 0.4% of their income in state and local gas taxes nationwide, while the best-off taxpayers, those in the top 5% income groups, pay less than 0.1% of their income on these taxes.[31]

One policy option identified by the Unified Transportation Plan would be to increase the statewide fuel tax by five cents every 10 years starting by 2014. This policy is projected to keep the state roughly on par with growth in CPI. This change would generate revenue of about $15.2 billion by 2040, an increase of nearly $4 billion above current tax rates (these cumulative revenue estimates are all expressed in 2010 dollars). A similar plan would be to increase the tax rate by two cents every other year, similar to the increases on the tax between 1978 and 1984. This policy change would yield about $17.4 billion by 2040, an increase of $6 billion.

Index Motor and Special Fuel Tax to CPI

An alternative to using a fixed fuel tax rate would be to index the rates to the consumer price index (CPI). This would link the tax to the rate of growth in prices for items purchased by typical consumers. Currently, fuel taxes are charged at a per-gallon rate at the federal level and in most states, and rates only change when Congress or state legislatures make statutory revisions. In the late 1970s and early 1980s, a number of states altered the structure of their fuel taxes in response to lagging revenues that were not keeping up with expenses. Gasoline consumption in the U.S. dropped sharply in 1978 due primarily to a steep rise in gasoline prices and improved vehicle fuel efficiency. Some states responded to this by adopting fuel taxes, a portion of which are levied as a percentage of the fuel price, while another portion were indexed to the CPI or to some indicator of highway construction or maintenance costs. This strategy backfired in the early 1980s when fuel prices and inflation fell, forcing revenue collections to decline. Since that time, some of those states have gone back to the fixed per-gallon levy and periodic statutory increases.[32]

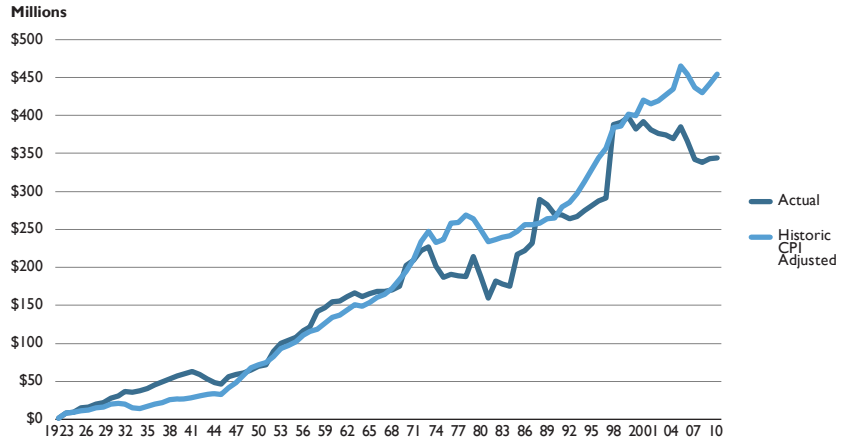
Over the past two decades, at least 15 states have tried some form of variable-rate gasoline tax. In many of these cases, the variable-rate

Figure 9: History of the Motor Fuel Tax in Utah

		Increase in Cents	Percent Increase	Years Since Last Increase
1923	Motor Fuel Tax is established at 2.5 cents per gallon (cpg)			
1925	Rate increased to 3.5 cpg	1.0	40.0%	2
1931	Rate increased to 4 cpg	0.5	14.3%	6
1951	Rate increased to 5 cpg	1.0	25.0%	20
1957	Rate increased to 6 cpg	1.0	20.0%	6
1969	Rate increased to 7 cpg	1.0	16.7%	12
1978	Rate increased to 9 cpg	2.0	28.6%	9
1981	Rate increased to 11 cpg	2.0	22.2%	3
1984	Rate increased to 14 cpg	3.0	27.3%	3
1987	Rate increased to 19 cpg	5.0	35.7%	3
1997	Rate increased to 24.5 cpg	5.5	28.9%	10

Source: Utah State Tax Commission.

Figure 10: Historical Fuel Tax Revenue (in 2010 Dollars) Compared to Revenue if Tax Rates Were Adjusted for Inflation Each Year



Source: Utah State Tax Commission, calculations by Utah Foundation.

tax was discontinued because it did not work as expected, such as during the early 1980s when gas prices and inflation fell, limiting the buying power of a tax tied to CPI.[33] In addition, when the cost of asphalt and other transportation inputs grow more quickly than the CPI, as was the case throughout much of the 2000s, revenues from this type of tax can be inadequate. The District of Columbia tried indexing its gas tax to CPI in 1982 with a formula that increased the gas tax rate from 13 cents to 15.5 cents in three years. However, due to concerns over losing business and revenue to nearby competitors in Maryland and Virginia, both of which had lower gas taxes, the indexing formula was repealed in 1985 and statutory rate adjustments resumed.[34]

Several state gasoline taxes are currently indexed to CPI. In Florida, the tax rate has changed annually based on CPI since 1990. In 2011, the indexed portion accounted for 19.5 cents of the state fuel tax of 23.5 cents per gallon.[35] Maine increased its fuel tax and began indexing it annually in 2003. Additionally, a portion of New York's fuel tax is indexed to inflation. Several other states have a variable gas tax rate, meaning the gas tax is adjusted without legislative intervention at a specified interval, usually quarterly, semi-annually or annually.[36]

Indexing the gas tax to the CPI would result in modest and predictable increases in nominal gas tax rates in most years. An important result of this is that it would provide a more predictable revenue source. In addition, legislators and the public would not need to revisit this issue and debate a controversial tax increase every decade or so.

Efforts to index the motor fuel tax to CPI would face the same challenges as any tax increase, with the added problem that simply indexing Utah's current motor fuel tax would result in a very small initial increase in revenue. To make the gas tax adequate to current highway funding needs, lawmakers would need to enact a rate increase to make up the diminished revenue generating power of the current tax, and then index it. An example of the difficulty of indexing a gas tax can be found in Utah. A Republican-led "Growth Summit" recommended indexing the gas tax to inflation in 1995 to help deal with the rapid growth the state was experiencing and in planning for the 2002 Olympics. However, opponents argued that this would enact an automatic tax increase without public input and might set a precedent for other taxes. Additionally, Democrats in Utah opposed the increase in general, claiming it was regressive.[37]

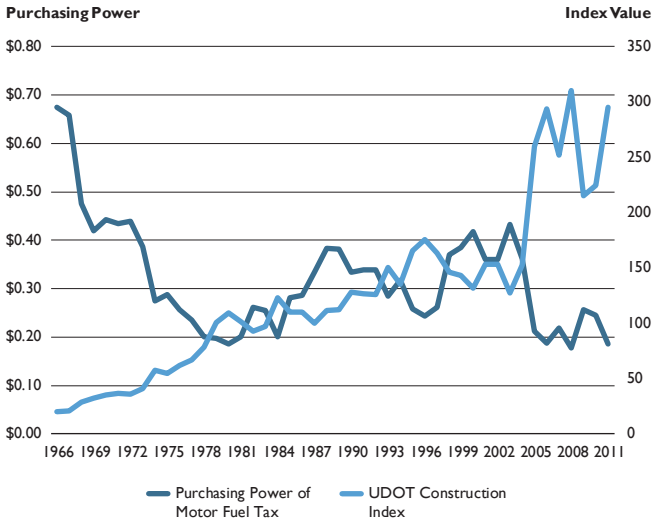
Indexing the gas tax to CPI has proved unpopular because it compounds the impact on consumers and increases the retail price of gasoline. Opponents argue that indexing the rate of taxation on a necessary item diminishes buying power, especially during times of economic hardship. This can lead to legislators being pressured to suspend or eliminate indexing during times of recession or high gas prices.[38]

If the current motor and special fuel tax were adjusted to CPI beginning in 2014, these taxes would yield $14.5 billion by 2040, an increase of about $3.3 billion. If instead the tax rate were increased to 33.1 cpg in 2013, which is the inflation-adjusted 1997 rate, and then indexed to CPI, the state would collect $18 billion by 2040, an increase of $6.8 billion over current tax rates.

