Research Report
KTC-94-4

ALLEVIATION OF FUEL TAX EVASION IN KENTUCKY (INTERIM REPORT)

by

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and

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16. Abstract

Motor fuel tax evasion is a problem of major significance nationwide. In Kentucky, evasion of motor fuel taxes could mean an annual loss of approximately $25 million. This study was initiated to provide Kentucky officials involved with fuel tax collection with the best available information on the problem of fuel tax evasion and the best uses of all resources to alleviate the problem.

This interim report concludes the first phase of the study and provides a qualitative look at motor fuel tax evasion in Kentucky. It discusses the fuel tax process in the Commonwealth, how evasion occurs, efforts to alleviate evasion, and preliminary findings and recommendations.

Findings include the fact that fuel tax evasion by dishonest dealers places honest dealers at a major competitive disadvantage, as well as contributing to the loss of funds for highway construction and maintenance. Kentucky is combating evasion through a combination of state and cooperative regional and national efforts.

Future research will include examining three basic approaches to developing a quantitative estimate of the magnitude of fuel tax evasion in Kentucky and implementing the most promising of these approaches. Additional research could be conducted on experience gained by other states, average fuel burn rates for various types of engines and furnaces, and a cost/benefit analysis for Kentucky's Motor Fuel Tax Audit program to justify additional funds for that program.

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METRIC CONVERSION FACTORS

APPROXIMATE CONVERSIONS TO METRIC UNITS

Symbol	When You Know	Multiply By	To Find	Symbol
	LENGTH			
in.	inches	25.40000	millimetres	mm
ft	feet	0.30480	metres	m
yd	yards	0.91440	metres	m
mi	miles	1.60934	kilometres	km
	AREA			
$in.^2$	square inches	645.16000	millimetres squared	mm^2
ft^2	square feet	0.09290	metres squared	m^2
yd^2	square yards	0.83613	metres squared	m^2
ac	acres	0.40469	hectares	ha
mi^2	square miles	2.58999	kilometres squared	km^2
	FORCE			
kip	pound-force	4.44822	kilonewton	kN
	VOLUME			
fl oz	fluid ounces	29.57353	millilitres	ml
gal.	gallons	3.78541	litres	l
ft^3	cubic feet	0.02832	metres cubed	m^3
yd^3	cubic yards	0.76455	metres cubed	m^3
	PRESSURE			
psi	pound-force per square inch	6.89476	kilopascal	kPa
	MASS			
oz	ounces	28.34952	grams	g
lb	pounds	0.45359	kilograms	kg
T	short tons (2000 lb)	0.90718	megagrams	Mg
	TEMPERATURE (exact)			
°F	Fahrenheit temperature	(°F-32)/1.8	Celsius temperature	°C

APPROXIMATE CONVERSIONS FROM METRIC UNITS

Symbol	When You Know	Multiply By	To Find	Symbol
	LENGTH			
mm	millimetres	0.03937	inches	in.
m	metres	3.28084	feet	ft
m	metres	1.09361	yards	yd
km	kilometres	0.62137	miles	mi
	AREA			
mm^2	millimetres squared	0.00155	square inches	$in.^2$
m^2	metres squared	10.76392	square feet	ft^2
m^2	metres squared	1.19599	square yards	yd^2
ha	hectares	2.47103	acres	ac
km^2	kilometres squared	0.38610	square miles	mi^2
	FORCE			
kN	kilonewton	0.22481	pound-force	kip
	VOLUME			
ml	millilitres	0.03381	fluid ounces	fl oz
l	litres	0.26417	gallons	gal.
m^3	metres cubed	35.31448	cubic feet	ft^3
m^3	metres cubed	1.30795	cubic yards	yd^3
	PRESSURE			
kPa	kilopascal	0.14504	pound-force per square inch	psi
	MASS			
g	grams	0.03527	ounces	oz
kg	kilograms	2.20462	pounds	lb
Mg	megagrams	1.10231	short tons (2000 lb)	T
	TEMPERATURE (exact)			
°C	Celsius temperature	(1.8C) + 32	Fahrenheit temperature	°F

TABLE OF CONTENTS

EXECUTIVE SUMMARY

INTRODUCTION

Motor fuel taxes are assessed by federal, state, and sometimes local governments on the purchase or sale of fuel used to propel vehicles for highway use. Fuel tax evasion occurs when taxable fuel is bought or sold but the appropriate tax is not remitted to the government. Fuel tax evasion is a problem of major significance across the United States, with estimated annual losses of $2.5 billion in federal and state revenue(1). Fuel tax evasion also has serious implications for honest fuel dealers because of unfair competition and price-cutting.

This study was initiated to provide officials involved with fuel tax collection in Kentucky with the best available information on the problem of fuel tax evasion and also on the best uses of all resources to alleviate the problem. The objectives of the study are:

1. To determine the magnitude of the fuel tax evasion problem in Kentucky,
2. To establish an interagency working group in Kentucky to address issues which affect fuel tax evasion and the efficiency of collection,
3. To facilitate Kentucky's involvement in regional and national programs designed to alleviate fuel tax evasion, and
4. To develop recommendations for additional efforts to alleviate fuel tax evasion in Kentucky.

This report summarizes the first phase of the study, which has taken a qualitative look at motor fuel tax evasion in Kentucky. This report can serve as a primer on the motor fuel tax situation. It contains discussions of: (1) the fuel tax process in Kentucky, (2) how evasion occurs, (3) efforts to alleviate evasion, and (4) preliminary findings and recommendations.

AN OVERVIEW OF FUEL TAXES IN KENTUCKY

Motor fuels are classified as either gasoline or special fuels. Special fuels include all fuels not fitting the definition of gasoline, except that they do not include liquefied petroleum gas. Although Kentucky produces some motor fuel, most of the fuel used in Kentucky is imported from other states via waterway or by truck.

Taxes on motor fuels are collected by the Revenue Cabinet and by the Transportation Cabinet. The Revenue Cabinet collects an excise tax and a supplemental highway user motor fuel tax on all gasoline and special fuel received in the state. The Transportation Cabinet collects motor fuel taxes based on highway usage (as reported

by motor carriers) and vehicle weight. The Transportation Cabinet credits interstate motor carriers for taxes paid on fuel purchased in Kentucky.

A primary mechanism in the collection of fuel taxes in Kentucky is the licensing of fuel dealers. Dealers are licensed by the Revenue Cabinet, and surety bonds are required from all licensed dealers. The dealer is then responsible (through monthly reports) for reporting and paying the tax on all fuel received, less any exemptions and credits.

The Motor Fuels Tax Section of the Revenue Cabinet, in addition to having staff responsible for licensing and collection of taxes, has a recently-expanded audit team. All monthly reports are checked, and audits are performed when deemed appropriate. Each audit requires a great deal of staff time.

FUEL TAX PROBLEMS IN KENTUCKY

Recent estimates by the Federal Highway Administration (FHWA) place the current level of motor fuel tax evasion nationwide at 3 to 7 percent of all gallons consumed for gasoline and 15 to 25 percent of all gallons consumed for diesel fuel(6). Applying these estimates to fuel sales and use volumes for Kentucky results in an estimated annual loss of $23 million in state revenue. If gasohol is included, the total becomes $25 million. However, because Kentucky is more active in conducting audits and pursuing tax evaders than many states, Revenue Cabinet staff believe the annual loss for Kentucky may be considerably less (between $11 and $16 million).

Lost revenue is not the only negative effect of fuel tax evasion. Because the margin of profit for fuel sales is small, nonpayment of taxes by dishonest dealers places honest dealers at a major competitive disadvantage. This has certainly forced some honest dealers out of business and has probably caused others to feel pressured to evade taxes in order to remain competitive.

It appears that the most common types of fuel tax evasion occurring in Kentucky are: refund permit holders powering highway vehicles with fuel purchased for non-highway use; improperly claimed credits against tax due on diesel fuel; and "paper company" fraud (usually referred to as a "daisy chain").

One significant factor contributing to evasion in Kentucky is the difficulty in tracking fuel entering Kentucky by waterway. This difficulty in detecting exact volumes allows dealers to understate the amount of fuel received (taxes are paid only on the reported quantity). Another problem is that of motor carriers who understate the miles they travel in Kentucky to avoid paying the total usage taxes due.

EFFORTS TO ALLEVIATE EVASION

Significant efforts have been undertaken in Kentucky to combat fuel tax evasion. A Motor Fuel Tax Audit Program was started in September of 1992, and in its first year four dollars in unpaid taxes were billed for every one dollar invested in the program. To aid in the audit process, plans are being developed to convert to electronic filing for monthly reports. The amount of the required surety bond for licensed dealers has been increased, and licensing of fuel exporters has been initiated. In August of 1988, the tax refund process was modified to require more thorough documentation of refund requests.

On a national and regional level, the Joint Federal/State Motor Fuel Tax Compliance Project is the largest combined effort in the fight against fuel tax evasion. Kentucky is a charter member and an active participant in the project's Indiana Task Force.

PRELIMINARY FINDINGS

Fuel taxes are a major source of revenue for Kentucky's Road Fund, contributing approximately $370 million annually. Because nationwide revenue losses have been estimated in the billions of dollars, fuel tax evasion is a major concern to all states. Using FHWA estimates for tax evasion nationwide, Kentucky may lose up to $25 million each year. However, because Kentucky is more active in pursuing tax evaders than many states, the annual loss may be considerably less. Lost revenue is not the only result of fuel tax evasion. The unfair competition from tax-evading dealers is a constant threat to the existence of legitimate fuel dealers.

Three methods have been identified for estimating the extent of fuel tax evasion. It is not yet known which of these offers the best potential for an accurate estimate.

The most common methods of evading fuel taxes in Kentucky are believed to be (1) improper claiming of credits or refunds for fuel supposedly used for off-road vehicles or for heating oil and (2) fraud involving companies which exist only on paper ("daisy chains"). It is also difficult for tax officials to determine the accuracy of volumes of fuel entering Kentucky by waterway, because there is no mandatory checking of manifests. In addition, Kentucky is one of the few states with no regular gasoline testing program, although the state legislature is currently addressing the issue.

Kentucky is combating fuel tax evasion through an expanded audit team, increased surety bond requirements for licensed fuel dealers, and increased documentation required for refund requests. Kentucky is also involved in cooperative efforts with other states. Projects such as the Joint Federal/State Motor Fuel Tax Compliance Project and the Federation of Tax Administrators' 11-Point Plan allow states to share knowledge and tactics to provide a united front against evasion. Kentucky may also benefit by implementing successful anti-evasion measures used by other states.

The effectiveness of other national efforts remains controversial. The results of fuel coloring as a tax evasion deterrent are not yet known, and membership in the International Fuel Tax Agreement (IFTA) may even be detrimental to some states (such as Kentucky) which currently have a very active fuel tax collection program.

