Motor Vehicle Fuel and Alternate Fuel Tax

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Prepared by
Al Runde

Wisconsin Legislative Fiscal Bureau
One East Main, Suite 301
Madison, WI 53703

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The state's fuel tax is an excise tax levied on a per gallon basis on motor vehicle fuel (gasoline and diesel) and alternate fuels (such as compressed natural gas and liquid propane gas). Fuel tax receipts are deposited in the state's transportation fund, a separate nonlapsible trust fund used to finance transportation-related programs. Table 1 shows 2001-02 transportation fund revenues (vehicle registration fees are shown prior to deductions made for revenue bond debt service).

Table 1: 2001-02 Transportation Fund Revenues

Source	Collections	% of Total
Fuel Tax	$865,453,800	64.7%
Vehicle Registration Fees	376,067,000	28.1
Driver License Fees	33,030,900	2.5
Investment Earnings	4,614,100	0.3
Other Revenues	58,489,600	4.4
Total	$1,337,655,400	100.0%

In 2001-02, collections from the tax on gasoline represented 78.4% of total fuel tax collections and the tax on diesel fuel represented 21.5% of collections, with 0.1% being collected from users of alternate fuels. Both the motor vehicle fuel tax and the alternate fuel tax are designed to be paid by those individuals who consume the fuel on the state's roads.

Modifications in the structure or yield of the fuel tax have significant implications for the state's transportation programs. In response to declining fuel consumption, the Legislature substantially increased the fuel tax rate during the early 1980s. In addition, in the 1983-85 budget, the Legislature adopted an indexing formula for the fuel tax that provides automatic, annual adjustments in the tax rate. This paper reviews the development of the fuel tax and explains the general concepts and the specific calculation related to the indexing formula.

In addition to the excise tax on motor vehicle and alternate fuel, a petroleum inspection fee of 3¢ per gallon is imposed on petroleum products brought into the state. This fee is described in Informational Paper #59, prepared by the Legislative Fiscal Bureau, entitled "Petroleum Environmental Cleanup Fund Award (PECFA) Program."

Development of the Fuel Tax

The state's fuel tax was created in 1925 at a rate of 2¢ per gallon. Since the segregated highway fund was not created until 1945, the revenues generated from the fuel tax were initially deposited in the state's general fund. However, these receipts were appropriated for the purpose of developing and maintaining highways. In fact, the stated intent of establishing the new tax was to transfer the source of funding for highway programs from the general taxpayer to the highway user.

Fuel tax rate increases occurred at irregular intervals during the period from 1925 until 1980.

However, since 1980, the fuel tax has been modified on a regular basis, with a 21.1¢ total increase in the rate since 1979. Table 2 provides a history of the state motor fuel tax rate.

Table 2: History of the Fuel Tax Rate

Year	Tax Rate Per Gallon	Type of Rate Change
1925	2.0¢	Statutory
1931	4.0	Statutory
1955	6.0	Statutory
1966	7.0	Statutory
1980	9.0	Statutory
1981	13.0	Statutory
1983	15.0	Statutory
1984	16.0	Statutory
1985	16.5	Index Adjustment
1986	17.5	Index Adjustment
1987 (April 1)	18.0	Index Adjustment
1987 (August 1)	20.0	Statutory
1988	20.9	Index Adjustment
1989	20.8	Index Adjustment
1990	21.5	Index Adjustment
1991	22.2	Index Adjustment
1993	23.2	Index Adjustment
1994	23.1	Index Adjustment
1995	23.4	Index Adjustment
1996	23.7	Index Adjustment
1997 (April 1)	23.8	Index Adjustment
1997 (November 1)	24.8	Statutory
1998	25.4	Index Adjustment
1999	25.8	Index Adjustment
2000	26.4	Index Adjustment
2001	27.3	Index Adjustment
2002	28.1	Index Adjustment

An analysis of historic fuel consumption figures helps to explain this increase. From 1966 to the early 1970s, fuel consumption increased at an annual rate of approximately 7%. Consequently, even though the tax rate remained constant (7.0¢ per gallon), tax revenue increased each year. However, in the mid-1970s, the supply and price of fuel were significantly affected by international events. As a result, consumption did not increase for a two-year period and fuel tax revenues for 1973-74 and 1974-75 remained at the 1972-73 level. Fuel consumption began to increase again during the last half of the 1970s as the supply situation eased. However, annual growth in this period averaged approximately 4%, as compared to the earlier experience of approximately 7% annual growth.