Index Motor Fuel Tax to Infrastructure Costs

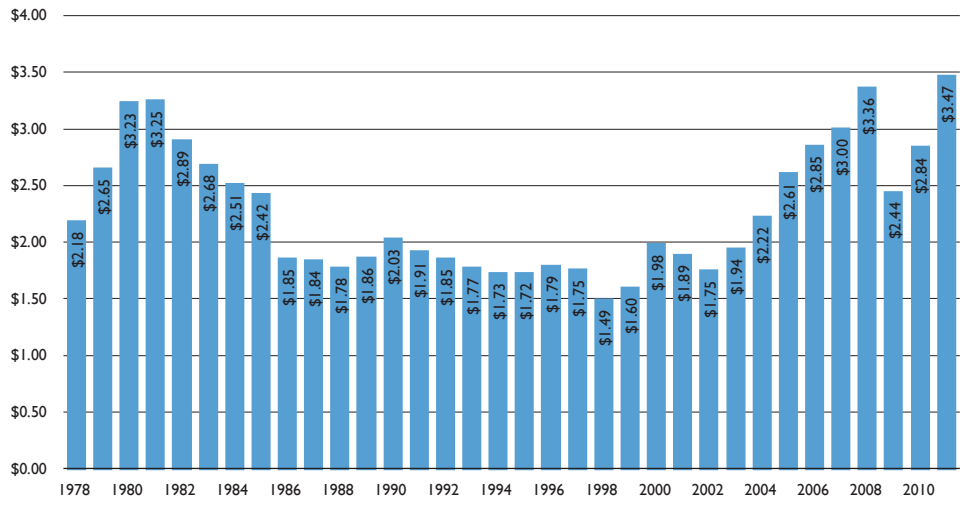
As noted in the previous section, lawmakers can index the motor fuel tax to factors other than the broad, overall CPI. More specifically, it has been argued that tying the gas tax to infrastructure costs is the most direct path for accommodating the increases in the price of asphalt, machinery, and other transportation inputs. Since revenue from the motor fuel and special fuel taxes fund road capacity and maintenance, it is important that they can adequately fund a state's infrastructure needs while keeping up with the costs of building. As shown in Figure 11, adjusting motor and special fuels taxes by using the UDOT Construction Index shows these taxes losing considerable purchasing power over time, not providing sufficient revenue to cover cost increases in transportation construction and maintenance. According to the Institute for Taxation and Economic Progress (ITEP), indexing the gas tax to transportation construction costs is the best

Figure 11: Purchasing Power of Motor and Special Fuels Tax (2010 dollars)



Source: Utah Department of Transportation, calculations by Utah Foundation.

Figure 12: Real Average Price of Gasoline in the U.S. (2010 Dollars)



Source: Energy Information Administration.

option for reforming state gas taxes because it ties use to the costs of maintaining the infrastructure.[39]

A major challenge for enactment of this type of reform is that no state currently ties their motor fuel tax to infrastructure costs. Though ITEP argues that the gas tax would simply need to be tied to the national Composite Bid Price Index and the National Highway Construction Cost Index, legislators may not be familiar with these indices or comfortable using them.[40] While Michigan and Ohio have levied a tax in this manner in the past, no state currently uses it, meaning there is no model to use as an example. In addition, the UDOT Construction Index shows how volatile construction costs are, meaning the tax would fluctuate significantly over time. It should be noted that it is because of this volatility that Utah Foundation did not model revenue projections of a motor fuel tax tied to this index.

Index Motor Fuel Tax to the Price of Gasoline

Instead of indexing their gasoline tax to CPI or construction costs, several states have adopted a combination percentage and fixed-rate gasoline tax. This type of index closely resembles a traditional sales tax. In North Carolina, the state legislature adopted a tax in 1986 wherein part of the tax is set at a fixed rate with a supplemental tax rate of 3.0% of the average wholesale price. Similarly, Georgia has a gasoline tax of 7.5 cpg and a "second motor fuel tax" of 3.0% of the retail sales price.[41] Other states in which the gas tax varies with gas prices include California, West Virginia, New York, Kentucky, New Hampshire and Connecticut. In Nebraska, the fuel tax can change twice a year, on July 1 and January 1, based on a complicated formula that takes into account the wholesale price of gasoline, driving trends, and the budget of the Nebraska Department of Roads.[42]

A benefit of this type of index is that even with the volatility of gas prices, it still provides a more sustainable revenue stream over the long-term than a fixed-rate state gas tax. This is especially true if it is paired with volatility reducing techniques like limiting rate changes or imposing floors and/or ceilings on the tax.

A challenge with this type of index is that transportation costs tend to rise much more steadily over the time than the price of gasoline. In addition, the price of gasoline can be very volatile, rising or falling 20% one year to the next, as shown in Figure 12. This volatility can pose a serious challenge when trying to predict revenue.

Motor Fuel and Special Fuels Forecasts

Utah Foundation has modeled several of the aforementioned scenarios for increasing the motor and special fuel excise taxes with data from 2011 and 2012 through 2040. These include models of the status quo of no tax changes, the increases proposed by the Unified Transportation Plan, increasing the taxes to account for lost purchasing power from the last increase in 1997 while indexing to CPI, indexing the taxes to CPI beginning in 2014, and lastly a two-cent increase every other fiscal year. To maintain compatibility with the Unified Transportation Plan, all of these figures are expressed in 2010 dollars and assume the taxes would have been imposed in 2011.

To understand a range of potential outcomes, motor fuel and special fuel tax forecasts were modeled under identical assumptions which include growth forecasts with low, medium and high estimates. However, only the medium-growth projections are included in the figures in this report. These growth forecasts include the change in Consumer Price Index (CPI), and gasoline and special fuel consumption rates. The change in CPI ranges from 1.85% year-over-year in the low model, to 2.25% in the medium model, and 2.75% in a high model based on historical trends. These same growth rates in CPI are consistently used in other models outside of these fuel tax models. The change in motor fuel consumption, in the terms of gallons, ranges from 1% year-over-year in the low model, to 2% in the medium model, and 3% in a high model based on historical trends. The change in special fuel consumption in terms of gallons ranges from 3.0% year-over-year in the low model, to 4.5% in the medium model, and 6.0% in a high model based on historical trends. Again, for simplicity, only the medium-growth projections are shown in the figures in this report.

Status Quo

The Status Quo model keeps current taxes unchanged to 2040. However, this model applies the aforementioned assumptions to the three different growth scenarios to act as a baseline model. The status quo demonstrates the diminishing purchasing power of holding a tax constant without adjusting for inflation (CPI). By 2040, the current tax rate of $0.245 cpg is projected to diminish to a real level of $0.125 cpg. According to this model, the current motor fuel tax will generate about $11.2 billion in cumulative revenue from 2011 to 2040 (in 2010 dollars).

The Unified Plan

The Unified Plan model is based on the motor fuel and special fuel tax increases from 2011 Unified Transportation Plan. These increases begin in 2014 increasing the rate by $0.05 cpg from $0.245 cpg to $0.295 cpg. This rate holds constant until 2024, when the rate is again increased by $0.05 cpg to $0.345 cpg and again in 2034 to

Figure 13: Motor and Special Fuel Tax Revenue Scenarios 2011-2040 (millions of 2010 dollars)

	2011-2040 Total Revenue	Increased Revenue
No Change in Taxes	$11,193	
Unified Plan Taxes (5-cent increase every 10 years starting in 2014)	$15,188	$3,995
Increase Fuel Tax by 9 Cents and Adjust Annually for Inflation	$18,033	$6,840
Adjust Current Fuel Tax Rate Annually for Inflation	$14,484	$3,291
Biennial 2-Cent Incremental Increase	$17,379	$6,186

Source: Utah Foundation.

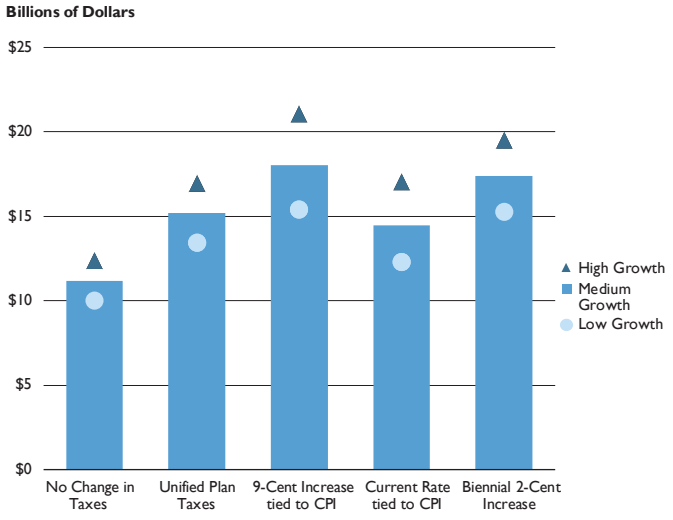
$0.395 cpg. While CPI does not adjust this model's rates, the rates are affected when valuing the revenue in real 2010 dollars. Though the Unified Plan did perform its own revenue forecasts, Utah Foundation also produced projections that were consistent with its own assumptions and thus comparable to the other models in this report. According to this model, the state would receive $15.2 billion in revenue from 2011 to 2040, an addition of $4.0 billion over the status quo.

