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Fuel Oil and Kerosene Sales 1992

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MASTER

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Fuel Oil and Kerosene Data Available on Diskette

Annual petroleum marketing data are available on a diskette which contains statistics from the *Fuel Oil and Kerosene Sales 1992* report. Included are annual sales data on petroleum volumes of kerosene, distillate fuel oils, and residual fuel oils by State. Annual historical data at the national level are provided in summary tables.

The *Fuel Oil and Kerosene Sales* diskette is in ASCII text format on a double-sided low-density 5.25 inch diskette for use with IBM-compatible personal computers.

How to Order

Fuel oil and kerosene sales data are available on diskette from:

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Office of Data Base Services
U.S. Department of Commerce
5285 Port Royal Road
Springfield, Virginia 22161
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Further information as to content may be obtained from the National Energy Information Center (NEIC), telephone (202) 586-8800.

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Introduction

This publication contains the 1992 survey results of the "Annual Fuel Oil and Kerosene Sales Report" (Form EIA-821). This is the fourth year that the survey data have appeared in a separate publication. Prior to the 1989 report, the statistics appeared in the *Petroleum Marketing Annual* (PMA) for reference year 1988 and the *Petroleum Marketing Monthly* (PMM) for reference years 1984 through 1987. The 1992 edition marks the ninth annual presentation of the results of the ongoing "Annual Fuel Oil and Kerosene Sales Report" survey.

Except for the kerosene and on-highway diesel information, data presented in Tables 1 through 12 (Sales of Fuel Oil and Kerosene) present results of the EIA-821 survey. Tables 13 through 24 (Adjusted Sales of Fuel Oil and Kerosene) include volumes that are based on the EIA-821 survey but have been adjusted to equal the products supplied volumes published in the *Petroleum Supply Annual* (PSA).

Tables 1 through 12 contain sales estimates resulting from the EIA-821 survey for all categories except kerosene and on-highway diesel. For on-highway diesel the survey was not expected to yield valid statistics because the sampling frame does not include a comprehensive listing of all truck stops. Hence, State-level data obtained from the Federal Highway Administration were used instead.

Kerosene sales data were not expected to be complete because a comprehensive listing of kerosene retailers was not available to serve as a sampling frame. It was thought that a complete frame would be expensive to construct because many kerosene retailers are convenience stores or other small businesses. Because of these concerns, kerosene sales data have been published only after adjusting the sales data so that they add to the U.S. total of kerosene product supplied from the PSA.

In Tables 13 through 24, estimates of distillate fuel oil are adjusted at the Petroleum Administration for Defense (PAD) district level to equal published PSA volume estimates of products supplied. For certain sales categories, data obtained from alternate sources are used instead of the adjusted numbers. See "Technical Note 3" in Appendix for further explanation.

Kerosene and residual fuel oil in Tables 13 through 24 are adjusted at the national level to equal published

PSA products supplied estimates. Historically, kerosene estimates have always been adjusted at the PAD district level. However, in 1992, certain kerosene estimates at the PAD district level resulted in negative numbers. Hence, the adjustment procedure was changed to display sales volumes of kerosene for all PAD districts.

The adjustment procedure for residual fuel oil was changed in 1990. In previous years, estimates of vessel bunkering volumes were obtained from the Bureau of the Census report, *United States Foreign Trade, Bunker Fuels*. This Census report was discontinued after 1989. In order to minimize disruption to the residual fuel oil adjusted sales data series, the Census data were removed from prior years' estimates and the adjustment to equal products supplied is now performed at the national level.

The sales data (Tables 1 through 12) differ from the adjusted sales estimates (Tables 13 through 24) for many reasons, including:

- Some products are interchangeable (fungible) and may be supplied as one product and sold as another product. For example, kerosene, kerosene-type jet fuel, and No. 1 fuel oil can be used interchangeably.
- Products supplied into a PAD district may be blended prior to final sale. For example, residual fuel and No. 2 distillate may be blended and sold as No. 4 fuel oil or, in colder climates, kerosene may be blended with distillate fuel oil and sold as heating oil.
- Geographic differences can be attributed to the transportation of product by truck or rail from the district of production. Inter-PAD district movements of products by these modes of transportation are not accounted for in Tables 13 through 24.
- Products may be supplied into a PAD district but the final sale may cross PAD district boundaries. For example, a fuel oil dealer in Ohio (PAD District II) may make retail sales into Pennsylvania (PAD District IB) and/or West Virginia (PAD District IC).
- Drawdowns or buildups in stocks will cause volumes supplied to differ from sales volumes.