PRELIMINARY RECOMMENDATIONS

Efforts currently underway to combat fuel tax evasion in Kentucky appear to be beneficial and should be continued. Other possible actions include a joint project of the Revenue Cabinet and Transportation Cabinet to address evasion by refund permit holders, and a joint effort of the Revenue Cabinet and the Army Corps of Engineers to develop improved methods of tracking fuel movement on waterways. Also, the possibility of changing U.S. Census questionnaires to separate heating oil from kerosene should be explored for better identification of motor fuel use.

Recommended future research includes several studies which could ultimately result in improved fuel tax collection. Obtaining better estimates of fuel tax evasion, obtaining information on fuel burn rates for various types of engines, and keeping up-to-date on other states' fuel tax experiences could benefit both the Transportation and Revenue Cabinets. Additionally, an up-to-date cost benefit analysis of Kentucky's Motor Fuel Tax Audit Program could provide justification for committing additional funds to the program, thus generating additional revenue for the Road Fund. The implications of IFTA, with respect to Kentucky's fuel tax revenues, could be carefully examined to help minimize any revenue loss. Also, an analysis of the inconsistencies in the Transportation and Revenue Cabinets' fuel taxation processes could lead to improved fairness to all taxpayers and a reduction of multiple audits.

INTRODUCTION

BACKGROUND

Motor fuel taxes consist of the money assessed by governments on the purchase or sale of fuel used to propel vehicles for highway use. These taxes are assessed by federal, state, and sometimes local governments. The taxes collected are used for a variety of highway-related purposes, such as construction, maintenance, planning, and research. Nearly everyone benefits from the revenue these taxes provide, either directly (by driving or riding on good roads) or indirectly (through the lower transportation costs of goods).

Fuel tax evasion occurs when taxable motor fuel is bought or sold for highway use, but the appropriate tax is not remitted to the government. This can occur when the end user improperly reports how the fuel will be used to avoid paying the tax, or when the end user pays the tax to a retailer or wholesaler who then keeps the tax as illegal profit.

The impacts of fuel tax evasion are extensive. At a hearing on tax evasion before the U.S. House Public Works and Transportation Committee, Deputy Federal Highway Administrator Eugene McCormick estimated that fuel tax evasion could be costing as much as $2.5 billion annually in Federal and State tax revenue(1). State losses alone were projected to be in excess of $1 billion, which averages out to $20 million per state. In Kentucky, all motor fuel taxes collected go into the Road Fund, so evaded taxes translate into fewer dollars for highway construction and repair.

In addition to reducing highway fund dollars, fuel tax evasion has other economic impacts on Kentucky. A representative of the Kentucky Motor Transport Association has stated that some trucking firms once established in Kentucky have moved to states having a more favorable tax structure(2). Perhaps more importantly, the National Association of Truck Stop Operators (NATSO) is concerned that tax evaders rob everyone, have put many legitimate truck stops out of business by undercutting fuel prices, and threaten the very existence of the truck stop industry(3).

As a result of national publicity and congressional testimonies, several studies have been published on federal fuel tax evasion. A few states, plagued by large fuel tax losses resulting from the activities of organized crime, have commissioned studies of the problem in their respective states. A limited formal study has been conducted on fuel taxes in Kentucky(4). However, no detailed study has been performed specifically related to the motor fuel tax evasion problem in Kentucky.

Significant efforts are underway at the national and regional levels to alleviate fuel tax evasion. Because fuel movement and use often cross state lines, it is essential to coordinate alleviation efforts in Kentucky with national and regional programs. The Kentucky Transportation Cabinet, in cooperation with the Federal Highway

Administration, requested the Kentucky Transportation Center to conduct a study to provide more complete information for state officials on the scope of the fuel tax evasion problem and methods to alleviate this evasion.

OBJECTIVES

Officials involved with fuel tax collection in Kentucky need to have the best available information on the problem of fuel tax evasion and on the best uses of all resources to alleviate the problem. This study has the following objectives to help attain that goal:

1. To determine the magnitude of the fuel tax evasion problem in Kentucky,
2. To establish an interagency working group in Kentucky to address issues which affect fuel tax evasion and the efficiency of collection,
3. To facilitate Kentucky's involvement in regional and national programs designed to alleviate fuel tax evasion, and,
4. To develop recommendations for additional efforts which would be beneficial in alleviating the fuel tax evasion problem in Kentucky.

It is hoped that this report will provide a better understanding of the extent and implications of motor fuel tax evasion in Kentucky, and that it will reveal the importance of applying the necessary resources to maintain the integrity of the fuel tax system.

SCOPE

This study of alleviation of fuel tax evasion is being conducted in two phases. The first phase concentrates primarily on the qualitative aspects of the issue. The second phase of the project will expand on the initial phase and will develop methodologies to provide quantitative information on the extent of evasion. This interim report completes the first phase of the study and is intended to serve as a primer on the motor fuel tax evasion situation for legislators, transportation officials, and others who are concerned with motor fuel tax evasion in Kentucky.

This interim report contains sections which (1) look at the fuel tax process in Kentucky, (2) examine how evasion occurs, (3) detail efforts to alleviate the evasion, and (4) offer preliminary conclusions and recommendations.

AN OVERVIEW OF FUEL TAXES IN KENTUCKY

The fuel tax process in Kentucky is an established method of adding funds to the budget for road construction and maintenance. All motor fuel taxes collected by the Commonwealth go into the State Road Fund (with the exception of the small EPA-mandated Leaking Underground Storage Tank fee which goes to the Natural Resources Department).

Unfortunately, in any situation where there is tax collection, one can usually find some degree of tax evasion. In the case of motor fuel taxes, this evasion results in a reduction of funds available for constructing, maintaining, and improving public highways. In order to better understand the fuel tax evasion problem, some background knowledge is needed. Therefore, some fuel terminology, the basic steps in fuel processing, and the administrative process for carrying out the fuel tax procedure in Kentucky are presented.

THE FUEL PROCESS

The path taken by crude oil through processing until it reaches consumers' gas tanks is fairly straightforward. Gatherer or feeder lines carry crude oil from the wells to a nearby refinery or to a trunk line transfer point. Trunk lines are used to carry crude oil to a more distant refinery. At the refinery, the petroleum is treated to yield a variety of fuel and nonfuel products. The raw products obtained from the various processing operations are separated by distillation into fractions in various boiling ranges. The less volatile (or heavier) components, such as the various fuel oils and the even heavier lubricating oils, condense at the lower levels of the fractionating column, while the simpler (lighter) components, such as straight-run gasoline, condense at higher levels. These various liquid fractions (or side streams) are drawn off at their different levels. They may then be blended and marketed or used as feedstocks for other refinery processes.

The various oil products are then transported from the refinery by water (tankers for overseas shipment and barges for inland waterways), by pipeline (overland or underwater), by railroad tank cars, or by highway (tanker trucks) to bulk storage terminals. Terminal operators may own the fuel stored in their terminals, lease the space to others, or both. Fuel then leaves the bulk terminal at the loading "rack," which is the name for the point where fuel is usually loaded into tanker trucks operated by or for wholesalers. Wholesalers then distribute the fuel to retailers, who sell the products to consumers. Figure 1 shows the most common transport methods for fuel products. Products can change ownership at any or all points along this process, creating opportunities for fuel tax evasion. These potential evasion avenues are discussed in the section entitled "Fuel Tax Problems in Kentucky."

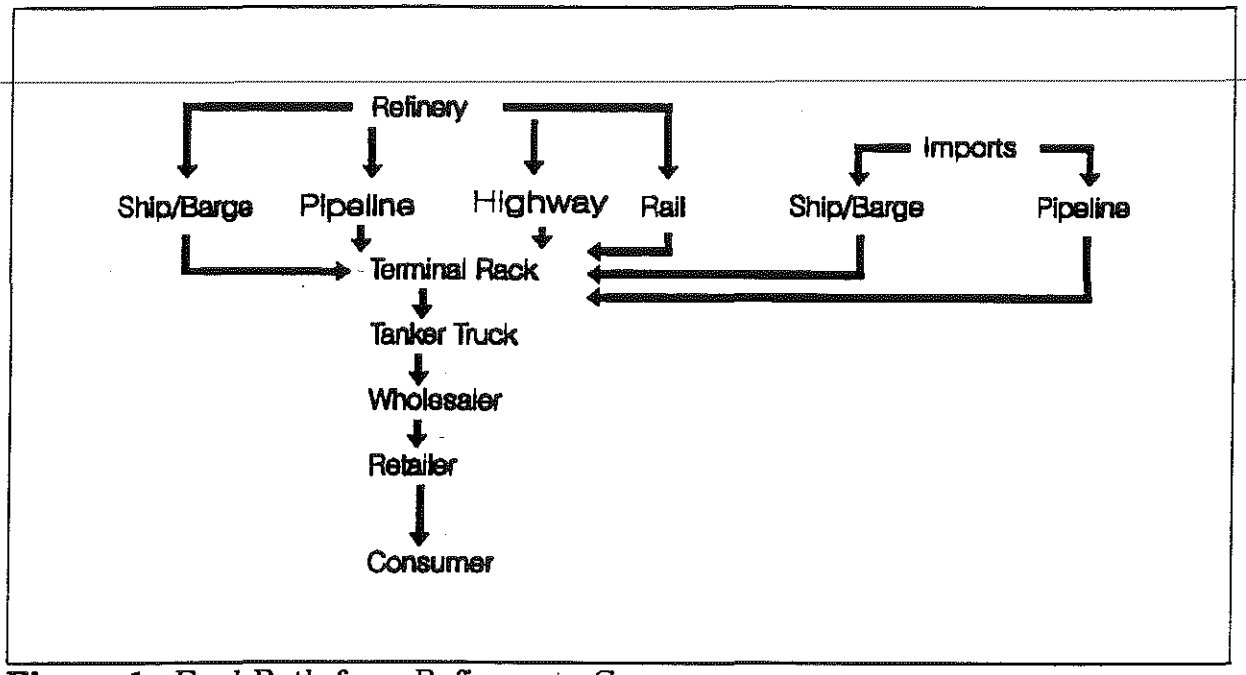

Figure 1. Fuel Path from Refinery to Consumer

FUEL SUPPLY IN KENTUCKY

Kentucky is similar to many other states, in that it both produces and imports motor fuel. A substantial oil field is located in south central Kentucky in Clinton, Wayne, and Cumberland counties. There are also some scattered fields in western Kentucky, and some natural gas wells in eastern Kentucky occasionally draw off some crude oil. The Severance Tax Section of the Kentucky Revenue Cabinet reports that nearly 1.36 million barrels of crude oil were produced in Kentucky during the first three quarters of fiscal 1993(5). This nearly equals the entire previous year's volume of 1.37 million barrels, but falls short of the boom year 1990-91, which produced over 5.5 million barrels of crude oil. Some of this oil is exported and some is used within the state; amounts vary by market conditions. However, the majority of motor fuel used in Kentucky comes from outside the state. Therefore, Kentucky is considered to be an import state.