Increase Fuel Tax by Nine Cents and Adjust Annually for Inflation
This model would increase the fuel tax rate to account for the change in CPI since that tax was last increased in 1997. This would increase the rate from $0.245 cpg by roughly $0.09 cpg to between $0.336 and then adjust for CPI annually. According to this model, the state would generate revenues of $18.0 billion from 2011 to 2040, an addition of $6.8 billion over the status quo.

Adjust Current Fuel Tax Rate Annually for Inflation
This model would use a similar formula as described above, but it would not account for any previous change in CPI. The tax rate would increase from $0.245 cpg annually starting in 2014. According to this model, the state would generate revenues of $14.5 billion from 2011 to 2040, an addition of $3.3 billion over the status quo.

Biennial Two-Cent Incremental Increase
A similar policy to the Unified Plan would be to increase the motor fuel tax rate by two cents every other year, beginning in 2014. According to the model, this policy change would result in $17.4 billion in revenue by 2040, an addition of $6.2 billion over the status quo.

Figure 14: Comparison of Fuel Tax Options Total Revenue, 2011-2040 (2010 Dollars)



Source: Utah Foundation

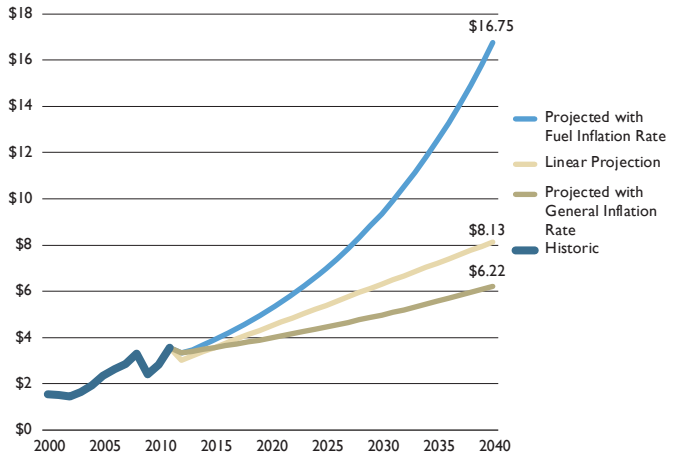
State Sales Tax on Fuel
Some states levy a sales tax on gasoline, either instead of or in addition to a motor fuel tax. In total, 11 states and Puerto Rico have state-level sales taxes on motor or special fuels. Of the states that have a sales tax on motor or special fuels, seven of them (California, Florida, Georgia, New York, Tennessee, Vermont and West Virginia) have a special statewide sales tax on gasoline or diesel, and seven states (California, Florida, Georgia, Hawaii, Illinois, Indiana and Michigan) make motor fuels subject to some or all of the statewide general sales tax. In addition, seven states impose other taxes on fuel distributors or suppliers (Connecticut, Hawaii, Nebraska, New Jersey, New Mexico, New York and Pennsylvania). Nearly all of these states dedicate some or all of those revenues to transportation; the exception to this is Hawaii, where only one county-level surcharge is used for transportation purposes.[43]

A statewide sales tax on gasoline would provide several benefits to Utah. First, it would provide an additional revenue source. Whether the state imposed its general sales and use tax of 4.7% on all gasoline purchased or even subjected gasoline to a reduced portion of this, a significant amount of revenue would be added to the Transportation Fund. A sales tax on gasoline would also have the benefit of being tied directly to use. Those who rely on gasoline and the transportation system would be paying directly into the transportation fund via the sales tax. In 2012, Maryland Governor Martin O'Malley proposed a sales tax to fulfill just that purpose. He proposed a sales tax of 6% on gasoline, in addition to the current $0.23 cpg tax, which would help fund a backlog of highway and transit projects.[44] A statewide sales tax on gasoline could also be paired with a local fuel tax, this would provide additional revenue, especially for city and county roads. This option will be further evaluated later in this report.

A sales tax on gasoline could be viewed as a double-tax on the same product, and though double taxation does exist in other areas such as income taxes on dividends or capital gains, it could be difficult to implement politically. Since consumers are already charged an excise tax that is paid by the gallon, adding a sales tax based on the price may seem onerous. In addition, just as opponents of indexing the gas tax to CPI argue that as prices go up, people are forced to pay additional taxes at a time when the product is less affordable, the same argument can be made here. Sales taxes are also considered regressive and are more difficult for those in lower income brackets to pay because the amount paid represents a larger proportion of their income than for wealthier individuals. In fact, this has been a controversial political issue in recent history. In April of 2012, candidates and politicians in Indiana debated whether they should suspend or even eliminate the sales tax on gasoline. Opponents of the sales tax argued that removing it would relieve tax payers and benefit businesses. However, this plan would cost Indiana an estimated $540 million per year in lost revenue.[45]

Utah Foundation modeled two scenarios for applying a statewide sales tax of 4.7% to gasoline and diesel sales. These include options of levying the sales tax on the total price of fuel including the current state excise taxes and the option of excluding the excise tax from the price of fuel for purposes of applying the sales tax. These forecasts include the change in fuel consumption and price of fuel and are adjusted to current dollars with assumed changes in CPI. Figures 15 and 16 on the following page highlight the projected costs of gasoline and diesel. In addition, Figure 17 shows that the state would receive

Figure 15: Forecasted Price of Gasoline (Nominal)



Source: Energy Information Administration, projections by Utah Foundation.

between $10.7 to $19.7 billion in additional revenue if a sales tax of 4.7% on gasoline were implemented in addition to the current excise tax. If the tax were levied on the price of fuel excluding the state fuel tax, the state would receive $9.8 to $18.7 billion in additional revenue.

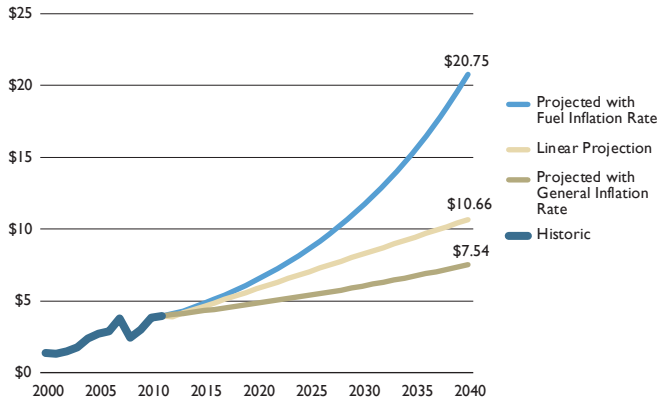
Other State Options

State Severance and Refinery Taxes

Most of the top oil-producing states charge a wellhead tax when an oil company extracts oil or natural gas.[46] The wellhead tax is a volume-based tax; for oil it is usually measured as a tax per barrel, and for natural gas it is usually measured as a tax per thousand cubic feet, also known as MCF. The wellhead tax is based on the value of the petroleum when it is extracted from the well before it is refined, which is why it is also called a severance tax.

Utah has a long history of implementing severance taxes. In 1937, the state imposed a 1% severance tax on the net proceeds from the sale of metallic ores such as gold, silver, copper, lead, uranium and other valuable metals. In 1956, a 1% severance tax was also applied to oil and natural gas production.[47] The severance tax for oil is currently 3% of the value of oil for the first $13 per barrel of oil and 5% if the value is $13.01 or higher. For natural gas, the severance tax is 3% of value for the first $1.50/MCF and 5% if the value is $1.51 or higher.

Figure 16: Forecasted Price of Diesel (Nominal)



Source: Energy Information Administration, projections by Utah Foundation.