Highlights

Sales of Fuel Oil and Kerosene in 1992

Lower petroleum prices, a colder winter, and a recovering economy increased demand for distillate fuel oil in 1992. After showing a decline for the previous 2 years, distillate fuel oil sales rose 4.5 percent in 1992. Demand for residual fuel oil, on the other hand, diminished, particularly in the electric utility sector, due to the coolest summer in 77 years (U. S. Department of Commerce, National Oceanic and Atmospheric Administration, Climate Analysis Center) and competition from natural gas. Residual fuel oil purchases dropped 8.1 percent in 1992. Sales of kerosene also fell after showing an increase in 1991.

In 1992, a total of 64.1 billion gallons of fuel oil and kerosene was sold in the United States, an increase of 0.9 percent over 1991. Distillate fuel oil's share of these products increased to 73.7 percent, while residual fuel oil and kerosene products' share fell to 25.3 and 1.0 percent, respectively. In 1991, these products' shares of total sales were 71.1, 27.8, and 1.1 percent, respectively.

Distillate Fuel Oil

The transportation sector rebounded in 1992 with distillate sales increasing 5.3 percent over 1991. A

slowly improving economy spurred demand for more goods that in turn increased demand for freight transportation services. This was evidenced by increased sales of on-highway diesel, 21.4 billion gallons, 890 million gallons over 1991. Similarly, the vessel bunkering and railroad industries displayed sales volumes of 2.2 and 3.2 billion gallons, a jump of 8.4 and 10.2 percent, respectively, over 1991. The transportation sector's share of total distillate sales accounted for 56.6 percent, with 45.2 percent coming from on-highway diesel sales (Table HL1).

Distillate sales to residential customers for home heating increased over 1991. Overall, the average temperature in 1992 was almost 5.0 percent colder than in 1991 and prices of residential distillate averaged 8.3 cents a gallon less than during the previous year (*Short-Term Energy Outlook*, August 1993 and *Petroleum Marketing Annual 1992*). Thus, heating demand for this end-use sector was up 7.6 percent. Commercial distillate sales remained constant during 1992. Of note, the price gap between residential heating oil and natural gas also narrowed in 1992.

Farmers purchased 10.8 percent more distillate in 1992 than in 1991. The largest increase in sales occurred in the Midwest where distillate fuel oil

Table HL1. Volume Distribution of Distillate and Residual Fuel Oils, 1991 and 1992

End Use	Distillate 1992		Distillate 1991		Residual 1992		Residual 1991	
	Volume (million gallons)	Percent Share	Volume (million gallons)	Percent Share	Volume (million gallons)	Percent Share	Volume (million gallons)	Percent Share
Residential	7,291	15.4	6,776	15.0	--	--	--	--
Commercial	3,771	8.0	3,768	8.3	1,176	7.3	1,424	8.1
Industrial	2,312	4.9	2,309	5.1	2,127	13.1	1,935	11.0
Oil Company	664	1.4	739	1.6	271	1.7	301	1.7
Farm	3,500	7.4	3,158	7.0	--	--	--	--
Electric	541	1.1	595	1.3	5,961	36.8	7,071	40.1
Railroad	3,173	6.7	2,879	6.4	--	--	--	--
Vessel Bunkering	2,219	4.7	2,046	4.5	6,563	40.5	6,773	38.4
On-Highway	21,375	45.2	20,485	45.3	--	--	--	--
Military	653	1.4	812	1.8	92	.6	120	.7
Off-Highway	1,758	3.7	1,642	3.6	--	--	--	--
Other	6	.0	2	.0	9	.1	8	.0
Total	47,262	100.0	45,211	100.0	16,199	100.0	17,632	100.0