Kentucky has two licensed, operating refineries--one in Ashland and one in Somerset. In addition, there are a few other smaller refineries which are not currently licensed to operate, but could be brought into production. Although these refineries have some storage capacity, costs involved with complying with strict Environmental Protection Agency (EPA) environmental regulations have prevented new storage tank construction.

Figure 2 shows the major supply routes for Kentucky motor fuels. The majority of motor fuels entering the state arrives by waterway, via the Ohio River, although exact volumes have not been determined. The river ports of Paducah, Henderson, Owensboro, Louisville, Covington, and Ashland are major points of entry for motor fuel supplied to Kentucky by barge.

Fuel also arrives by tanker truck, mainly from Tennessee via Interstate 75 from Knoxville. Lesser amounts come from Nashville, Tennessee (via Interstate 65), and from the neighboring states of Indiana and Illinois. Some fuel is also brought in from Ohio, Virginia, and North Carolina. Scattered rail shipments into Kentucky also occur, but the volume is much less than that brought in by water or truck. Within the state, fuel is transported by pipeline from Louisville to Lexington, and by truck to and from all parts of the state.

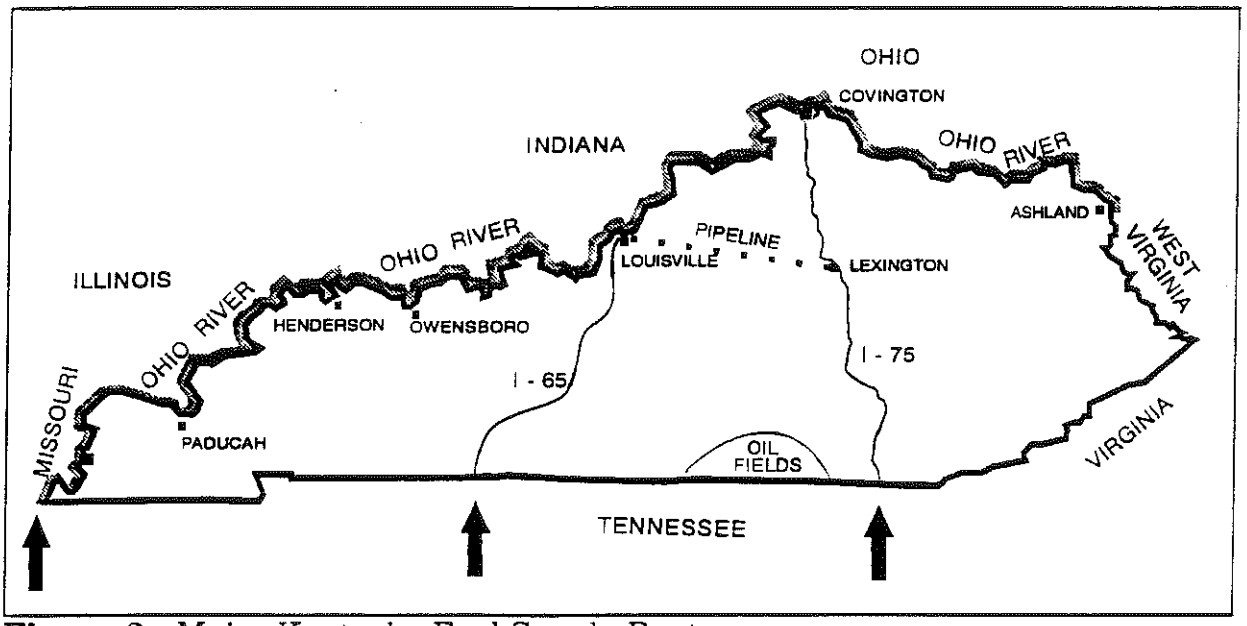

Figure 2. Major Kentucky Fuel Supply Routes

TERMINOLOGY

Some definitions of various terms are necessary for a discussion of fuel tax evasion. The following definitions are presented to give all readers a common understanding of the types of fuel discussed in this report and the way in which the Kentucky Revised Statutes (KRS) view these fuels.

The term "gasoline" refers to all liquid fuels having a flash point of 110 degrees Fahrenheit or below, which are ordinarily, practically, and commercially usable to power internal-combustion engines (those having an electric spark ignition). Commercial gasolines are usually blends of petroleum refinery products. These blends provide the characteristics required for different engines under various conditions. Gasolines of the same quality (antiknock behavior, boiling range, etc.) can vary in composition, since the desired properties can be obtained by blending different components.

Special fuels include diesel and all other fuels not fitting the definition of gasoline, except liquified petroleum gas (LPG) which is taxed separately under Kentucky law. Compressed natural gas may even become a special fuel if it is used for certain applications, such as to power fleet vehicles.

Diesel fuel has a higher boiling range and specific gravity than gasoline and is also more viscous (resistent to flow). Diesel fuel is used in compression ignition (diesel) engines. It is composed of either various distillates obtained in petroleum refining operations or blends of such distillates with residual oil.

Fuel oils (sometimes called heating or furnace oils) are either distillates or residual oils or a mixture of these. The American Society for Testing and Materials (ASTM) divides fuel oils into six categories based on the type of burner for which the oil is suitable. No. 2 Heating Oil is a medium distillate used in atomizing burners (burners which spray the oil in small droplets into a combustion chamber). This grade of oil is used in central heating systems for residences and small commercial or industrial buildings and is virtually the same as the fuel used in trucks or other vehicles powered by a diesel engine.

Gasohol is gasoline blended with at least 10% ethanol or other alcohol fuel. Blends of gasoline with up to 20% ethanol can be used for fuel in many automobile engines without the need for carburetor adjustment.

Kerosene is another fuel obtained by the distillation of petroleum. It is less volatile than gasoline but more volatile than fuel oil. Originally used as fuel in oil lamps, kerosene is now mainly used as a sole or partial component of diesel fuels, jet fuels, and light fuel (heating) oils. Kerosene is often added to diesel fuel to aid in cold-weather engine starting.

Blending is the process of mixing one fuel with another. Blending is usually done while the fuel is in storage tanks. However, another common method is to add an additional fuel or fuels to that which is already loaded into a tanker truck. This is called splash blending, because the fuels are mixed by the movement of the truck on the highway.

MOTOR FUEL TAX ADMINISTRATION

Fuel taxes are collected in Kentucky by the Revenue Cabinet under KRS 138.220 and 234.100 and by the Transportation Cabinet under KRS 138.660 and 138.6601. Kentucky defines three fuel categories for fuel taxes: gasoline, special fuels, and liquified petroleum gas. Taxes are levied on all fuels used to power motor vehicles intended for highway use, except for liquified petroleum gas used in approved pollution control carburetion systems. Because some fuels are intended for off-road use (agriculture, etc.), or, in the case of diesel or kerosene, as heating oil, several categories for exemptions or refunds exist. These will be discussed further in the section on exemptions, credits, and refunds. Since the liquified petroleum gas tax makes up less than one percent (1%) of total motor fuel receipts, it will be excluded from the remainder of this study.

Tax Rates

Fuel taxes administered and collected by the Kentucky Revenue Cabinet are: (1) an excise tax to be paid on all gasoline and special fuel received in the state, and (2) a supplemental highway user motor fuel tax to be paid in the same manner and at the same time as the excise tax.

The basic (excise) gasoline and special fuels tax rate is 9% of the average wholesale price (with a minimum price of $1.11), adjusted quarterly. Currently, the tax is $0.10 per gallon for both gasoline and special fuels. In addition to this tax, the supplemental highway user motor fuel tax is assessed, based on the average wholesale fuel prices, not to exceed $0.05 per gallon for gasoline and $0.02 per gallon for special fuels. This gives a total combined tax of $0.15 per gallon on gasoline and $0.12 per gallon on diesel at the time this report was prepared.

In addition to these taxes, the Kentucky Transportation Cabinet administers and collects taxes based on highway usage. These taxes are (1) a motor fuels surtax of 2% of the average wholesale price of gasoline and 4.7% of the wholesale price of special fuels for fuel consumed by trucks or combinations with three or more axles and a declared gross weight of more than 26,000 pounds (KRS 138.660), and (2) an additional fuel tax of $0.02 per gallon (for gasoline and diesel) on motor vehicles having a combined licensed weight in excess of 59,000 pounds (KRS138.6601). Tax is computed by taking the number of miles traveled on Kentucky public highways divided by the vehicle's rate of miles per gallon to give the number of gallons consumed in Kentucky.

Licensing

Licensing of dealers is one of the main mechanisms in the fuel tax collection process. For tax purposes, Kentucky defines a dealer as anyone who is regularly engaged in refining, producing, distilling, manufacturing, distributing from wholesale bulk storage, blending, or compounding gasoline or special fuels in the state. In the case

of gasoline, receiving or accepting for delivery for resale within Kentucky of an average of 100,000 gallons per month for 12 consecutive months constitutes a dealer [KRS138.210(2)]. The definition of a dealer also includes those who regularly import (or export) gasoline or special fuel into (or out of) the state, or who distribute gasoline from bulk storage (20,000 or more gallon capacity at a single location).

Licensing benefits Kentucky by providing a method of recording and tracking fuel volumes, and it benefits dealers by providing a means of obtaining tax credits for non-highway use fuel. Licensing also allows the dealer a 2.25% deduction of the net tax due as compensation for losses due to evaporation and thermal shrinkage and for handling the required paperwork. Therefore, the only dealers who are not licensed are usually those who do not have the volume or finances necessary to meet licensing requirements. This may include new dealers who are beginning a business or those who are entering a new geographic location. Occasionally, a "dealer" may decide against licensing because he or she does not want the task of filling out the monthly paperwork required for paying the tax. However, these persons are usually referred to as retailers, not dealers, and are not permitted to deal in fuel on which the tax has not been paid. An unlicensed dealer who acts in the capacity of a gasoline or special fuels dealer must pay a penalty up to 20% of the amount of the tax in addition to the fuel taxes due. He or she may also be fined up to $1,000 and/or imprisoned up to one year.

As stated previously, Kentucky taxes all gasoline and special fuels received in the state. Fuel is defined as "received" by any dealer in the state when it has been loaded for bulk delivery into tank cars or trucks for destinations within the state, or when it has been placed into storage tanks or other containers for use, delivery, sale or other distribution [KRS138.210(5)]. There are approximately 400 licensed gasoline dealers and 500 licensed special fuel dealers in Kentucky. These are the persons who are required to pay fuel taxes to the Revenue Cabinet. If one licensed dealer sells to another licensed dealer, the purchaser is responsible for paying the tax (KRS138.270). A licensed dealer may sell to someone who is not licensed, but that licensed dealer must report and pay the tax, passing the cost of the tax along in the selling price.