Figure 17: Fuel Sales Tax Revenue Scenarios 2011-2040 (millions of 2010 dollars)

	Increased Revenue
4.7% Sales Tax on Fuel Price *Including* Current Excise Taxes (fuel prices adjusted for general inflation)	$10,766
4.7% Sales Tax on Fuel Price *Including* Current Excise Taxes (linear projection of fuel prices)	$12,874
4.7% Sales Tax on Fuel Price *Including* Current Excise Taxes (fuel prices adjusted for fuel-specific inflation rates)	$19,677
4.7% Sales Tax on Fuel Price *Excluding* Current Excise Taxes (fuel prices adjusted for general inflation)	$9,845
4.7% Sales Tax on Fuel Price *Excluding* Current Excise Taxes (linear projection of fuel prices)	$12,021
4.7% Sales Tax on Fuel Price *Excluding* Current Excise Taxes (fuel prices adjusted for fuel-specific inflation rates)	$18,747

For natural gas liquids it is a flat 4% tax. Currently, the revenue from these taxes goes directly into Utah's General Fund. In 2012, voters narrowly approved of a constitutional amendment that will require a portion of the state's severance taxes be deposited into the permanent state trust fund beginning July 1, 2016. Under current law, severance tax revenue generated from oil and gas removed from Indian lands is set aside to be used for the benefit of Indian tribes in Utah, the remainder of severance tax revenue is places in the state's General Fund to be used for general state purposes.[48]

There are two types of reform that could be made to Utah's severance taxes on oil and gas. First, some of the revenue could be dedicated to the Transportation Fund. Second, an additional tax could be implemented at the refinery level. Supporters of this would argue that since Utah has a finite amount of oil in the ground, the citizens of Utah should get a permanent benefit from the removal and refinement of that oil. However, this type of tax could have challenges in the political arena, especially since in recent years there have been more arguments about giving refineries tax breaks to incentivize them to expand rather than imposing new taxes.[49] In addition, Utah only has five major refineries, so a refinery tax may seem too focused on such a small number of companies.[50] This may also shift refinement of oil to the 14 neighboring refineries in Colorado, Wyoming, Montana, and Nevada.[51]

Vehicle Registration Fees

Lawmakers could also raise or index motor vehicle registration fees. The annual statewide fee paid by vehicle owners to meet state registration requirements has not been increased since 1997. At that time, some of the fees were increased by as much as $10. If fees were to be increased to keep up with inflation in 2011, fees would need to be increased as high as an additional $10, as shown in Figure 18. If the vehicle registration fee were increased by $10, the state would receive an additional $1.4 billion in revenue by 2040.

Figure 18: Vehicle Registration Fees

Vehicle Type	Fee Prior to 1997 Increase	Current Fee (1997 Increase)	Current Fee Adjusted for Inflation Since 1997
Motor vehicle (12,000 lbs or less)	$11.00	$21.00	$30.04
Motorcycle	$12.50	$22.50	$32.18
Trailer/semitrailer over 750 lbs	$10.00	$11.00	$15.73
Commercial trailer/semitrailer less than 750 lbs	$7.50	$8.50	$12.16
Vintage Vehicle (initial registration only)	$10.00	$20.00	$28.61

Sources: Office of Legislative Research and General Counsel, Bureau of Labor Statistics, 2012 inflation based on Utah Foundation calculations.

Alternative Fuel Vehicles
Finally, the state can determine how alternative fuels should be taxed. Though there is currently a severance tax on the mining of natural gas, it may only be a matter of time until lawmakers choose to tax users of natural gas for vehicle fuel.

State Financing Mechanisms

The state utilizes bonds to finance large capital projects, including new construction, major remodeling, and highway projects. The Utah Constitution caps the debt limit total general obligation at 1.5% of the value of Utah's taxable property. The statutory debt limit further caps general obligation debt to 85% of the constitutional debt limit unless approved by more than two-thirds of the Legislature. This is in done in part to ensure the state keeps its "Triple A" rating from the three national rating agencies (Moody's, Fitch, and Standard and Poor's). Currently, Utah is one of only eight states that have a "Triple A" rating.

In addition, The Utah Department of Transportation has historically incurred 15-year debt terms, shorter than the industry standard of 30 years. By comparison, Utah Transit Authority typically issues 30-year bonds for its projects. Longer debt terms for highway projects would allow the current level of annual debt service expenditures to finance a larger portfolio of capital projects.

In 2011, Utah issued $600 million in previously authorized bonds at a 2.78% true interest cost. That same year, though they gave Utah a "Triple A" rating, all three rating agencies noted Utah's increasing debt levels. Per-capita general obligation debt is at a historical high, Utah reached 87% of the constitutional debt limit in 2012 as a result of increased bonding for highway projects and a decrease in property value.

Transportation projects have had the most influence on the constitutional debt limit in recent years, with debt funding transportation projects from FY 2009 through FY 2014 enabling the state to triple capital expenditures during the recession, bolstering Utah's economy at the time. Significant increases in debt service have resulted from these bonds beginning in FY 2011. In fact, a majority of the revenue in the transportation fund is dedicated to paying off debt service for the next several years. According to the Legislative Fiscal Analyst's Office, transportation revenues will be sufficient to pay debt service on existing and anticipated bonds, but do not support additional bond- or cash-funded highway projects until FY 2015.[52]

FUNDING OPTIONS FROM THE LOCAL OR REGIONAL LEVELS

As explained earlier, transit, highways and roads are also funded by local option taxes and fees. In FY 2011, local sales and use taxes generated over $191 million to help fund transportation, or about 8.5% of all funding sources.[53] They are used for public transportation, the expansion of public transportation, local highways, state highway projects, and airport projects and services.

Local Option Gas Tax
There are at least 15 states that authorize local option motor fuel taxes, including several western states such as Alaska, Hawaii, Nevada, New Mexico and Oregon. These local gasoline taxes are only widespread in a handful of these states but have proven to be important sources of revenue. Most of these states require that revenue from local option gas taxes be used for transportation purposes, but a few, such as Alabama, Alaska and New Mexico allow other uses, such as funding for schools or health care.[54]

Analysis of the states that allow this type of tax has shown that these taxes are typically open-ended in duration, are not earmarked in advance for specific projects, and do not require voter approval. They are administered similarly to state and federal gasoline taxes, with revenues being placed in trust funds and local agencies then drawing upon them for routine operations. In those states where local option fuel taxes have been widely adopted, they are used primarily for local and county roads.[55]

Local fuel taxes generate a relatively stable revenue stream that is sufficient to support long-term maintenance, operation, and routine expansion of local transportation systems. In addition, the tax is paid by automobile drivers, meaning those that benefit from the local transportation system are supporting it.

A local fuel tax would suffer from the same problems associated with state and federal fuel taxes. If the tax is not tied to inflation, its revenues would decline over time, thus losing their purchasing power. In addition, local option fuel taxes that are based on a per gallon basis lose purchasing power as cars become more fuel-efficient. Implementing a local fuel tax in addition to already existing state and federal fuel taxes would increase the cost of gasoline, and likely face opposition from consumers. Another concern is that consumers may avoid these taxes by purchasing fuel from neighboring jurisdictions that do not impose such a tax, which could prove disruptive to local businesses that sell fuel. This could be countered to a large extent by region-wide taxes, perhaps including all or most of the Wasatch Front counties. Another challenge is that fuel taxes are currently collected from refiners and wholesale distributors who do not track fuel deliveries by local jurisdiction.

Local Sales Tax on Fuel
As noted earlier in this report, enacting a local sales tax on fuel could also provide additional revenue. There are three states that currently have local sales taxes on gasoline. Georgia allows a local sales tax on gasoline which vary by county and city, and are applied on a cpg basis weighted by population.[56] In Illinois, the state's share of the sales tax is 5%, while local governments receive 1.25%, both of which are applied to motor fuel. Some municipalities then add their own sales taxes on fuel, ranging from 0.25% in small communities to 3.5% in Chicago.[57] In New York, local county sales taxes can be applied to motor fuels as a cpg or on a percent basis, with most counties opting for a 4% sales tax.[58] A local sales tax on fuel would have many of the same advantages and challenges as a state sales tax. It would provide additional revenue, linking those who rely on gasoline with the funding of the transportation system. However, it could be seen as a double-tax on a product that already has several fees and taxes, and sales taxes in general are regressive, placing more of a burden on low-income individuals than on others.