After reaching a peak in 1979, fuel consumption dropped in each of the next three years, with a 14% reduction in consumption from 1979 to the low year of 1982. This reduction resulted from several different factors, including improvements in fuel efficiency, modifications in driving habits, and a sluggish economy. While consumption has decreased in recent years from 1999 levels, it remains 38.1% above 1982 levels. Table 3 shows the consumption of taxable gallons of motor fuel for the last ten years.

Table 3: Taxable Gallons of Motor Vehicle Fuel

Calendar Year	Gallons	Change from Previous Year
1992	2,610,000,000	
1993	2,698,200,000	3.4%
1994	2,824,400,000	4.7
1995	2,909,600,000	3.0
1996	2,992,600,000	2.9
1997	3,019,400,000	0.9
1998	3,129,000,000	3.6
1999	3,164,600,000	1.1
2000	3,066,800,000	-3.1
2001	3,117,400,000	1.6

When combined with significant inflation in the early 1980s, the reduced fuel consumption resulted in a major reduction in the purchasing power of the transportation fund's revenue base. One of the responses to this situation was a series of increases in the fuel tax rate.

In addition, the 1983-85 budget changed the process used to determine the fuel tax rate. Prior to this time, fuel tax increases required passage of a law amending the existing tax rate. The 1983-85 budget act created an indexing formula for fuel taxes, which annually adjusts the fuel tax rate.

Since April 1, 1985, fuel tax changes have been made under the indexing adjustment provisions of the statutes, with three exceptions: (1) 1987 Act 27 increased the fuel tax rate of 18.0¢ per gallon to 20.0¢ per gallon, effective August 1, 1987, as a means of raising additional revenue; (2) 1991 Act 119 suspended fuel tax indexing for one year (in response to a federal highway aid increase), from April 1, 1992, until April 1, 1993, at which time both the 1992 and 1993 indexing adjustments were made; and (3) 1997 Act 27 increased the fuel tax rate of 23.8¢ per gallon to 24.8¢ per gallon, effective November 1, 1997.

The motor fuel tax rate for alternate fuels was modified by 1997 Act 27. Effective November 1, 1997, the rate for each type of alternate fuel is based on the ratio of the fuel content of the alternate fuel to the fuel content of gasoline, expressed in BTUs, multiplied by the existing motor fuel tax rate. As a result, the current rates on alternate fuels are 20.6¢ per gallon for liquified petroleum gas and 22.5¢ per gallon for compressed natural gas.

The Indexed Fuel Tax Rate

Prior to 1997 Act 27, the fuel tax rate was annually adjusted to reflect fuel consumption changes and inflation, with the new tax rates going into effect on April 1 of each year. However, Act 27 eliminated the fuel consumption component of the indexing formula. Therefore, beginning on April 1, 1998, the fuel tax is adjusted to only reflect changes in inflation.

The goal of indexing the fuel tax rate using an inflation factor is to preserve the purchasing power of the fuel tax revenue. Under a fixed fuel tax rate, if fuel consumption remained constant, the purchasing power of the fuel tax revenue declined due to inflation. By adjusting the tax rate to reflect inflation, changes in revenue are more likely to approximate changes in highway program costs.

The formula used to calculate the index includes the following steps:

1. An inflation factor is calculated by dividing the inflation index for the previous year by the inflation index for the year preceding that year. For the April 1, 2002, calculation, the 2001 inflation index was divided by the 2000 index.

2. The new fuel tax rate is calculated by multiplying the existing fuel tax rate by the inflation adjustment factor and rounding the result to the nearest tenth of a cent.

Table 4 shows how the index was used for the April 1, 2002, fuel tax rate determination (applicable April 1, 2002, through March 31, 2003).