A license may be obtained by submitting an application, including a financial statement, to the Revenue Cabinet. A surety bond must also be filed with the Cabinet in the amount of three month's estimated tax liability or $5,000, whichever is greater. The Cabinet may also require personal contact with the applicant or a physical inspection of the operation if there are doubts about the legitimacy of the application. The Cabinet may refuse to issue a license to anyone who has previously operated without a license or has had a license canceled, or when a Cabinet official is of the opinion that the application is not filed in good faith.

Reporting

All licensed dealers must file a "Licensed Gasoline Dealer's Monthly Report" and/or a "Special Fuels Dealer's Monthly Report" each month with the Kentucky Revenue

Cabinet. These reports itemize fuels received and sold (by various categories) and itemize deductions for nontaxable (credit) volumes. Taxes due are paid, at the time of filing each month's form, by check payable to the Kentucky State Treasurer. Dealers must retain their records and make them available for review by the Revenue Cabinet for a period of five years.

The Transportation Cabinet administers all fuel taxes for motor carriers. All motor carriers operating in Kentucky must have a Kentucky User (KYU) number which is issued by the Division of Motor Carriers. (A temporary permit may be issued to a carrier that does not regularly operate in Kentucky.) All KYU holders must file a quarterly fuel tax return with the Transportation Cabinet. This return reports information on number of miles the vehicle was operated on Kentucky public highways, rate of fuel consumption, and vehicle weight for tax classification purposes. Payments are made to the Kentucky State Treasurer.

Presently, most reporting forms are completed by hand and all are checked by hand, although plans are being made to change to an electronic filing system. Benefits and disadvantages of electronic filing will be discussed in the section describing efforts to combat evasion.

Exemptions, Credits, and Refunds

When filing the motor carrier's Highway Quarterly Tax Return with the Transportation Cabinet, the motor carrier is entitled to a tax credit for any fuel purchased in Kentucky, because tax was paid to Kentucky on that fuel at the time it was purchased for use in their vehicle. The tax liability of the carrier is determined based on the miles traveled in Kentucky and the average miles per gallon. The quarterly report also provides for refunds for tax paid on fuel for off-road (private) use. In contrast to the Revenue Cabinet, which require that off-road fuel must be drawn from a specially marked tank to qualify for a refund, the Transportation Cabinet will refund tax paid for any fuel that is used off-road. However, refunds are available only after all available credits have been used. Refunds are withheld by the Transportation Cabinet for one quarter.

When filing the dealer's monthly report with the Revenue Cabinet, a licensed dealer is permitted (by KRS 138.270) to claim a deduction for gasoline or special fuel sold to another licensed dealer. In these cases, the dealer purchasing the fuel shall be responsible for reporting the fuel as "received" and paying the tax (and/or claiming deductions). However, fuel tax paid by a nonlicensed dealer may not be refunded or credited to any licensed dealer who may subsequently acquire that fuel from the nonlicensed dealer. Gasoline is exempt from tax if it is sold to the U.S. Government (such as to Ft. Knox and Ft. Campbell) at the wholesale level.

Refunds are available to those who use the gasoline for agricultural, off-road use; at docks for motor boats; for taxi-cab companies; for city and suburban transit (buses); in aircraft; and in some senior citizens' vans which qualify for government funding.

Special fuels which are not taxed (i.e., taken as a deduction on dealers' monthly reports) are those volumes which are (1) exported, (2) sold for use in railroad engines, (3) sold to the U.S. government, (4) lost through a casualty loss, and (5) used in non-highway dealer facilities (such as fuel used to operate fork lifts or heat buildings on dealer facilities).

Any special fuels dealer who delivers special fuels into a tank which has no dispensing outlet and which will be used exclusively to heat a personal residence is entitled to claim a credit against the tax due on his or her monthly report, provided the dealer obtains from the purchaser a signed statement to that effect (Revenue Form 72A133). Credits may also be obtained for non-highway-use fuel delivered to nonprofit religious, charitable, or educational organizations, or state or local government agencies which have qualified for exemption from Kentucky sales and use tax.

The tax on special fuel used to heat a commercial building must be paid to the Revenue Cabinet by the selling licensed dealer, but the purchaser may obtain a quarterly or annual refund of the tax from the state, provided (1) the purchaser obtains a refund permit from the Cabinet by filing an application (Revenue Form 72A135), (2) the purchaser obtains a refund invoice (Revenue Form 72A054-A or Cabinet approved alternative) from the selling licensed dealer for each tax refundable purchase at the time the fuel is delivered, (3) the purchaser stores the fuel in a specially marked tank, and (4) the purchaser files an application for refund (Revenue Form 72A053).

The purchaser of gasoline or special fuel to be used in aircraft can be reimbursed for the tax paid after filing a surety bond with the Revenue Cabinet. Special fuels that are to be used for agricultural purposes may be purchased tax free by a farmer who holds a refund permit, provided he or she issues a certification to that effect (Revenue Form 72A134) to the selling dealer. The dealer may then deduct that fuel on his or her Special Fuel Dealer's Monthly Report as a credit on the amount of tax due.

Auditing

The Motor Fuels Tax Section of the Revenue Cabinet has staff who work with licensing and collection of taxes and also has a newly-expanded field audit team. Since the motor fuel tax in Kentucky is a receipt-based tax, tax is due on any fuel received by a dealer unless a deduction is claimed. Dealers' monthly reports include a number of attached schedules detailing these deductions.

Because auditing must be done by hand, a great deal of staff time is required for each field audit. For this reason, although each monthly report is checked, field audits have traditionally been done on a case-by-case basis as deemed necessary, with no specified frequency. Members of the audit team carefully examine monthly returns which appear to be incorrect, giving priority to a suspected problem area. One field audit can lead to the audit of another dealer, and that audit to another. In

conducting a field audit, an auditor starts with the dealer's monthly report, then goes back to examine (as necessary) invoices, payments, and shipping and receiving bills of lading. After a field audit, the Division of Audit Review and Protest Resolution submits bills for any taxes due.

Currently, the Revenue Cabinet is conducting field audits on refund permit holders, licensed dealers, retailers, and consumers. Occasionally, field inspections will be conducted to check storage tanks when office audits suggest this is warranted.

Unlike the Revenue Cabinet, Transportation Cabinet audits are conducted by a separate audit review unit. A strong working relationship exists between the audit review staff and the Transportation Cabinet tax administrators.

Enforcement

Occasionally, fuel taxes are not paid because of ignorance on the part of the taxpayer. However, auditors report that most tax evasion results from a perception that the evasion will not be discovered, or, if discovered, will not be penalized.

Kentucky statutes provide both civil and criminal penalties for fuel tax evasion. Civil penalties consist of fines of 2% per month up to 20% of the total tax due. Nonpayment of fuel taxes is a Class A misdemeanor for a first offense. A second offense is considered a Class D felony. Felony charges can also be based on fraud (KRS138.990 and KRS138.991). The fine for fraud is 50% of the tax due; there is also a 5% negligence penalty. Although corporate officers cannot be personally held liable for payment of evaded taxes, they may be imprisoned for evasion of those taxes. Evasion or non-payment of tax by a licensed dealer is considered embezzlement, in that a licensed dealer is considered a trust officer of the state for purposes of collecting and remitting the tax (KRS138.280).

The Revenue Cabinet has three special investigators who work on all types of taxes (not solely dedicated to the Motor Fuel Tax Section). These investigators sometimes work undercover on cases of suspected fuel tax evasion. Although investigations can sometimes require years of work, civil and criminal charges have successfully been brought against fuel tax evaders. The section describing efforts to alleviate fuel tax evasion will review current enforcement activities in more detail.

The Transportation Cabinet uses KYU numbers as one of its primary tools for enforcement. If a motor carrier's KYU number has been canceled for nonpayment of fuel tax (or other violations), any subsequent trucks having that number and entering a weigh station will be stopped and impounded. In this way, the Transportation Cabinet can put that motor carrier out of operation until the problem is corrected.

SIGNIFICANCE OF FUEL TAX EVASION IN KENTUCKY

It is difficult to produce a reliable estimate of the current level of fuel tax evasion in Kentucky for several reasons. Perhaps the main factor is that records of fuel volumes come from tax reports submitted to the state by dealers. Since tax evaders are included in this group of reporters, and since some fuel sales are not reported, it is impossible to obtain exact numbers. Secondly, using fuel consumed as a measure of the volume of fuel that should be reported as sold is very difficult because of (1) the difficulty in obtaining reliable fuel burn rates for various furnaces and engines, (2) the lack of data on the number and size of homes using home heating oil, and (3) the lack of exact numbers of miles traveled in the state by vehicles, especially diesel-powered vehicles.

Although the amount of fuel tax evaded in Kentucky is unknown, the FHWA believes the current level of tax evasion nationwide for gasoline is between 3 and 7% of the total gallons consumed; for diesel, it is estimated to be between 15 and 25% of the number of gallons consumed. These estimates are based on tax fraud investigations and prior studies and testimony(6).

Kentucky reported sales of 1,593,313,000 gross gallons of gasoline and 462,609,000 gross gallons of diesel fuel in calendar year 1992(7). Kentucky's 1992 sales of 314,297,000 gross gallons of gasohol are not included in this discussion because national loss estimates are not available for gasohol. These numbers were reported to the state by licensed dealers on state tax reports. By using the mid-range (5% and 20%) of the FHWA suppositions of percentage of tax evasion, it is feasible that fuel taxes were not paid on 79,665,650 gallons of gasoline and 92,521,800 gallons of diesel fuel in 1992. This translates to a possible yearly loss to Kentucky of $23,052,464 in evaded gasoline and diesel fuel taxes. (If one also assumes a 5% evasion rate for gasohol, an additional state tax loss of $2,420,096 would result from that evasion.) It should be noted, however, that Kentucky Revenue Cabinet staff feel that because Kentucky is more active in conducting fuel tax audits and pursuing tax evaders than many states, Kentucky's annual evasion loss may be somewhat lower (in the range of $11-$16 million).

Because the margin of profit for fuel sales is small (usually in the range of $0.05 per gallon), nonpayment of motor fuel taxes by dishonest dealers places the legitimate dealer at a competitive disadvantage. By not paying the state tax, dealers can avoid costs of as much as $960 for every 8,000-gallon truckload of gasoline. This reduced cost can allow dealers operating illegally to sell at a lower price, sometimes putting honest dealers out of business (see the following chart). Customers are not aware of the unpaid taxes and will do business at the establishment offering the lower pump price.