Local Option Sales Tax for Transit
Another funding option would be to increase the local option sales tax for transit. Communities have shown a willingness to tax themselves in order to receive benefits. For instance, in November 2006, the residents of Salt Lake and Utah counties voted to increase their sales tax by a 0.25% rate increment in order to fund work on

Figure 19: Local and State Sales Tax for Western States

	Local Sales Tax Rate	State Sales Tax Rate	Combined Local and State Rate
Boise, ID	0.00%	6.00%	6.00%
Seattle, WA	3.00%	6.50%	9.50%
Los Angeles, CA	1.50%	7.25%	8.75%
Phoenix, AZ	2.00%	6.60%	8.60%
Las Vegas, NV	1.25%	6.85%	8.10%
Albuquerque, NM	1.88%	5.13%	7.00%
Salt Lake City, UT	0.90%	5.95%	6.85%
Denver, CO	3.62%	2.90%	6.52%
Cheyenne, WY	1.00%	4.00%	5.00%
Billings, MT	0.00%	0.00%	0.00%
Portland, OR	0.00%	0.00%	0.00%

Note: In Albuquerque, the sales tax is administered as a gross receipts tax on goods and service providers, that is then passed on to the consumer.

Source: State and local tax agencies.

light rail projects and the FrontRunner south line. This additional funding accelerated the delivery of these projects 15 years earlier than projected.[59] Public acceptance of passing legislation for higher taxes for transit was also a trend throughout the 1990s, including in states such as: Alabama, Arkansas, Colorado, Hawaii, Iowa, Missouri, New Mexico and North Carolina.[60] A 0.25% rate increase in the transit sales tax in each of the six counties that UTA serves would provide about $3.8 billion in revenue from 2011 to 2040 (in 2010 dollars).

When sales tax changes are considered, a common question is how much "headroom" exists within current sales tax rates for additional increases. In other words, is a higher rate reasonable for consumers and for the economic competitiveness of the region? Figure 19 shows combined state and local sales taxes for the largest cities in the western states. Of the nine states that use sales taxes, the combined tax rate in Salt Lake City is fourth lowest and below the regional average, implying that there is some headroom available while still remaining competitive with most of the metropolitan areas in the west.

An increase in these local taxes and fees could produce more revenue, but like any increase, could face obstacles. This is especially the case for a sales tax, which places a proportionately greater burden on low-income households. Additionally, an increase in this type of tax would not have a relationship with transit or road use. Those who are against a sales and use tax increase, or against the use of these taxes and fees for transportation, argue that there is no interaction between the tax and the demand for transportation. They stipulate that there should be a connection between spending plans and user charges in part for distributional equity, but also to help manage demand. In other words, those who benefit from the public spending on transportation should help pay for it. A separate rationale for charging users rests on the goal of economic efficiency.

Rider Fares

Directly related to transit, UTA could generate revenue by changing its fees or fares. UTA currently charges the riders of buses, TRAX and FrontRunner a flat fee, though round-trip, daily and monthly passes can be purchased. A flat fee like this is common, and is also used by transit systems in Boston, Chicago and New York, just to name a few. However, other cities have a system that charges users based on the time of day and distance traveled. For instance, in Washington, D.C., pricing of the rail system is based on distance traveled and whether the user is riding during peak or off-peak hours. This pricing system assigns a minimum and maximum rate to these different time periods as well.

A fee system that is based on distance and time could yield additional revenue in Utah. UTA's TRAX system now extends from the northeastern edge of the valley at the University of Utah and downtown Salt Lake City to Daybreak and West Valley on the southwestern edge of the Salt Lake Valley. Soon, TRAX will extend to Draper on the southeastern edge of the Salt Lake Valley and Salt Lake International Airport in the northwestern portion. In addition, FrontRunner commuter trains run from Ogden to Provo. This very large rail system produces a wide range of trip length for passengers, making variable fares based on distance a potentially logical alternative to current flat rates.

Raising fares, especially on bus service, affects those UTA riders who are lower-income, economically vulnerable populations who have difficulty affording the increased costs. However, increases in fares do not seem to have affected use of UTA's services. Data show that ridership of TRAX has steadily increased ever since it opened in 1999, with an anticipated decline in bus ridership.[61] In addition, year-over growth in the first quarter of 2012 for total ridership increased 34.1%, the second highest growth rate in the nation.[62]

In addition to changing its fare structure, UTA could also charge for parking in its FrontRunner and TRAX lots. UTA owns all of the Park and Ride lots for FrontRunner, and either owns or co-owns many of the lots for TRAX or bus service. The remaining lots are owned by the LDS Church, UDOT or local businesses. Only one of these lots requires a permit. Charging a daily or hourly rate for parking, as many other transit systems do throughout the country, could provide an additional source of revenue for UTA. However, charging a fee could also discourage ridership. In addition, since many of the areas around Trax parking lots have free and plentiful parking, riders may just use street parking or nearby business parking lots instead.

County Transient Room Tax

An increase in the county transient room tax is another option to increase revenue for public transit. This type of tax is typically applied to property or rooms that are rented thirty days or less at a time. This tax has the benefit of taxing visitors to the state, so the tax burden is not placed primarily on residents. However, revenues from this tax are rather volatile, and would not provide a revenue stream that is consistent from one year to the next. Transient room taxes can be levied by cities and counties, and combined rates within the UTA service area range from 3.5% to 6.25%. According to Utah Foundation projections, if the county transient room tax were increased by 1% in the six counties that UTA services, it would provide $139 million from 2011 to 2040 (in 2010 dollars).

Rental Vehicle Tax

Also during the 1990s, several states, including Utah, authorized new taxes on vehicle rentals, though a political backlash against high personal property taxes on motor vehicles led to their elimination in several states. A 1.0% increase in this tax statewide would yield $71 million in revenue from 2011 to 2040 (in 2010 dollars).

Local Option Property Tax

A final option would be to create a new local option property tax increment for transit. These projections indicate that a 0.1% increase in the property tax in the counties in which UTA operates, additional revenue of $5.8 billion would be brought in from 2011 to 2040 (in 2010 dollars).

Figure 20: Local Revenue Scenarios 2011-2040 (in millions of dollars)

County Transit Tax Revenue Scenario	Increased Revenue
Increase Transit Tax by 0.25% Across UTA Service Area	$3,754

Transient Room Tax Revenue Scenario	Increased Revenue
1% Increase in Transient Room Tax Across UTA Service Area	$139

State Rental Car Revenue Scenario	Increased Revenue
1% Increase in Rental Car Tax	$71

County Property Tax Revenue Scenario	Increased Revenue
Enact a Transit Property Tax of 0.1% in UTA Counties	$5,779

Source: Utah Foundation.

Other Local or Regional Options

Some cities have capitalized on value capture programs around central business districts or major transit locations. In many areas, the impact of public transportation on land values is found to be positive, especially when government policies encourage coordinated land use or discourage car use. In addition, rail systems have been found to have a much larger effect on land values than bus routes.[63] However, bus rapid transit (BRT) systems are growing in popularity in North America, and it has been found that significant economic development can occur around BRT stations, including retail, business, residential and industrial developments. [64] Some planners and economists suggests that cities could fund transit system development costs and operating costs from land value capture, that is, by taxing a portion of the additional value of adjacent properties that result from transit accessibility.[65] This would be similar to Tax Increment Financing (TIF) utilized by redevelopment agencies for local development projects and programs.

Redevelopment agencies (RDAs) fund projects utilizing tax-increment financing tools that capture increases in property taxes due to area redevelopment. Several RDAs around the U.S. are in involved in transit and transit oriented development (TOD) financing. The Salt Lake City RDA recently provided $2.25M to the Sugar House Streetcar project which will run between the TRAX stop at 2100 South and the center of the Sugar House neighborhood at 1050 East and is expected to open in December 2013. The agency is also exploring a downtown streetcar project. More commonly, RDAs fund TOD projects including commercial and residential project financing, transit station design and construction, and smaller projects such as traffic signals for new transit areas and pedestrian pathways linking transit to commercial areas.

There are several examples of metropolitan areas successfully implementing value capture programs. Hong Kong's rail transit system is partially funded from land rents derived from development in station areas. In addition, it has been estimated that the added land values that followed the development of Washington D.C.'s Metro and the London Tube generated surpluses for each of their respective cities.[66] Taiwan also has a land value incremental tax that is imposed on income realized from the sale of land or capital gains from land transactions around transit facilities.