Sources: Energy Information Administration, Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," 1991 and 1992.

demand increased 15.6 percent. The increases were caused by a colder heating season and an abundant corn harvest. According to the National Agricultural Statistics Service (NASS), corn production and acreage yields were up 26.8 and 21.0 percent, respectively, over 1991 (*Annual Crop Summary*, January 1993). Not only were more acres of corn harvested, but each acre planted yielded more corn. Additionally, NASS farm diesel expenditures were up as well--13.5 percent.

Off-highway distillate sales, i.e., sales for construction and road building, were up 7.1 percent in 1992. Residential housing starts were up as well as expenditures for Federal highway construction projects. According to the Federal Highway Administration (Office of Highway Information Management), Federal funds for highway construction increased 4.5 percent in 1992, up 1.4 billion dollars.

Not all end-use sectors showed increases in 1992, however. For example, military sales were off 19.6 percent from 1991. Base closings and the end of the Gulf War (Desert Storm) accounted for this decrease. Oil company use sales also dropped as evidenced by the drop in oil rig counts in 1992. Not only did the number of rotary oil rigs in operation decrease by 22.6 percent, but total footage drilled for all wells fell 16.3 percent (*Monthly Energy Review*, August 1993).

Industrial distillate sales remained constant in 1992, even though industrial production was up 2.3 percent (*Economic Indicators*, June 1993). The primary reason for the lack of change in distillate fuel use was the extremely low price of natural gas, particularly in the first half of 1992. Natural gas delivered to industrial customers was up 6.0 percent in 1992 (*Monthly Energy Review*, August 1993).

Distillate fuel oil sales increased in all PAD districts in 1992, except PAD District V which remained constant (Figure HL2). The largest increase occurred in PAD District IA, the Northeast, with a 10.2 percent increase over 1991. On a market share basis, PAD District I, the East Coast, and PAD District II, the Midwest, both showed increases. The remaining PAD districts' shares of total distillate fuel oil fell slightly, with PAD District V, the West Coast, declining 0.6 percentage points.

Residual Fuel Oil

Residual fuel oil sales declined for the third straight year. A total of 16.2 billion gallons of residual fuel oil was sold in the United States in 1992, compared to 17.6 billion gallons in 1991 (Table HL1). Sales declines were attributed to a cooler than normal summer, the introduction of the Iroquois natural gas pipeline from Canada into the northeast region of the United States,

competitive natural gas prices, and Clean Air Act legislation (American Petroleum Institute's (API) *Monthly Statistical Report*, January 13, 1993).

Residual fuel oil sales share of total fuel oil sales fell in 1992, primarily due to the decline of electric utility sales. For the third consecutive year, electric utilities purchased less residual fuel oil, down 15.7 percent from 1991. Electric utility demand was down because the summer of 1992 was the coolest since 1915 and was also 21.6 percent milder than 1991 (*Short-Term Energy Outlook*, August 1993). Debris (stratospheric aerosols) from the Mt. Pinatubo volcano contributed to this weather phenomenon (Fourth Annual Climate Assessment 1992, National Oceanic and Atmospheric Administration).

An additional factor contributing to the fall in demand of residual fuel oil was the continuing price competition from natural gas. Although natural gas prices were higher in 1992 than in 1991, prices to electric utilities were still less than residual fuel oil, therefore, enticing utilities to switch to this cheaper fuel. The abundance of natural gas from the Iroquois pipeline also made it easier for utilities in the northeast to consume more natural gas in 1992 (API's *Monthly Statistical Report*, January 13, 1993).

The shipping industry bought 3.1 percent less residual fuel oil in 1992. Although waterborne activity was up in the United States, the effect of the bunkering tax in California, which took effect in July 1991, more than offset any increases in demand for bunker fuel. (Note: the bunkering tax was repealed in July 1992; however, the new tax law was not effective until January 1993.) Bunkering sales fell for the second straight year in California, with sales dropping 29.5 percent from 1991, almost doubling last year's sales decrease when residual fuel oil purchases fell 18.0 percent in this State.