Tax-Paying Dealer		Tax-Evading Dealer	
dealer cost	$.759/gal.	dealer cost	$.759/gal.
tax paid	.120	tax paid	.000
profit	.050	profit ($.03 plus the $.12 tax not paid)	.150
retail pump price	$.929	retail pump price	$.909/gal.

The figures in this example are for illustrative purposes only and include only state fuel tax. When federal motor fuel taxes are also evaded, a dishonest dealer can realize even higher profits.

Fuel tax evasion can be viewed as a problem of ethics versus economics. Tax evaders generally fall into two groups. The first is composed of those whose primary purpose in business is to scam the government to obtain illegal profits. They do not earn their living by operating a competitive fuel business but by collecting (and not paying) fuel taxes. The second group of people are those who legitimately make their living by fuel operations, but who try to cut costs illegally by cheating on their fuel tax reports. This group may include some otherwise honest individuals who fear being forced out of business by other dealers who evade taxes.

METHODS OF EVADING FUEL TAXES

Numerous methods have been used to avoid payment of motor fuel taxes, and new methods are being employed, even as old ones are hindered by detection and enforcement. To aid in fully understanding the scope of fuel tax evasion in Kentucky, this chapter will discuss types of evaders and many of the evasion methods which have been detected in the state.

Wholesalers or distributors who collect tax from the customer but do not pay it to the government can realize up to 10 times the profit of an honest dealer. Their primary purpose in the fuel business is to profit from evaded taxes, and large profits can be accumulated within a few months. Organized crime is often involved in this type of activity; their money enables them to hire attorneys to find legal loopholes, bring in expert accountants, and use sophisticated computer equipment to generate false records in a short period of time. Although organized crime has been a component of the fuel tax evasion problem in several states (such as New York, New Jersey, Indiana, and Pennsylvania), not much organized crime has been uncovered in Kentucky. Therefore, it is not currently regarded as a major threat by state auditors. While organized crime is not prevalent, "independent" criminals, who use their businesses as scams to gain fast profits, have been discovered by state audits.

Another type of evader is the person who pays fuel taxes but tries to cheat on the amount owed. Although these people realize less individual financial gain from cheating on their fuel tax returns than those who pay no taxes at all, their cumulative effect is a major facet in Kentucky's fuel tax evasion picture.

According to auditors in the Motor Fuel Tax Section of the Revenue Cabinet, the types of fuel tax evasion most often seen in Kentucky involve (1) refund permit holders and (2) those who improperly claim credits against tax due on diesel fuel.

In the case of refund permit holders, tax is evaded by filling highway vehicles with gasoline or special fuels which have been designated for off-road use. There are approximately 36,000 refund permit holders (approximately 30,000 are farmers, with the remainder being off-road commercial users, i.e., businesses engaged in mining, timber, and construction). Vehicles may also be filled from tanks of fuel purchased to heat a commercial building, with the purchaser claiming a tax refund for fuel supposedly used for heating. State auditors suspect that fuel reported as used in some mining company facilities, but instead used to power highway vehicles, costs Kentucky more in lost taxes than any other single type of evasion scheme.

Improperly claimed credits (deductions for tax owed on fuel tax reports) can occur in a number of ways. In the case of home heating oil, a certificate is required from the purchaser, but since these are supplied by the dealer and the customer does not send them to the state, the amount of fuel stated on the form can be altered by the dealer. For example, 100 gallons can be changed to 1000 gallons, simply by adding a zero. The additional 900 gallons are then sold tax free for highway use.

Ethanol or alcohol may be illegally blended with gasoline to increase its volume, with tax paid only on the gasoline portion. The same abuse can apply to illegal blending of diesel fuel. Kerosene, which is routinely blended with diesel fuel at a rate of 20-50% to aid cold engine starting, can be illegally blended by not reporting the correct blend rate. However, kerosene is more expensive than diesel, so this is not a common problem.

Fuel tax has also been evaded in other states by reporting that fuel was sold to railroads when, in fact, it was not. Dealers have falsely reported such sales for tax credits when completing monthly tax reports.

Along with falsely claimed credits and refunds, auditors view "paper company" fraud as one of the main Kentucky fuel tax evasion problems, with three major incidents being uncovered recently. Paper companies are those which exist on paper only, and are set up for the sole purpose of gaining profit from tax evasion. A common paper company scam involves the "daisy chain," where a series of actual dealers sell fuel from one to another tax free. Then the fuel is sold to the paper company, which then reports selling the fuel as tax paid, when in fact the tax was not paid. By the time auditors unravel the "chain" of sales, it is discovered that the paper company exists on paper only, with no assets or persons who can be held responsible for the tax.

Another area of evasion occurs as a result of the difficulty in tracking fuel entering Kentucky by waterway. Fuel imported and transported on inland waterways is difficult to track because there is no mandatory checking of manifests. It is not uncommon for a shipment of fuel to begin with 10 or 12 barges, each containing 300,000 gallons of fuel. These large shipments are split along the way with deliveries to various destinations. Adding to the problem is the fact that special fuel delivered for resale into a border-river commercial river vehicle for its own use is exempt from tax. Since it is not uncommon for a tugboat to carry 15,000 gallons for its own consumption, there may be difficulty in determining whether the actual end use of the fuel is to power the tugboat or whether the fuel will be sold for other use. These inherent waterway tracking difficulties create an atmosphere wherein potential evaders feel they are not likely to be caught if they understate or fail to report any of the fuel they receive.

The Kentucky Transportation Cabinet reports several problem areas related to evasion of the highway user taxes which it administers. Some carriers do not report all the miles they travel in Kentucky. Some carriers based in Kentucky do not report the correct number of gallons of fuel purchased in Kentucky. Some carriers claim zero miles traveled in Kentucky and then go out of business, but have had vehicles going through Kentucky scales. There are also carriers that start a business and, after a few months, go out of business. They start again in another state and move from state to state in this manner. To help prevent evasion, the Transportation Cabinet has 300 enforcement officers and an audit staff. Carriers are required to be bonded, so if they go out of business the Transportation Cabinet can go against the bond to help collect unpaid taxes.

Other fuel tax evasion problems exist which, although not considered major activities in themselves, cumulatively create a problem worth investigation. Abuse occurs by operators or blenders who don't want it known that they exist and therefore do not request licensing or file monthly reports. Abuse also occurs when businesses own unlicensed trucks for legitimate off-road use (for example, in mining operations) but operate these trucks illegally on public highways using untaxed fuel. Such unlicensed trucks may also be owned by as many as ten people, making it difficult to trace ownership or to determine a responsible party when tracking liability.

Aiding all these schemes for evasion is the fact that, due to processing time, evaders have at least 90 days "free" in which to operate. These 90 days are automatically built into the system because dealers have a 30-day period in which to file reports, 30 days or more while auditors review the reports, and 30 more days to provide additional information which may be requested by an audit.

MEASUREMENT OF EVASION

The first step in attempting to measure evasion is to define it; i.e., does "evasion" refer only to intentional nonpayment of taxes or does it also include nonpayment due

to ignorance of the law, sloppy bookkeeping, or a mistake in computation on a monthly tax return? For the purposes of this report, it will be assumed that all fuel taxes which are not paid are evaded. The issue of intent may be addressed by later research.

The various data elements necessary for measuring fuel tax evasion are shown in Figure 3. While this measuring process appears to be fairly straightforward, problems arise due to the varying level of accuracy for each data element. Relative confidence can be placed in estimates of the first element, fuel produced in Kentucky, because of the limited number of producers and because gallons produced must also be reported under severance tax laws. Determining the next two items, imports and exports from Kentucky, becomes more difficult. Gallons imported must be tallied from that brought in by truck, rail, waterway, and pipeline. An accurate assessment of imports is difficult because complete manifests are not always required (for barge shipments, for example) and because individual loads of fuel (trucks, barges, railroad cars) coming into or passing through Kentucky are so numerous. Volumes of imports and exports are listed on licensed dealers' monthly fuel tax reports. However, accuracy of the numbers is tied to the honesty of those filing the reports.

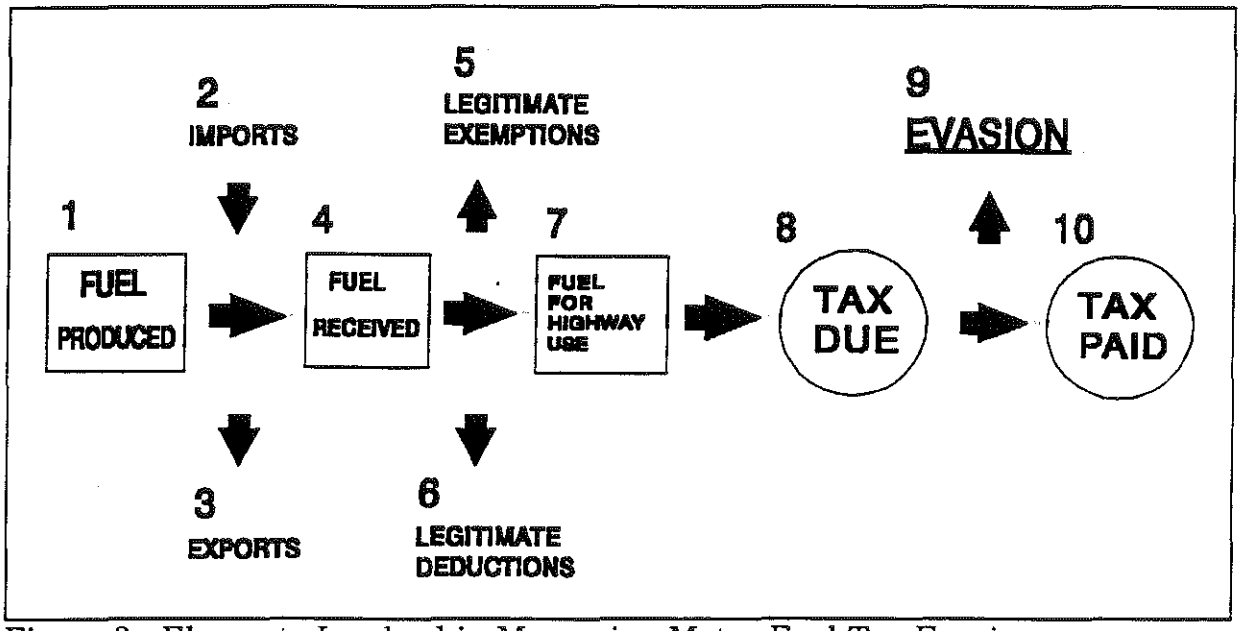

Figure 3. Elements Involved in Measuring Motor Fuel Tax Evasion

The first three elements determine the value of item 4, fuel received, as defined by KRS 138.210. To determine item 5, legitimate exemptions, we need to know the number of gallons used by tax-exempt entities, such as the federal government. The limited number of exempt entities in this category increases the possibility of

obtaining more accurate numbers. However, item 6, legitimate deductions, is much more difficult to obtain. To derive accurate statistics on the number of gallons of fuel actually consumed for non-highway use, reports would be needed on numbers of off-road units (agricultural vehicles, heating furnaces, etc.), and their respective burn rates. Unfortunately, this information is not available and maintaining such a data base could be a tremendous administrative burden.