Other approaches could include naming rights for bridges, commercializing interstate rest areas, a tax based on street frontage, and increasing the cost to advertise on UTA buses and trains.

PUBLIC PRIVATE PARTNERSHIPS

Some states and communities have also looked to funding from public-private partnerships. Public-private partnerships have actually been in existence for some time, but as the level of private involvement changed they became more well known in the mid-1990s and have grown more common in the ensuing decades. Projects that were funded by public-private partnerships include new road and bridge construction in Germany, the expansion of ports in Eastern Europe, and the extension of urban transit systems across Asia. Public-private partnerships have also been developed in the United States. Within the U.S. between 2005 and 2010, $7 billion was planned to be invested in public-private partnership rail projects, and $43 billion in roads, however, it is estimated that many of these programs were not developed, bringing the investment totals down significantly.[67] In addition, public-private partnerships have generally been a financing mechanism for transit projects, less so for roads and highways.

No projects that involve public-private funding have yet been implemented in Utah, but opportunities do exist. For example, in recent years several entities have proposed a Mountain Transportation System, which would allow riders to travel from Salt Lake to area ski resorts via a rail or tram system. This type of project could be funded by a combination of interested private entities as well as the state or local agencies.

FUNDING OPTIONS FROM THE FEDERAL LEVEL

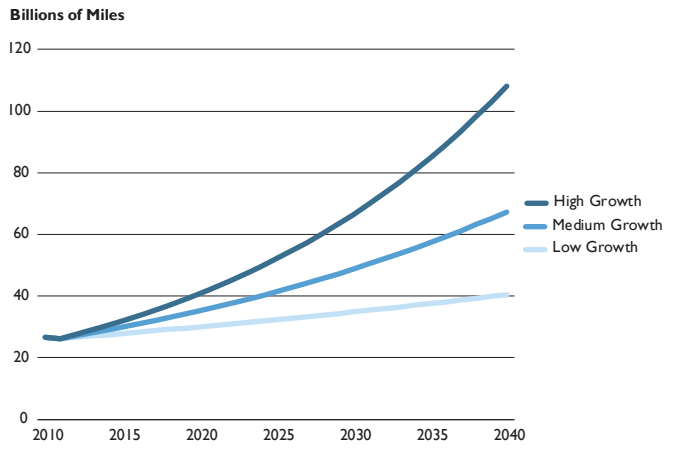
Federal funding has been a key component of highway and transit funding for many years, but the reliability of this funding source is diminishing. Currently, spending from the HTF exceeds its revenues, and since the HTF is prohibited by law from incurring negative balances, the portion of the trust fund devoted to highway projects has received almost $30 billion in transfers from the general fund to allow the U.S. Department of Transportation to meet its obligations.[68]

In addition, when the federal spending bill for transportation (SAFETEA-LU) expired in 2009, Congress did not pass another one until nearly three years later. On July 6, 2012, President Obama signed into law the Moving Ahead for Progress in the 21st Century Act (MAP-21), funding surface transportation programs at over $105 billion for the next two years. This is the first long-term transportation authorization enacted since 2005 and provides needed funds and guidance to the growth and development of the country's transportation infrastructure.[69] However, it represents a break from the historical practice of passing five-year authorizations for transportation funding. It also highlights the difficulty Congress has had in passing a long-term spending bill for transportation, and how states may not be able to rely on this funding as much as they once did.

VEHICLE MILES TRAVELED TAX

Vehicle miles traveled (VMT) taxes, or mileage taxes, are levied on motorists based on how many miles they travel. In general, VMT refers to the number of miles traveled by motor vehicles, usually measured annually. Instead of taxing fuel consumption, a VMT tax

Figure 21: Projected Vehicle Miles Traveled



Source: Utah Foundation.

charges drivers based on road consumption by measuring mileage. The goals of VMT taxation would be to create a revenue source that does not decrease as cars become more fuel-efficient, that maximizes the efficient use of highways, and that minimizes traffic.

Several states and cities have performed pilot tests to see whether a VMT tax would work in their areas. In 2001, the Oregon Legislative Assembly passed a bill creating the Road Use Fee Task Force. The new law charged the task force with developing a new road revenue system alternative to the gas tax. After consider 28 different funding ideas, the task force recommended the Oregon Department of Transportation (ODOT) conduct a pilot program to study two strategies called the Oregon Mileage Fee Concept. This program was charged with studying the feasibility of replacing the gas tax with a mileage-based fee based on miles driven in Oregon and collected at fueling stations.

ODOT launched a 12-month pilot program designed to test the technological and administrative feasibility of this concept. The program included 285 volunteer vehicles, 299 motorists, and two service stations in Portland. ODOT found the pilot program to be viable, and by using existing technology in new ways, a mileage fee could be implemented to replace the gas tax as the principal revenue source for road funding. Essentially, participants agreed to have GPS devices installed in their vehicles, which would transmit mileage information to specially equipped gas pumps that would add a mileage tax to the participants' fuel purchases instead of the per-gallon fuel tax. After the program ended, 91% of participants said they would agree to continue paying the mileage fee in lieu of gas tax if the program were extended statewide.[70]

Oregon started a second VMT pilot program in the fall of 2012, but at the time of publication, no results of this program were available. However, there are several important differences in this new pilot program compared to the original one. Administrators of the original pilot program found people were uncomfortable with the required GPS unit in their car, so they will allow participants to choose whether their mileage is recorded with a smart phone, odometer, GPS unit, OnStar or other device. Participants will not be required to pay the tax at the pump in this program, but will instead pay the tax quarterly. This change is especially important since paying at the pump is not viable for drivers of electric or alternative fuel vehicles.

In the Puget Sound region of Washington, a pilot program charged fees based upon the time of day traveled on a network of major highways between 2005 and 2007. These charges were up to 50 cents per mile on some roads during evening peak hours. Of the 500 vehicles involved, participants reduced the number of miles traveled on toll roads by 13%, and cut the number of miles they traveled by 12% overall.[69] In addition, the University of Iowa conducted a nationwide study for the U.S. Department of Transportation which involved 2,700 vehicles in 12 locations, but the results have not yet been released.

Proponents of VMT taxes argue that fuel tax should be questioned as a sustainable way of financing road infrastructure, especially since revenues decline as a result of increasing fuel efficiency. A mileage-based road user charge, such as a VMT tax, would offer a means of generating a stable revenue stream that would be unaffected by the method of vehicle propulsion. Once implemented, the system would entail a low cost of collection for both agency and users, and it could provide road users with improved information on the costs they impose on the road system. A mileage charge also would allow flexibility in pursuing a variety of public policy objectives. This system could facilitate pursuing other initiatives such as congestion pricing, privately operated tollways, lane-specific user charges to encourage carpooling, pricing to encourage use of environment-friendly vehicles and to reflect road damage imposed by different classes of vehicles, improved travel demand analyses, and a shift of the financial burden for roads from property owners to road users. VMT taxes provide a better incentive for efficient highway use than do fuel taxes because the majority of those costs are related to miles driven.

VMT taxes come with some challenges. Though economists have touted the benefits of such a tax for years, they have remained a politically and practically difficult policy to implement.[70] Most specifically, people do not like the possibility that GPS units would need to be installed on their vehicles, as they see this as a government intrusion of privacy. As noted with the second Oregon pilot program, this could be overcome by allowing people to choose how their mileage is recorded. This would not only be a concern for the public, but transportation and government officials would need to consider this important issue when implementing such a tax. However, this concern may not be as strong as it could have been in years past, as more cars are equipped with GPS devices like navigation tools or OnStar.

Another concern with a VMT tax is that, similar to fuel taxes, it may impose larger burdens on low-income or rural households. However, to the extent that people in rural or low-income households have vehicles that tend to be less fuel efficient, they might pay smaller shares of total VMT taxes than of total fuel taxes.[73] In addition, the purchase and maintenance of GPS units and receptors or other mileage-recording devices can be costly. This could be mitigated by relatively simple in-vehicle equipment, like the E-ZPass transponder used for prepayment of tolls in 14 states from Maine in the Northeast, to Virginia in the South and Illinois in the West. It could also be mitigated by focusing on specific vehicle types, such as trucks, that account for roughly 25% of all costs highway users impose on others, including almost all of the costs associated with pavement damage.[74]

Figure 22:VMT Revenue Scenarios 2014-2040 (millions of 2010 dollars)

	2011-2040 Total Revenue	Increased Revenue
Current Motor Fuel Tax Equivalent	$11,972	$780
Motor Fuel Equivalent, Adjusted Annually by CPI	$17,125	$5,932

Source: Utah Foundation.