While industrial residual fuel oil sales increased 9.9 percent (192.1 million gallons) in 1992, oil company use sales decreased 9.9 percent (29.9 million gallons). Though the industrial sector has used natural gas in the past because it has been, on average, a less costly fuel than residual fuel oil, a slightly stronger economy and higher industrial natural gas prices in 1992 caused the industrial sector to purchase residual fuel oil to produce domestic goods (*Monthly Energy Review*, August 1993). Oil companies used less residual fuel oil in refinery operations. Although refinery utilization rates increased from 89.2 percent in 1991 to 91.6 percent in 1992, refinery capacity fell 1.6 percent (*Petroleum Supply Annual 1992*).

Residual fuel oil sales to the military declined by 23.5 percent in 1992. This significant decrease was attributed to the end of the Gulf War. Commercial sales also showed a drop of 17.4 percent.

As in past years, residual fuel oil sales remained concentrated in PAD District I, the East Coast (Figure HL2). Virtually all of the residual fuel was used in this region for electric utility, industrial, commercial, and vessel bunkering uses. The East Coast accounted for the vast majority of electric utility sales, 90.0 percent, an increase over 1991 of 0.6 percent (Figure HL3). PAD District I's share of total residual fuel oil decreased, however, from 60.8 percent in 1991 to 60.2 in 1992. PAD District III, the Gulf Coast, showed an increase in its share of residual fuel oil sales of 1.3 percent. The latter increase was partly due to an increase of vessel bunkering sales in this area of 1.7 percent.

Kerosene

Kerosene sales fell 10.3 percent in 1992 after rebounding in 1991. The bulk of kerosene sales were made to the residential sector, with this sector's share of total kerosene remaining basically unchanged from 1991, at 75.7 percent. All end-use sectors showed sales decreases in 1992, with the exception of farm use where sales increased 17.5 percent. The majority of kerosene sales were made in PAD District I--77.0 percent.

Distillate sales for construction and road building, i.e., off-highway use, were up 116 million gallons (7.1 percent) in 1992.

Figure HL1. U.S. Sales of Distillate and Residual Fuel Oils by End Use, 1990-1992

*For distillate fuel oil, transportation use comprises railroad, vessel bunkering, and on-highway diesel end-use categories. For residual fuel oil, transportation use comprises the vessel bunkering end-use category.
 Sources: Energy Information Administration, Form EIA-821, "Fuel Oil and Kerosene Sales Report," 1991 and 1992.

Figure HL2. Volume Distribution of Distillate and Residual Fuel Oils by PAD District, 1990-1992

*Residual fuel oil sales in PAD District IV were too small to appear in this graph.
 Sources: Energy Information Administration, Form EIA-821, "Fuel Oil and Kerosene Sales Report," 1991 and 1992.

Figure HL3. Distillate and Residual Fuel Oil Sales for Selected End-Use Categories, by PAD District
Distillate: Transportation

Residual: Electric Utility

Source: Energy Information Administration, Form EIA-821, "Fuel Oil and Kerosene Sales Report," 1992.

Low Sulfur Diesel: Requirements and Impacts

Background

After several years of study, the Environmental Protection Agency (EPA) proposed to regulate the sulfur content for highway diesel fuel. A primary reason for proposing lower sulfur highway diesel fuel was to allow proper operation of emission control equipment on 1994 and later motor vehicles. The regulations are intended to reduce the sulfur content in highway diesel fuels by 80 percent on average, while capping aromatics at current levels.