Item 7, fuel used on highways, is the number of gallons of fuel on which tax is due. Fuel used on highways can be measured by estimating items 1 through 6, or by obtaining data directly on vehicle miles traveled (VMT), vehicle classification data, and MPG to determine gallons used. Item 9, evasion, may be computed by subtracting item 10, tax paid, from item 8, tax due; or it may be calculated by extrapolating the results of auditing tax returns. The number of gallons on which tax was actually paid is available from the "Trends and Receipts" report compiled by the Kentucky Revenue Cabinet.

Thus, we have three possible methods for measuring fuel tax evasion. The first method estimates items 1 through 6, allowing us to calculate the number of gallons of fuel for highway use. The taxable gallons can be multiplied by the tax rate to determine the tax due, which is subtracted from the amount of tax paid to arrive at the amount of evasion.

A second method is to estimate item 7 (fuel used on highways) directly by estimating statewide vehicle-miles-traveled by class of vehicle. Then, fuel efficiency by class of vehicle could be estimated to determine gallons consumed for highway use.

The third approach for measuring evasion is to compile periodic statistics on gallons (or tax) evaded as discovered through audits of fuel tax returns and through an aggressive field audit program. Although it is generally understood that certain types of evasion may go undetected for a period of time, an effective audit program should, at some point, uncover the evasion. Although measuring evasion by type of evasion scheme is not easily done because several different types of evasion are sometimes used by a single evader, total gallons and total dollars evaded could be compiled. The results of a random sampling of audits could be extrapolated to provide a picture of total evasion.

RELATED PROBLEMS

Several other problems may be viewed as related to motor fuel tax evasion, although they have no direct fuel tax consequence. Fraudulent dealers may adulterate fuel with sediment, water, or waste oil, or substitute low octane for high octane. In addition, pumps may be inaccurately calibrated to show more gallons than the number actually pumped. The American Automobile Association has issued warnings of possible bad gasoline and other possible cheating at the pump in 22 states which have no laws on gasoline quality (such as Kentucky) or do not enforce the laws they

have(8). Additionally, it is estimated that about 8% of the fuel pumps in Kentucky are inaccurate(9). The result is that the public is not getting what they pay for (and additionally may incur damaged engines and associated repair costs). Just as important, the public is paying fuel tax on the total volume shown on the pump, while tax is reported and paid to the state only on the actual volume of gasoline received by the seller.

Here, again, cheating creates a situation where those who cheat have a competitive advantage over those who do not cheat, potentially forcing the honest dealer out of business. States, such as California, which conduct a stringent official state inspection program including undercover investigations, help to expose and reduce the number of scam operations. In Kentucky, such activities would fall under the Department of Agriculture, which currently does not conduct a regular fuel quality inspection program. (State legislation is being considered to begin such a program in Kentucky.)

Tax evasion schemes are multi-faceted and costly to Kentucky. However, increased efforts are being made to combat evasion. The next chapter will review these measures.

EFFORTS TO ALLEVIATE EVASION

Kentucky's efforts to combat motor fuel tax evasion fall into two general areas: those initiated solely by the Commonwealth and those in which Kentucky participates in cooperation with other entities. Many different activities fall within these general areas. Some activities are designed to stop specific types of evasion and some address the "big picture."

STATE EFFORTS

Auditing

Kentucky has recently gained an increase in staff devoted to motor fuel tax. The primary reason for this increase was a shortfall in state funds, accompanied by the realization that revenues collected (especially special fuel tax receipts) were not meeting expectations. Consequently, Kentucky's Motor Fuel Tax Audit Program was initiated in September of 1992. Staff conduct usage audits for refund permit holders, dealer audits, and end-users audits. They also perform test audits to determine the best place to use their resources. Unfortunately, evasion is being discovered in all areas.

Although auditing is an effective measure to detect fuel tax evasion, it is very labor intensive. A tax evader may have four sets of books: one for federal taxes, one for state taxes, one actual set, and one to pull everything together for an audit. One audit often leads to another and can result in a lengthy paper chase.

Requiring dealers to submit their monthly reports on electronic media could be a key element in reducing the number of hours required for checking returns and conducting more extensive audits. Revenue staff in Florida, one of the first states to implement electronic filing, report success with their system. Their Inventory Tracking System tracks monthly inventories of a vendor's fuel and identifies where it was purchased and to whom it was sold. For example, the system helped identify a Miami vendor who was under-reporting sales volume and not remitting the proper state tax(10).

Kentucky Revenue Cabinet staff have initiated plans to develop electronic filing for the Commonwealth. Funds for conversion to electronic filing are included in the Revenue Cabinet's budget request for FY 1994-96. However, along with the time-saving and uniformity benefits which would be realized by revenue staff, there are also new issues. For example, larger filers have no problem with electronic filing and can switch to this method of reporting fairly easily, but the reaction of smaller filers is mixed. Many oppose the cost of obtaining new equipment and the time and trouble required to learn new reporting methods for what they perceive as an already cumbersome procedure.

Electronic filing will also require Kentucky to have staff trained to handle computer fraud. Computerized returns offer potential evaders greater opportunity to transpose data quickly and easily once a format is developed. Confidentiality and security concerns also must be addressed before electronic filing can become a reality.

Prevention

Detecting fuel tax evasion after it occurs is a formidable endeavor, but perhaps even more challenging is the task of establishing measures to curb evasion tactics before they can occur. Several steps have been taken in recent years to attempt to stop motor fuel tax evaders before they can start their schemes. While not totally successful, these new measures at least are making it more difficult for tax criminals to cheat the government.

Kentucky has increased the surety bond requirement for licensing of dealers to $5,000 or the average of three months' tax liability, whichever is greater. This allows the state better recourse in the event of unpaid tax. Another measure of control was initiated in July of 1992, when Kentucky began exporter licensing to track fuel that is reportedly being shipped out of state.

One of the greatest concerns, however, still poses a constant challenge to fuel tax administrators. This is the problem of verifying the validity of exempt purchases (those fuels which may be purchased tax-free or which are eligible for a refund of tax). Prior to August 1988, no detailed information was required for the refund process. The current refund process makes it more difficult to evade taxes by requiring more information. Even though this additional submitted information may also be false, a more complete paper trail of transactions is now available for auditors to follow.

Because more gallons of diesel fuel than gallons of gasoline are eligible for credits or refunds, diesel fuel is a major element of evaded fuel tax. Fuel purchased at a refinery is often sold and resold, essentially tax free, from dealer to dealer (with dealers reporting illegal credits and requests for refunds) before taxable status is finally determined and the tax is paid. It has been suggested that tax evasion in this process could be alleviated by moving the point of taxation of diesel fuel to the terminal. However, taxing at the terminal would result in a carrying cost to refiners, if they would have to pay the tax monthly upon receipt of the fuel but would not recoup this cost until they sold the fuel at some time in the future. Refiners feel that this burden discourages the incentive to store fuel, possibly resulting in shortages or dependency on foreign oil. On the other hand, a study conducted for the Independent Fuel Terminal Operators Association concluded that any competitive disadvantage would balance out nationwide(10).

The diesel tax problem and equally troublesome "daisy chain" schemes, discussed earlier, plague not only Kentucky, but other states as well. Therefore, it may prove useful to look at some measures taken by other states to combat these problems.

New York's state legislature eliminated tax-free inter-distributor sales, allowing tax-exempt purchases only by hospitals, governments or for immediate export out of state. The collection of motor fuel tax rose 23% following this legislative change(11). Michigan has enacted new legislation to collect tax on diesel fuel at the rack(12). California has severely limited situations for tax-free sales between distributors by requiring a distributor to meet strict, specific financial requirements. Florida allows tax-exempt sales only between refineries. Tennessee enacted legislation in July 1992 which strengthens documentation requirements for tax credits or refunds on petroleum products exported to points outside the state for resale. North Carolina enacted a new law which requires service stations to account for all diesel fuel purchased, how much was sold for off-road use, and who purchased it.

Perhaps the most stringent regulations have been imposed by Texas, which now requires field investigation of those applying to become licensed dealers, to ensure that each applicant is a real company whose people/identities can be verified. In addition, the Texas legislature appropriated $2.5 million to hire additional attorneys, investigators, and accountants. Legislation now requires each tanker truck carrying a taxable fuel product to have in its possession a manifest showing place of purchase and delivery and a copy of the fuel permit or proof of tax payment. Otherwise, the truck may be impounded for 72 hours awaiting the owner to produce proof of tax paid. If no proof can be produced, the truck and fuel can be seized and sold to satisfy the tax liability. This has proved to be an effective method of shutting down major violators who were selling fuel without remitting the tax. In addition, the minimum bond was raised from $1,000 to $30,000 on each permit. The offense of purchasing diesel tax-free and selling tax-paid without remitting the funds to the State was changed from a third degree to a second degree felony providing for a jail term of 2-20 years and a $10,000 fine on each count. With the assistance of FBI agents and State Troopers, in six months time, 26 criminal cases were submitted for prosecution under felony fuel tax statutes. Nine persons were indicted and three were convicted. On the civil side, 128 fuel tax audits were completed, revealing $65 million in unreported fuel taxes. Texas authorities have seized assets, including truck stops, trucks, and trailers, based upon jeopardy assessments for nonpayment of fuel taxes(13).

While similar steps might be effective in Kentucky as well, passing desirable corrective legislation can prove to be a challenge. Timing is a key factor. The current political environment in Kentucky appears to be generally supportive of efforts to combat fuel tax evasion. However, industry has a strong, powerful lobbying interest. If industry does not support a measure, that proposed legislation will probably die in committee. For instance, in Georgia, a bill sponsored by the Georgia Oilmen's Association would have required terminal operators to list the destination of products on bills of lading. The bill was intended to stop bootleggers who buy fuel in Georgia and sell in states having higher taxes, pocketing the difference in tax. Major oil companies, however, opposed the bill, saying it would have added to their administrative burden and cost them too much money. The bill was defeated in committee(14). After modifying the proposed measures to better reflect industry's interests, a similar bill was signed into law in April 1993.