Utah Foundation modeled VMT forecasts including several scenarios under assumptions of growth forecasts that include possible variations in CPI and VMT. Aggregate VMT in Utah has increased in all but two years since 1990, and both of these years were during recessions. Because of this, it is expected that VMT will continue to increase. According to these projections, if current fuel taxes were replaced by a mileage tax that is set to be equivalent to current revenue from fuel taxes, the state would receive revenue of $11.9 billion from 2011 to 2040, an increase of $780 million over current fuel tax projections. If the tax were tied to inflation, the state would receive $17.1 billion in revenue by 2040, and increase of $5.9 billion.

Congestion Pricing

Congestion pricing, or value pricing, is a system of charging users of a good a higher rate when demand is higher. This is a familiar concept for use of electricity, subway systems, cell phones, tolls and hotel rates. Some cities have also implemented this for road congestion, charging motorists a fee or tax for driving in certain areas at certain times, with the hope of reducing traffic.

Within congestion pricing, there are four main types of pricing strategies: variably priced lanes, which involve variable tolls on separated lanes within a highway, such as Express Toll Lanes or High Occupancy/Toll (HOT) Lanes; variable tolls on entire roadways, both on toll roads and bridges, as well as on existing toll-free facilities during rush hours; cordon charges, which levy variable or fixed charges to drive within or into a congested area of a city; and area-wide per-mile charges on all roads within an area that may vary by level of congestion.[75]

Congestion pricing has been implemented almost exclusively in urban areas, since traffic is common in and around city centers. More specifically, this has been implemented in several major cities outside the U.S.

International Congestion Pricing

In February 2003, London implemented a plan for using pricing to combat congestion in central London. The system involves a standard per-day charge for vehicles traveling within a zone bounded by an inner ring road. A network of fixed and mobile cameras log the license plates, meaning drivers do not need to stop for tollbooths, gantries or barriers. In addition, people living in the zone receive a 90% discount, and motorcycles, mopeds, bicycles and alternative-fuel vehicles are exempt. In its first five years, the system reduced traffic by 21%, the subway carried record numbers of customers, and bus and bicycle ridership increased by 45%.[76] In addition, it was estimated that it reduced traffic in a 14-square-mile zone of the city by 70,000 cars a day.[77] Bus delays in central London dropped by 50%, even with a 7% increase in bus ridership.[78] In 2007, this system generated the equivalent of $429 million, 42% of which was used to collect fees. This high percentage of revenue going to collection is probably attributable to the fact that London uses a video system, which is about four times as expensive as the E-ZPass toll prepayment transponder system.[79]

In 2006, congestion pricing was introduced as a seven-month trial in Stockholm, Sweden. Stockholm's system also depends almost entirely on license plate cameras, a method chosen because Swedish law requires that the agency have photographic evidence when assessing taxes. The fee is based on the time of day, increasing for peak travel hours. The "trial" results were very favorable: there was an immediate drop of 22% in vehicle trips, a decrease in travel times, and a large shift to public transit. Ridership on inner-city bus routes increased, and buses and taxis both reported reductions in travel times. Exhaust emissions decreased by 14% in the inner city and 2-3% in Stockholm County. In addition, public acceptance of the program increased, from under 30% approval before the trial to over 55% towards the end.[80] The success of this system could also be attributed to the fact that Stockholm put 200 new buses into service several months before the pricing trial, thus ensuring the city was equipped to handle the increased use of public transportation. At the end of the trial period, a referendum was held and the citizens of Stockholm voted to make the congestion tax permanent.[81]

An electronic road pricing (ERP) system is used in Singapore. All roads linking into Singapore's central business district are marked with overhead road signs, also known as gantries, which create a system of sensors and cameras. Each Singapore-registered vehicle is required to have an electronic device known as an In-Vehicle Unit that allows the gantries to charge the motorist for road usage. It is reported that road traffic decreased by nearly 25,000 vehicles during peak hours, with average road speeds increasing by 20%. Within the restricted zone, traffic decreased by about 13% during ERP operating hours. However, the system is reported to be unpopular with many road users, and many argue that it simply moves the traffic elsewhere.[82]

Domestic Congestion Pricing

Congestion pricing has been debated in New York City. Mayor Michael Bloomberg proposed a congestion pricing plan in 2007. Taking cues from London and Stockholm, he argued that such pricing systems would cut traffic, generate billions of dollars in fees, and make drivers consider alternatives to using their cars. This system was not adopted, but different types of congestion pricing exist throughout the U.S. in the form of toll lanes. Tolls have been a part of transportation finance since the colonial period, and there are currently toll roads that have operated for over 50 years in Kansas, Massachusetts, New Jersey, New York, Ohio, and Pennsylvania, to name a few. Other states including California, Minnesota and Florida have added toll roads more recently in the form of HOT lanes.

States began to introduce High Occupancy Vehicle (HOV) and HOT lanes to deal with congestion, especially as the number of commuters carpooling to work declined significantly in the 1980s and 1990s, and as the average commute length and time had been increasing.[83] HOT lane pricing enables vehicles with several occupants to drive free or pay a lower toll when traveling in a designated lane. If drivers of vehicles that do not meet occupancy requirements (such as single drivers or two-person carpools in HOV-3 lanes, or single-occupant vehicles in HOV-2 lanes) wish to travel in this lane to avoid congestion, they must pay a toll that varies with prevailing traffic condition. Those

traveling in other lanes do not pay a toll, but they must contend with congestion during peak travel periods.

In urban areas, a growing number of tolling applications are designed as road pricing mechanisms. HOT lanes, for example, were implemented in San Diego on I-15; in Orange County, California, on S.R. 91; in Houston on the I-10/Katy Freeway and U.S. 290; bridge pricing in Lee County, Florida; and in Minneapolis on I-394. A 170-mile HOT lane network exists in Washington, D.C. as well.

Several of these programs have been very successful. Within three months of the opening of the priced express lanes on California's SR-91 in Orange County, there was a 40% increase in the number of vehicles with three or more passengers. Ridership on buses and rail remained steady. Traffic in the priced lanes during rush hours moves at over 60 mph, while traffic in the adjacent lanes moves at 14 mph or less.[84] Revenues generated by toll-payers on San Diego's I-15 HOT lanes financed transit improvements than contributed to a 25% increase in bus ridership. After the HOV lanes were converted into HOT lanes, carpooling increased significantly.[85] Public response to HOT lanes generally has been favorable. In San Diego, for example, a telephone survey of 800 motorists who used the I-15 HOT lanes revealed an approval rating of about 90%.[86]

Utah's HOV/HOT Lane

Salt Lake City also has an HOV/HOT lane. As part of the I-15 reconstruction through Salt Lake City that preceded the 2002 Olympics, an HOV car pool lane was added. In 2006, the State Transportation Commission authorized UDOT to implement HOT lanes on a 40-mile stretch of I-15 between Provo and Salt Lake City. The lanes allowed a single driver to pay for the right to drive in the HOV lane for a cost of $50 per month and generated roughly $75,000 per month.

The flat fee was allowed for limited years during implementation of the HOT lanes. However, Federal Law, 23 USC 166(b)(4) requires a HOT lane be tolled electronically. In 2011, the flat fee of $50 for use of the HOT lane was replaced by a rate system – or Express Pass. Pricing of the HOT lane is determined by an equation that adjusts the price based on conditions in both the general purpose lanes and the HOT lane. The Utah Transportation Commission and the Utah State Legislature approved the minimum and maximum rates of 25 cents and $1 for the HOT lanes. The switch to Express Pass tolling reduced monthly revenues to estimated $40,000 per month which is revenue neutral and is sufficient to sustain the operation of the HOT lanes. UDOT's reasoning for the pricing of the HOT lane is that the goal of the system is congestion management and not revenue generation. Additionally, UDOT estimates the reduction in congestion results in $9 million annually in user-cost savings.[87]

UDOT originally estimated that speeds on I-15 would increase an average of 10 mph during peak travel time as a result of the HOT lanes. Early concern was that the tolled lanes would benefit mainly travelers who have comparatively high incomes, becoming so-called "Lexus lanes." This concern was prevalent in Salt Lake City as well, but drivers that do not have the resources to buy the HOT pass have still benefited from HOT lanes by carpooling.[88]

Additional Congestion Pricing Discussion

One of the advantages of tolls, or congestion pricing, is that it is paid only by the actual users of the road. If the policy has the desired effect of reducing travel and travel time, it will also reduce fuel consumption and vehicle emissions. There is an added benefit to drivers and businesses of reducing delays and stress by increasing predictability of trip times and by allowing more deliveries per hour. Congestion pricing policies have also been shown to benefit mass transit by increasing reliability and speed of bus services, and increases transit ridership overall.