Table 4: Indexed Fuel Tax Calculation--2002

Existing Fuel Tax		Inflation Adjustment Factor		New Tax Rate
27.3¢	x	Inflation Index for CY 2001 / Inflation Index for CY 2000	=	New Tax Rate
27.3¢	x	177.07 / 172.20		
27.3¢	x	1.028	=	28.1¢

Indexing for Inflation

The inflation factor adjusts the fuel tax rate to reflect any changes in the Consumer Price Index for all urban consumers (CPI-U) that occurred between the two preceding years. The CPI-U is a measure of the average change in prices over time in a fixed "market basket" of goods and services purchased by all urban consumers.

An example can be used to illustrate how this factor affects the fuel tax rate. If the CPI-U for Year 1 was 180 and the CPI-U for Year 2 was 189, the inflation factor to be used in calculating the fuel tax rate in effect on April 1 of Year 3 would be 1.05 (189 divided by 180), or 5%. Consequently, the inflation factor produces a 5% fuel tax rate increase beginning on April 1 (existing rate per gallon x 1.05).

As this example illustrates, CPI-U increases have an upward impact on the fuel tax rate. Conversely, CPI-U decreases have a downward impact. The purpose of the inflation factor is to annually adjust the motor fuel tax rate for inflation so that, in general terms, the revenue raised is capable of funding approximately the same total level of accomplishment each year even if inflation has changed the cost of those tasks.

Fuel Tax Collection Process

The motor vehicle fuel and alternate fuel taxes are collected by the Department of Revenue before being deposited in the transportation fund. The tax on motor vehicle fuel is imposed when the fuel leaves terminal storage and is collected monthly from licensed suppliers (typically the terminal operator who sells the fuel to wholesalers). There are 53 licensed, unrestricted suppliers that remit nearly all of the tax revenues to the state. There are 98 other restricted suppliers, or suppliers that deliver across state lines, that remit a small portion of the state tax revenues. Suppliers are not required to provide information on the destination of the fuel. As a result, it cannot be accurately estimated where the fuel is being purchased by motor vehicle operators.

The tax on alternate fuel is imposed when the fuel is first pumped into a motor vehicle and is collected monthly from retailers or directly from users if the user has a bulk fuel storage facility. The tax may be paid quarterly if the tax owed is less than $500 per quarter. There are 161 alternate fuel retailers and users that are required to pay the alternate fuel tax.

International Fuel Tax Agreement (IFTA)

IFTA provides a standardized motor fuel tax reporting system and collection procedure for interstate motor carriers. The federal Intermodal Surface Transportation Efficiency Act of 1991 required most states to join the agreement by September 30, 1996. Currently, all states are members of IFTA. Wisconsin has been a member since 1989.

Under IFTA, a carrier operating in two or more member states must apply for an annual fuel tax license from one of the states. That state becomes the carrier’s base state and the license from that state permits the carrier to operate in all IFTA states. IFTA guidelines require the base state to be chosen according to where carriers’ vehicles are registered and where carriers have operations that permit them to make records available for audit.

To pay motor fuel taxes, carriers send a quarterly return to the base state. The return reports all miles traveled, fuel purchased, and fuel tax already paid "at the pump" to each member state. Also, the return shows fuel taxes owed to each member state and any refunds owed the carrier. Each state’s taxes are calculated on the basis of the number of miles traveled in the state and the carrier’s fuel efficiency. The carrier pays any net amount due when the report is filed. If the carrier owes taxes to other states, the base state makes those payments for the carrier. If other states owe the carrier refunds, the base state refunds any overpayments and then collects the refunds from the other states. The carrier must keep records to support the information on its return. Each base state audits the carriers registered there, on behalf of all IFTA states.