Despite the array of evasion schemes and problems of detection, Kentucky has made progress against tax evaders. While no detailed studies have been performed of taxes evaded versus those collected, a simple cost/benefit ratio has been determined. On a $250,000 budget for FY 1993, Kentucky's Motor Fuel Tax Audit Program billed $1.1 million in non-reported taxes, yielding a potential return of more than four dollars for each dollar spent. Assessment should increase in future years, since this was a new program and the auditors spent much of their first month in training.

While the audit results are impressive, collecting these uncovered tax dollars is another matter. Some taxes are paid as soon as omissions of payment are discovered. Unfortunately, some evaders do not pay, or in the case of "paper" companies, have no assets with which to pay the tax. Officials may determine that prosecution is warranted and develop a case to present in court. The State Attorney General's office has funds available to prosecute cases involving fuel tax evasion. Available funding can go up or down depending on the priorities of the administration in office. Currently, funding is not a problem. However, the legal process is very time consuming and costly.

COOPERATIVE EFFORTS

Kentucky is not acting alone in its efforts to fight fuel tax evasion. In 1991, the U.S. Internal Revenue Service (IRS) added 150 positions to its staff for federal excise tax examinations. IRS staff time devoted to fuel tax investigations increased from 27 staff years in 1989 to 45 in 1991(15).

This increase in staff allows more cooperation between federal and state revenue staff. Even though federal and state governments may impose different points of taxation for motor fuels, the exchange of information and joint selection of examination targets provides generally superior audit results. In addition, when returns are targeted by both federal and state agencies, their investigations often lead to related returns of other fuel-type taxes (e.g., audits of gasoline returns may lead to discovery of diesel fraud and vice versa)(16).

Joint Federal/State Motor Fuel Tax Compliance Project

The major cooperative activity involving Kentucky motor fuel tax staff is the Joint Federal/State Motor Fuel Tax Compliance Project, often referred to as the "Joint Project." This is the largest combined effort established to date in the fight against fuel tax evasion. Some background and details of the project will help explain its overall scope and ability to act against motor fuel tax evasion.

In the 1980's, large revenue losses resulting from fuel tax evasion schemes were discovered in New York. With the resulting congressional testimony and realization that evasion schemes existed in other states as well, the FHWA increased efforts to

combat fuel tax evasion. The Joint Project was established as a cooperative effort among the FHWA, IRS district offices, and state revenue offices to increase the collection of motor fuel taxes. This goal is to be accomplished by identifying tax evaders through intense investigations and by discouraging future evasion through publicity of prosecutions. It was determined that these goals could best be accomplished by: (1) raising the priority given to collecting motor fuel taxes by increasing the amount of resources available for state and federal tax examination and investigation activities, including training, staffing, and associated overhead; (2) developing computerized tools that can be used by state and federal governments to enhance fuel tax compliance; and (3) setting up a federal/state organizational structure to carry out these activities.

Nine lead states have been designated to organize regional task forces in cooperation with IRS district offices. Each of the remaining states has been invited to join its respective regional task force. In order to participate, states first sign a Memorandum of Understanding, wherein they agree to work on the project and participate in the activities of the regional task forces by providing information and/or criminal investigations.

The cooperation and expertise of industry, professional, and trade associations have also been added to the effort. These ad hoc participants include the following groups:

American Association of State Highway and Transportation Officials
American Petroleum Institute
Federation of Tax Administrators
Independent Liquid Terminals Association
National Association of Truck Stop Operators
Petroleum Marketers Association of America
Society of Independent Gasoline Marketers of America
U. S. Department of Justice.

The Joint Project is a five-year effort funded by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, which provides $5,000,000 per year, plus an additional $2,500,000 per year from the general fund. Each participating state receives $50,000 per year, with lead states receiving $100,000 per year. The remainder of the funding will be utilized by the IRS effort.

Each regional task force and the IRS summarize their activities and progress at periodic meetings of the Joint Project Steering Committee. Comments from the ad hoc members are also submitted and discussed at these meetings. Reports of the Joint Project are prepared for submission to the Secretary of Transportation twice a year.

In May of 1992, the Deputy Federal Highway Administrator, Eugene McCormick, told the Investigations and Oversight Subcommittee of the House Public Works and Transportation Committee that he believed the most significant need for the

improvement of fuel tax enforcement was for the creation of a computerized transactional data base to track product movements. Along those lines and in keeping with the purposes of the Joint Project, the IRS is working on a registration data base and a nationwide motor fuel tracking system. The data base is a listing of taxpayers who are registered through IRS Form 637 and are therefore authorized to deal in tax-free products. Gasoline registrants have already been loaded into the system and it has been installed in each of the 63 IRS district offices. IRS staff can now review the status of all registrants and update those within their own districts. Progress is being made in loading diesel registrants and in authorizing industry access. Completion of this data base will allow IRS districts to make verification for sellers of a proposed buyer's registry status, thereby reducing inadvertent sales to unregistered dealers. Future industry access will allow businesses to ascertain the registration status of those with whom they propose to do business.

The Joint Project is already aggressively publicizing prosecutions and convictions of fuel tax evaders, not only to discourage future evasion, but also to send a message of reassurance to legitimate dealers that evasion will not be tolerated. "Fuel Tax Evasion Highlights" is a widely distributed newsletter published several times a year, which gives highlights of prosecutions in the news throughout the nation. The newsletter also includes updates of congressional and state actions and conveys information about upcoming motor fuel tax training seminars.

Kentucky officially joined the Joint Project in April 1992 as part of the Indiana Task Force, which also includes the states of Illinois, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. Thus far, Kentucky has received $70,000 in FHWA funding for state tax evasion projects, with an additional $50,000 FY 1993 funding allocation approved. Kentucky is using these dollars to fund the travel expenses of audit staff and to purchase equipment (such as lap-top computers) for their use in the campaign to detect motor fuel tax evaders. Future money will be allocated for enforcement staff, in keeping with the provisions of Section 1040 of ISTEA.

Kentucky has sent staff to Joint Project meetings and training seminars. In addition, news items relative to criminal prosecutions of fuel tax evaders in Kentucky have appeared in the project's newsletter. Persons in Kentucky now have access to a telephone hotline (1-800-528-FUEL) established for reporting suspected fuel tax fraud. This hotline was established in conjunction with the Indiana Dept. of Revenue and the IRS. Previously, informants had to call either the Motor Fuel Tax Section or the Governor's office to report suspected fraud. The toll free number is available day and night and conveys a stronger sense of anonymity for those who may feel intimidated.

International Fuel Tax Agreement

ISTEA requires all states to conduct universal auditing by 1996 under the International Fuel Tax Agreement (IFTA). Under this provision, the Transportation

Cabinet will audit and share information with other states. Each state will only collect tax from motor carriers based in that state and will allocate appropriate portions of taxes collected (based on miles traveled) to states in which those carriers traveled. Because Kentucky officials view their current tax collection efforts as being more vigorous than many other states, it is felt that joining IFTA will not be advantageous to Kentucky. The additional effort that will be involved in collecting and apportioning taxes for other states will not be offset by the taxes Kentucky will receive through the collection efforts of other states. In fact, Kentucky may lose significant revenue by being forced to rely on the collection efforts of other states (with less effective motor fuels taxation and enforcement programs) to secure its revenue from carriers based outside of Kentucky.

Twenty-six states, located primarily in the western United States, have become members of IFTA. (Western states generally have more to gain from IFTA than eastern states because they have traditionally employed less collection effort.) Current legislation (KRS.7291) allows Kentucky to enter into a cooperative motor fuel tax agreement; however, it does not provide overriding legislation for areas where Kentucky law and IFTA may differ. The 1994 state legislative session is expected to provide a blanket statement wherein IFTA bylaws will override any Kentucky laws which differ. Kentucky will probably not become a member of IFTA until 1996, because states must first give six months' notice of intent to join and must join at the beginning of a calendar year. Sufficient time will also be needed to notify motor carriers that operate in Kentucky, print new tax reports, and issue IFTA decals. In the meantime, representatives from Kentucky attend IFTA meetings and stay abreast of the status of IFTA issues through newsletters. The Kentucky Department of Vehicle Regulation's Division of Motor Carriers has started using a computer program to help with audits, and their enforcement system may serve as a model to be used by IFTA.

11-Point Plan

Another cooperative effort is one designed by the Federation of Tax Administrators (FTA) to promote uniform standards regarding motor fuel taxes among the states. While allowing some flexibility for specific requirements in each state, the 11-Point Plan provides for a common information exchange that will allow states and the federal government to benefit from their combined resources. Another intent of this uniformity plan is to reduce reporting costs for motor carriers and other industries. It is hoped that the plan will also ensure more accurate reporting.

The 11-Point Plan covers uniform reporting schedules, uniform definitions for imports and exports, and a uniform numbering system for fuel tax accounts. It also will examine the necessity for licensing those who maintain tax-free inventories for resale. The plan allows for magnetic tape reporting or development of a uniform personal computer reporting format. Regional workshops for auditing and investigative techniques will be held. An information network will be established among state tax administrators to identify persons, companies, or organizations involved in fuel tax

evasion schemes. The plan will provide for a review of confidentiality laws of states to allow more efficient exchange of information and encourage more cooperation with the IRS, U.S. Customs Service, and the U.S. Army Corps of Engineers. The requirement of third party (common/contract carriers) reporting of movement of fuel will also be examined.

The revised 11-Point Plan and Uniformity Reporting Schedules were adopted by the FTA Executive Committee in March of 1993 and now need to be implemented by the states. Kentucky will implement this plan, but it will be a long-term project. Kentucky is already using the uniform definitions for imports and exports and requires resellers of fuel to be licensed unless the tax has already been paid. However, Kentucky does not use Federal Employer Identification or Social Security numbers to identify accounts. There is also controversy among taxpayers; while some view uniformity as a good thing, many people don't like change, and they do not like any added expense. To maintain good taxpayer relations, the Kentucky Revenue Cabinet wants to put taxpayers through only one change. Therefore, they will try to combine the change to uniformity with the changes required to implement the planned electronic filing procedure.

With the 11-Point Plan, the exchange of information between states should be easier, and there should be better audit trails for investigators to follow. A working group formed by the IRS, FHWA, and petroleum industry officials hopes to coordinate with the Uniformity Committee and with other state information exchange efforts to look at additional ways of using automatic data processing tools to monitor fuel production and sales. The remaining and most difficult step is to obtain uniform state laws to implement the ideas and procedures promoted by the plan.

Training

There is a cooperative effort between the FHWA and FTA to develop and conduct motor fuel tax training seminars for state and federal audit and investigation personnel. There is also an interest in developing a more advanced course emphasizing the criminal prosecution side of fuel tax evasion. Beginning in July 1992, eight four-day training seminars have been conducted, with a total attendance of over 700 persons. The FTA Motor Fuel Tax Enforcement Training Seminar held in September 1992 in Indianapolis was attended by all Kentucky fuel tax auditors and several other Kentucky staff. The networking opportunities, as well as the training presented, were reported as valuable additions to Kentucky's resources in the fight against motor fuel tax evasion.