EPA Requirements

The final rule approved in 1992 states that "effective October 1, 1993, all highway diesel fuel is required to comply with the maximum sulfur content standard of 0.05 percent by weight" and must "meet either the 40 cetane index minimum or 35 volume percent aromatic maximum."¹ These limits on sulfur and aromatics were initially proposed jointly by members of the diesel engine manufacturing and the petroleum refining industries back in 1989.² The regulation "includes, but is not limited to, any diesel fuel, fuel oil, furnace oil, heating oil, kerosene, jet fuel, JP-4, JP-5, JP-8, marine diesel or railroad diesel that is suitable for use as a diesel motor vehicle fuel or is suitable for blending with diesel motor vehicle fuel."³ EPA requires that blue dye 1,4 - dialkylamino-anthraquinone be added to any diesel fuel or fuel suitable for blending with diesel motor vehicle fuel which is not in compliance with the sulfur and cetane standards. The blue dye will be added at the refinery for domestic production and at terminals for imports.

The blue dye added to the diesel fuel will not necessarily make the fuel appear blue and is not intended to

make it blue. An unspecified amount must simply be added. The dye is intended to change the color of the high sulfur diesel to make it "noticeably different" from the low sulfur diesel. With the variety of current colors and some of the exceptions to the requirements, color by itself will not determine a violation according to the EPA; color will only indicate that testing is warranted.

Exceptions to Rules on Dyeing

High sulfur diesel used in refinery operations or as feedstocks does not need blue dye added. Even high sulfur diesel moving from one refinery to another does not need to be dyed if the diesel is for feedstock or refinery use and is segregated and documented as such during shipment.

The blue dye will not be added to high sulfur kerosene based jet fuels if there is a downstream use for the fuel in aircraft, if the fuel is segregated, and if it is documented as high sulfur kerosene based jet fuel. The reason kero-jet is not being dyed is to avoid confusion between it and some grades of aviation gasoline. One grade of aviation gasoline is blue in color; another is green.

According to Defense Fuel Supply Center (DFSC) officials, the current Department of Defense (DOD) plan calls for all on-highway diesel used by the U.S. military in the United States to comply with the low sulfur requirements. On August 20, 1993, EPA did grant DOD's request that high sulfur marine diesel supplied by the DFSC be exempt from the blue dye requirement if the fuel is clearly marked and segregated. The exemption is based on DOD's concern that the dye may cause stability problems in the fuel when it is in long-term storage.

¹ See Environmental Protection Agency's (EPA) final rule in the *Federal Register* on May 7, 1992, p. 19535 or EPA's "1993 Diesel Desulfurization Question and Answer Document," August 5, 1993, p. 9. A notice of proposed decision to exempt Alaska has been published in the *Federal Register*, August 27, 1993.

² *Federal Register*, August 24, 1989, p. 35277.

³ EPA, "1993 Diesel Desulfurization Question and Answer Document," p. 1.

Figure 1 illustrates how the colors of diesel fuels and blending stocks will change on October 1. Of course there will undoubtedly be many degrees and shades of

colors between each of these described since (1) initial color of fuel varies depending on the chemical make up of the crude oil; (2) no particular end color is required; and (3) no specific amount of dye is required by EPA.

Figure 1. Changes in the Color of Diesel Fuel on October 1, 1993

Fuel	Colors		
	Early 1993	October 1, 1993 EPA Requirements	
		Low Sulfur	High Sulfur
Kerosene	Clear	Clear	
Kero-jet	Clear	Clear	Clear: aircraft use Blue: other uses
No. 1 Distillate	Clear	Clear, Blue ^a	Blue
No. 2 Distillate	Clear, Straw: natural Green, Red, Purple: premium Red: off-highway diesel from Canada	Clear, Straw: natural Red, Purple: premium	Blue, Green, Coffee: dyed Clear, Straw: DOD marine diesel

^aMay be dyed blue if intended for off-highway uses only or mixed with some high sulfur No. 1 distillate.

Definition of "Low Sulfur"

Congress (in the Clean Air Act Amendments of 1990) and EPA (in its final rule) defined low sulfur as a maximum content of 0.05 percent sulfur by weight. An enforcement issue arose concerning sulfur levels between 0.05 and 0.06 percent by weight. EPA's position is that "as a matter of enforcement discretion," it "will take enforcement action only when its diesel sulfur test results are 0.055 weight percent or greater."⁴

Pipeline companies are requiring "on-highway" diesel fuel to meet more stringent specifications than EPA. They want to ensure that, even if a small amount of high sulfur fuel contaminated a low sulfur batch, the low sulfur batch would remain in compliance with EPA regulations. Colonial and Williams pipelines, for example, are requiring low sulfur on-highway diesel to contain no more than 0.047 percent sulfur content by weight.⁵ Oil companies that want to ship on-highway diesel fuel by pipeline will have to meet the specifications required by the pipeline (as well as EPA) which means that the diesel fuel produced and shipped will be below EPA's enforcement threshold of 0.055 percent sulfur content by weight.