Although congestion pricing and tolling has significant potential, three problems may hamper the prospect of increasing the role of toll revenues in financing urban streets First, particularly in urban areas, the potential exists for traffic to divert from freeways and expressways with tolls to local streets without them, especially when these streets are parallel or would constitute shortcuts. Traffic diverting to routes through residential neighborhoods can endanger residents and perhaps increase traffic and congestion. Second is the idea that congestion pricing creates double payment. Tolls would be levied in addition to the motor fuel tax paid by all highway users. Third, tolling has limitations as a pricing mechanism. Because only a small portion of the urban road system can support tolling, it cannot be used to price individual segments across a road system to encourage heavy vehicles to use appropriate facilities, discourage commuters from traveling through residential areas, or encourage use of fuel-efficient vehicles.[89]

Another major challenge with congestion pricing is that it can be unpopular, especially if the policy is seen as a "Lexus Lane" or if drivers are frustrated by seeing that HOV/HOT lanes are not being used. In 1998, Governor Whitman of New Jersey announced the elimination of two controversial HOV lanes on Routes I-287 and I-80, converting them to general purpose lanes. This was after several months of intense media scrutiny of the low-utilization of the lanes, a report from the New Jersey Department of Transportation that found most the goals of the HOV lanes were not being met, and a Congressional fact finding forum regarding the use of federal funds.[90]

CONCLUSION

Funding Utah's transportation needs is a significant challenge for state policymakers. As Utah's population and economy will expand throughout the next three decades, the state must provide the necessary infrastructure to support this growth. This report explains how transit, roads and highways are currently funded in Utah, and describes a number of different policy options that could provide additional revenue.

Fuel taxes are a convenient source for generating significant funds for transportation investment, and their long history as a funding source suggests that consumers and sellers of fuel are well-equipped to continue their use. However, fuel taxes suffer from significant economic disadvantages, especially the declining purchasing power of the revenue source as it is devalued by inflation and as vehicles become more fuel efficient. One solution to this challenge is to index the tax rate to inflation, which would raise large amounts of revenue over the coming decades. Sales taxes on fuel could generate significant revenue as well, although they do not seem adequate as a replacement for per-gallon fuel taxes but rather as a supplement.

Still, any tax on fuel, including sales taxes, would have the disadvantage of falling behind the growth in miles traveled on Utah's highways and roads. By directly taxing drivers for the miles driven

Figure 23: Master Sheet of Policy Options (2010 dollars)

	2011-2040 Total Revenue (in millions)	Increased Revenue (in millions)	Implementation Level	Equity	Demand Management	Revenue Stability
Motor and Special Fuel Excise Tax						
No Change in Taxes	$11,193	$0	State	Regressive	Taxes users of highways and roads, which can reduce demand	Purchasing power of tax will continue to decline
Unified Plan Taxes (5-cent increase every 10 years starting in 2014)	$15,188	$3,995	State	Regressive	Taxes users of highways and roads	Purchasing power of tax will decline after each increase
Increase Fuel Tax by 9 Cents and Adjust Annually for Inflation	$18,033	$6,840	State	Regressive	Taxes users of highways and roads	Stable, except that fuel purchases decline when prices rise
Adjust Current Fuel Tax Rate Annually for Inflation	$14,484	$3,291	State	Regressive	Taxes users of highways and roads	Stable, but doesn't make up for loss of purchasing power since 1999 and fuel price influences
Biennial 2-Cent Incremental Increase	$17,379	$6,186	State	Regressive	Taxes users of highways and roads	Stable, except that fuel purchases decline when prices rise
Sales Tax on Gasoline						
4.7% Sales Tax on Fuel Price Including Current Excise Taxes	n/a	$10,766-$19,667	State	Regressive	Taxes users of highways and roads	Fluctuates with strength of economy and fuel prices
4.7% Sales Tax on Fuel Price Excluding Current Excise Taxes	n/a	$9,845-$18,747	State	Regressive	Taxes users of highways and roads	Fluctuates with strength of economy and fuel prices
Other State Options						
Severance and Refinery Taxes	n/a	n/a	State	Affects a small number of companies	Similar to fuel taxes if impact is passed on to consumers through retail prices	Similar to fuel taxes
Increase Motor Vehicle Registration Fees by $10	n/a	$1,370	State	Regressive	Taxes users of highways and roads	Fluctuates with strength of economy
Funding Options from the Local or Regional Levels						
Local Option Gas Tax	n/a	n/a	City, county or regional	Regressive	Taxes users of highways and roads	Fluctuates with strength of economy
Local Sales Tax on Fuel	n/a	n/a	City, county or regional	Regressive	Taxes users of highways and roads	Fluctuates with strength of economy and fuel prices
Increase Local Option Sales Tax for Transit by 0.25%	n/a	$3,754	UTA service area	Regressive	No tie to users and funding source	Fluctuates with strength of economy
Increase Transit Rider Fares	n/a	n/a	UTA service area	Regressive	Taxes transit users, which may reduce transit demand	Fluctuates with usage of system, but high fares discourage ridership
Increase Transient Room Tax by 1%	n/a	$139	County	Main burden is on out-of-state visitors	No tie to users and funding source	Fluctuates widely with strength of tourism economy.
Increase Rental Car Tax by 1%	n/a	$71	UTA service area	Main burden is on out-of-state visitors	Taxes users of highways and roads	Fluctuates widely with strength of tourism economy.
Enact a Transit Property Tax of 0.1% in UTA Counties	n/a	$5,779	UTA service area	Somewhat regressive but less than sales or fuel taxes	No tie to users and funding source	Fluctuates with strength of real estate market
Tax Increment Financing	n/a	n/a	UTA service area	No significant equity impacts	No significant tie to users and funding source	Fluctuates with strength of real estate market and specific growth around transit stations
Vehicle Miles Traveled Tax						
Current Motor Fuel Tax Equivalent	$11,972	$780	City, county or regional	More equitable than sales or fuel taxes	Taxes users of highways and roads more directly for road usage than other taxes	More stable than fuel taxes, but mileage driven is affected by fuel price fluctuations
Motor Fuel Equivalent, Adjusted Annually by CPI	$17,125	$5,932	City, county or regional	More equitable than sales or fuel taxes	Taxes users of highways and roads more directly for road usage than other taxes	More stable than fuel taxes, but mileage driven is affected by fuel price fluctuations
Congestion Pricing	n/a	n/a	City, county or regional	More equitable than sales or fuel taxes	Variable rates a significant tool to influence demand	Likely to be stable
Public Private Partnerships	n/a	n/a	City, county or regional	Depends on potential fees charged by private partners	Depends on potential fees and other aspects	Project specific

on highways and roads, a VMT or mileage tax would eliminate this principal disadvantage of Utah's current transportation tax system. A mileage tax would require a completely new system of collecting revenue and measuring VMT, but it would also facilitate rational taxation of alternative-fuel or electric vehicles, which are likely to grown in popularity in the coming decades. To keep up with the effects of inflation, however, a mileage tax would also need either an automatic adjustment for inflation or periodic increases in the rate. New technologies may make this tax viable without the privacy concerns of government-issued GPS devices in vehicles.

For transit funding, the largest revenue-generating option is a property tax increment for UTA services. Other revenue options could provide smaller revenue-generating capabilities, including an increase in county-wide sales taxes within the counties served by UTA, increased fares, and increases in taxes on hotels or rental cars. New concepts, such as tax-increment financing (or value capture) around transit stations, also could provide revenue, although it would likely be small amounts compared to the major tax options.

Figure 23 outlines the policy options explored in this report, including severance and refinery taxes, increasing motor vehicle registration fees, and congestion pricing. The figure provides additional observations of economic equity, how the revenue sources would affect transportation demand, and revenue stability. Utah Foundation does not endorse any particular policy changes, but encourages policymakers to examine these options as they consider methods to adequately fund Utah's future transportation needs.

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