Additional Cooperatives

The FTA is a national association of state revenue agencies. Kentucky officials are members of this group and attend regional and national meetings. The June 1992

Southern Region FTA Motor Fuel Tax Section Meeting was held in Louisville, Kentucky. These meetings serve as a forum for the exchange of ideas among persons working on similar problems.

In addition to formal cooperatives, Kentucky Motor Fuel Tax Section staff also have informal, day-to-day cooperative agreements with other states. Because Kentucky's fuel tax rates are lower than most of its bordering states, the higher tax states, such as Ohio and Tennessee, often request information from Kentucky to aid in catching fuel bootleggers. If an official request is received and the information can be legally disclosed, Kentucky staff freely cooperate.

Prosecutions

While motor fuel tax officials would much rather collect tax without the difficulty and expense of court cases, the value of prosecutions cannot be underestimated. Even in cases where evaded tax cannot be collected, the prosecution of the perpetrator sends a clear message to others that tax evasion is against the law and cases will be prosecuted. Cases in Kentucky are often prosecuted by the federal government because tax evaders frequently evade both federal and state motor fuel taxes. In November 1992, seven people, among 16 indicted in Kentucky in 1990 for motor fuel tax fraud, were sentenced in U.S. District Court in Lexington. The indictment said the offenses occurred since mid-1987, and the federal government lost almost $1 million in taxes(17). Nine other persons have since pleaded guilty in this case.

In the spring of 1993, an oil company was indicted in Kentucky on failure to pay $1.5 million in motor fuel tax. The federal indictment was the result of a two-year undercover operation. Prosecutions such as these help to reassure the tax-paying community that revenue officials are actively combating fuel tax evasion.

Fuel Coloring

It has been a longstanding requirement in Kentucky that off-road agricultural use fuel be dyed purple. However, controversy abounds regarding the effectiveness of coloring nonhighway-use diesel fuel as a method of combating fuel tax evasion. It is believed by some revenue staff that the addition of a single color nationwide would enable enforcement personnel to immediately determine whether fuel is being properly used. However, fuel coloring is opposed by industry and trade organizations, and also by many farmers, because of increased costs for separate fuel storage. Also, due to fuel blending, there are currently many colors of fuel. Fuel coloring may also be taken out as well as put in. For this reason, it is possible that fuel coloring would assist only in catching the small-time evader, and that some other type of chemical marker might be better overall.

The federal government is currently looking at several options relating to fuel coloring (18, 19) but it is not known what actions, if any, will take place. Presently, Kentucky is not bound by any federal dyeing statutes. New Environmental

Protection Agency regulations for coloring fuels containing certain levels of sulfur will probably have little significance in the Commonwealth because Kentucky taxes high- and low-sulfur fuels at the same rate.

FUTURE EFFORTS

Joint projects are very valuable because they enable different groups to combine their resources and skills to produce a stronger effort against motor fuel tax evasion. In informal discussions among Kentucky Motor Fuel Tax Section staff, several ideas have surfaced which might prove valuable as future efforts. Staff would like to see a joint project developed with the Kentucky Transportation Cabinet on how best to deal with problems involving refund permit holders. Another suggestion would be a cooperative effort between the U.S. Army Corps of Engineers and Kentucky tax officials to develop improved methods of tracking fuel movement on waterways.

Kentucky revenue staff have also stated that it would be beneficial to review information on volumes of finished product refined in the United States, versus what is sold, to know which borders should be monitored for illegal entry or "bootlegging" of fuel. Information providing reliable fuel burn rates would assist in determining fuel consumption volumes for various types of engines and furnaces, thereby more accurately predicting taxes exempt or due.

It would also be beneficial to Kentucky motor fuel tax staff if U.S. Census questionnaires were to ask for the number of homes heating with No. 2 home heating oil in each county. Currently, the question regarding heating combines heating oil and kerosene, making it more difficult to determine the volume of diesel fuel which should not be taxed.

Overall, the Commonwealth of Kentucky is making a strong effort to alleviate motor fuel tax evasion. Individual, state, and cooperative efforts, combined with vision toward the future, should have a positive effect in reducing tax evasion. It must be remembered that, in addition to excellent ideas, it is essential to have sufficient trained personnel and up-to-date equipment to make those ideas a reality. Finally, state laws must keep up-to-date with other fuel tax enforcement activities. Legislators must consider such issues as equitable taxation (measures which protect the legitimate dealer), enforcement costs, amount of state revenue collected, state administrative burden, industry cost and inconvenience, and the cost and inconvenience to the traveling public which may result from a shortfall in highway funds.

PRELIMINARY FINDINGS AND RECOMMENDATIONS

PRELIMINARY FINDINGS

1. Fuel taxes are a major source of revenue for Kentucky's Road Fund, contributing approximately $370 million annually to the fund. Kentucky's Revenue Cabinet is responsible for collecting an excise tax and a supplemental highway user motor fuel tax on every gallon of gasoline and special fuel used for highway transportation in the state.

2. Evasion of motor fuel taxes is a major concern to all states, including Kentucky. Revenue losses nationwide have been estimated in the billions of dollars, and tax evasion is a constant threat to the existence of legitimate fuel dealers.

3. Using FHWA estimates for fuel tax evasion nationwide, Kentucky may lose as much as $25 million annually. However, because Kentucky is more active in pursuing evaders than many states, Kentucky's loss may be somewhat lower.

4. Unfair competition from fuel tax-evading dealers may force otherwise honest fuel dealers to evade taxes to avoid going out of business.

5. The most common methods of evading fuel taxes in Kentucky are believed to be: 1) claiming a tax refund for fuel allegedly purchased for off-highway use but actually used to power highway vehicles, and 2) claiming credits against tax due on diesel fuel by claiming that the fuel was sold for heating or off-road use. Paper company fraud (such as the "daisy chain") is also viewed as a major problem in Kentucky.

6. A major obstacle to effectively combating evasion in Kentucky results from the difficulty in tracking fuel entering Kentucky by waterway. Because there is no mandatory checking of manifests for fuel shipments, dealers can understate the amount of fuel received, and auditors have little information by which to detect the inaccuracy.

7. There are at least three approaches to the task of quantifying fuel tax evasion in Kentucky. It is not yet known which of these methods offers the best potential for an accurate estimate of the magnitude of fuel tax evasion.

8. Although the Kentucky legislature is currently addressing the issue, Kentucky is one of the few states with no regular gasoline testing program. This provides opportunities for other fuel-related abuses and fraudulent activities.

9. Kentucky has taken significant steps to combat the fuel tax evasion problem. These include: an expanded audit team devoted solely to motor fuel taxes; an increase in the surety bond requirement for licensed fuel dealers; licensing of

exporters; and increased documentation required for refund requests. Initial plans have been developed but no funds have been allocated for conversion to electronic filing of monthly fuel dealers' reports. An early analysis of the expanded audit program showed a potential return of more than four dollars for every dollar spent.

10. Anti-evasion measures have been enacted in other states, many of which bear consideration for adoption in Kentucky. These include eliminating or restricting tax-free inter-distributor sales, field investigation of all license applicants, increased documentation requirements for fuel tanker truck shipments, and moving the point of taxation to the terminal.

11. Major efforts to combat evasion have also been undertaken at the national level. The Joint Federal/State Motor Fuel Tax Compliance Project is the largest combined effort established to date in the fight against fuel tax evasion. The Internal Revenue Service is developing a national registration database and a nationwide motor fuel tracking system. However, Kentucky is not actively involved with the IRS effort.

12. By 1996, all states will be required by the U.S. DOT to conduct universal auditing of motor carriers under the International Fuel Tax Agreement (IFTA). Legislative action is required before Kentucky can become a member of IFTA (this action is expected to take place in the 1994 legislature). However, joining IFTA is not viewed as beneficial to Kentucky because Kentucky already has a more active and effective fuel tax collection program than many other states and because participation in IFTA will probably result in Kentucky collecting more taxes for other states than other states would collect for Kentucky.

13. The Federation of Tax Administrators (FTA) has developed an 11-Point Plan to promote uniform standards regarding motor fuel taxes among the states. The Plan provides for a common information exchange among states and the federal government. Kentucky plans to implement the 11-Point Plan, probably in conjunction with implementing electronic filing. However, at the present, this plan has no "teeth" for implementation.

14. The Internal Revenue Service has filed temporary regulations implementing dyeing requirements for nontaxable diesel fuel, with a public hearing scheduled for March 1994. Fuel coloring remains controversial as a method for combating evasion.

PRELIMINARY RECOMMENDATIONS

1. Efforts currently underway to combat fuel tax evasion in Kentucky should be continued. This includes activities of the Motor Fuel Tax Audit Program, participation in the Joint Federal/State Motor Fuel Tax Compliance Project,

preparations for IFTA membership, implementation of FTA's 11-Point Plan, and conversion to electronic filing.

2. A working group should be established with representatives of the Revenue Cabinet and the Army Corps of Engineers to explore the potential for improving the tracking of fuel movement on waterways.

3. A working group should be established with representatives of the Revenue Cabinet and the Transportation Cabinet to evaluate methods for combatting evasion by refund permit holders.

4. Kentucky's Revenue Cabinet staff should solicit input from other states (perhaps through the Joint Project or FTA) on whether there is broad interest in changing U.S. Census questionnaires to separate heating oil from kerosene.

RECOMMENDED FUTURE RESEARCH

1. In accordance with the objectives of this study, the three alternative approaches to estimating the quantity of fuel tax evasion (discussed previously) should be evaluated. The most promising approach should be selected and used to determine the best possible estimate of the magnitude of evasion in Kentucky.

2. Experience from other states that have moved the point of taxation, implemented electronic filing, or implemented other anti-evasion measures should be assembled, summarized, and interpreted. This information will be vital to decision-makers in evaluating whether such changes would be beneficial for Kentucky.

3. Available literature should be searched for information on average fuel burn rates for various types of engines, furnaces, etc. If such information is not readily available, research should be undertaken to determine these rates.

4. An up-to-date cost/benefit analysis should be performed for Kentucky's Motor Fuel Tax Audit Program. Results of such an analysis could provide justification for additional funds to be committed to the program, thus generating additional revenue for the state's Road Fund.

5. The implications of IFTA should be examined in detail, with particular emphasis on possible methods of avoiding revenue loss.

6. An analysis of the inconsistencies in the Transportation and Revenue Cabinets' fuel tax processes should be conducted. Particular attention should be given to the inequity of methods of taxation and refunds and to the cost (to the state and to the taxpayer) of conducting multiple fuel tax audits.

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