Exemption, Refund, and Floor Tax Provisions

Fuel Tax Exemptions

Under current law, there are the following exemptions from the fuel tax:

1. Motor vehicle fuel exported from this state by a licensed exporter;

2. Motor vehicle or alternate fuel sold to the federal government;

3. Motor vehicle or alternate fuel sold for use in urban mass transportation;

4. Gasoline used for nonhighway purposes and delivered in a quantity of at least 100 gallons if the user (generally, a farmer) has obtained an exemption card in advance;

5. Gasoline sold to a general aviation fuel dealer for use in an aircraft, provided it is delivered directly into the dealer's storage tank in a quantity of at least 100 gallons;

6. Diesel fuel sold for use as heating oil;

7. Diesel fuel sold for use in trains;

8. Diesel fuel sold for nonhighway use; and

9. Diesel fuel exported by an unlicensed person who has paid the tax on it to the destination state, as evidenced by a bill of lading.

Dyed Diesel Fuel Tax Exemptions

The 1993-95 biennial budget act created provisions that allow licensed suppliers to dye diesel fuel. Dyed diesel fuel must be used for a tax exempt purpose. This change was made in response to a federal law that requires all high-sulfur diesel fuel to be dyed and to be prohibited from use in motor vehicles on highways. In addition, diesel fuel dying makes it easier to identify whether the tax has been paid on fuel that is being used for a taxable purpose.

Individuals using nondyed diesel fuel for off-highway use cannot purchase fuel tax-free. Instead, these individuals must pay the tax and then file a refund claim if the nondyed diesel fuel was used for off-highway purposes.

Fuel Tax Refunds

Current law allows individuals or businesses that use motor vehicle fuel or alternate fuel for any purpose other than operating a motor vehicle upon the public highways in the state or operating certain recreational vehicles or boats to file a claim for a refund of any fuel tax paid. In addition, taxicab operators are eligible for refunds of fuel tax paid on fuel used in their taxicabs and retailers of gasoline are eligible for a refund of one-half of one percent of fuel tax paid to cover shrinkage and evaporation losses of motor fuel. Claims for refunds are to be filed with the Department of Revenue.

Since the basic principle underlying the imposition of the fuel tax is to collect a fee from users of transportation facilities, the tax is not imposed on those who use motor vehicle or alternate fuel for other purposes or on gasoline that is lost to shrinkage or evaporation. However, the fuel tax is imposed on fuel used in snowmobiles, motorboats, and all-terrain vehicles (ATVs) since estimated fuel tax payments from these sources are used to support related recreation programs in the Department of Natural Resources. In addition, taxicabs can obtain refunds, which serves to treat them on the same basis as providers of urban mass transportation, who are exempt from paying the fuel tax.

Refunds of fuel tax payments in 2001-02 totaled

$18.3 million, or 2.1% of fuel tax collections. These refunds were provided to farmers, retailers, taxicab operators, and other miscellaneous users of motor vehicle and alternate fuel.

Floor Tax

Whenever the fuel tax rate is changed, a floor tax is imposed on any person possessing motor vehicle fuel on which the previous fuel tax has been paid, if the fuel is being held for sale or resale. This tax is equal to the number of gallons multiplied by the difference between the old and new tax rates. The floor tax must be paid by the fifteenth day of the month in which a tax rate change occurred. This tax is designed to prevent the filling of retailers' supply tanks prior to a fuel tax increase to avoid payment of the higher tax. With an indexed fuel tax, the payment of a floor tax is at least an annual occurrence. If the fuel tax rate is decreased, the floor tax provision is used to provide a refund to any person holding fuel for sale or resale purposes.

Federal Fuel Taxes

In addition to the state fuel taxes, there is a federal tax of 18.4¢ per gallon imposed on gasoline and 24.4¢ per gallon on diesel fuel. While a portion of these revenues, 0.1¢ per gallon, is used to fund the federal leaking underground storage tank program, most of the revenues associated with the federal fuel tax rates are credited to the federal highway trust fund for highway and mass transit projects, although from October 1, 1993, through October 1, 1997, the federal general fund was credited with 4.3¢ per gallon to be used for deficit reduction. Under the federal Tax Payer Relief Act of 1997, the 4.3¢ per gallon is again deposited to the highway trust fund (3.45¢ is designated for the highway account and 0.85¢ for the transit account). As a result, annual revenues to the fund have increased.

The federal Internal Revenue Service collects the fuel tax proceeds. Both the federal gasoline and diesel fuel taxes are imposed when the fuel leaves terminal storage and are collected semi-monthly from the terminal operators.