California's Clean Diesel Regulations

Effective October 1, 1993, on- and off-highway motor vehicle diesel fuel sold in California will be limited to a maximum of 0.05 percent sulfur content by weight and must have aromatics reduced to no more than 10 percent volume, unless a refiner can prove that an alternative formulation will reduce emissions by an equivalent amount. The low sulfur regulations issued by the California Air Resources Board apply to such off-highway uses as agriculture, construction, and mining, but excludes stationary, marine, and railroad uses. The South Coast Air Basin (greater Los Angeles area) and Ventura county impose even stricter standards, requiring all No. 2 distillate sold in the area be both low sulfur and low aromatics.

⁴Environmental Protection Agency (EPA), "1993 Diesel Desulfurization Question and Answer Document," pp. 8-9; EPA also stated that it "will take enforcement action only as a result of a calculated cetane index of less than 39.5."

⁵Colonial also requires a higher minimum cetane rating than EPA. Colonial requires it to be 42 while EPA only requires it to be 40 (with enforcement occurring if below 39.5).

Impact of Requirements on Petroleum Marketing

No. 2 diesel is not the only petroleum product affected by the low sulfur requirements. During winter months, kerosene, No. 1 distillate, or kero-jet is typically blended into diesel fuel to prevent clogging of fuel lines. No. 1 distillate and kero-jet are not normally low sulfur products. The supply of low sulfur No. 1 distillate and kero-jet will probably increase as a result of the regulations. The demand for "sweet" or low sulfur crude oil may increase as refiners try to position themselves to meet the new requirements for low sulfur diesel.

Storage and distribution of all petroleum products will become more challenging for pipelines, terminals, distributors, and retailers. Some pipeline companies, like Williams, for example, will no longer ship high sulfur No. 1 distillate. Some oil companies, particularly the smaller firms, will only sell high or low sulfur diesel. Even large oil companies that will market all products have announced that at selected terminals they will only carry high or low sulfur No. 1 and No. 2 distillate. Options open to companies to retain both on-highway and off-highway sales in a particular area include: (1)

manage available storage capacity to accommodate both low and high sulfur products; (2) enter into exchange agreements with competitors to obtain products not stored; (3) carry low sulfur products only and market these to all customers; and (4) buy or lease additional storage capacity.

IRS Requirements: Exempt-use Diesel will be Dyed

Section 13242 of the Omnibus Budget Reconciliation Act of 1993 revises the Federal diesel fuel tax. Effective January 1, 1994, the tax collection point for diesel fuel is moved to the terminal. The tax must be paid unless the diesel fuel is destined for a nontaxable use **and** the fuel is indelibly dyed. Clear low sulfur fuel (which is taxed) that is used for tax exempt purposes will entitle the user to claim a refund. Any diesel fuel that is dyed will not be taxed and, hence, will not be allowed for use on-highway. Discussions between IRS and EPA and between IRS and oil company officials are ongoing and comments are being solicited from the public.

All on-highway diesel must be low sulfur (.05 percent by weight) effective October 1, 1993.

Table 1. Sales of Distillate Fuel Oil by End Use in the United States: 1988-1992
(Thousand Gallons)

End Use	Distillate Fuel Oil				
	1988	1989	1990	1991	1992
U.S. Total	47,576,811	49,786,896	47,826,587	45,210,737	47,261,552
Residential	8,518,859	8,648,629	7,277,365	6,775,589	7,291,444
Commercial	4,294,182	4,277,105	3,986,624	3,767,833	3,771,021
Industrial	2,562,685	2,725,774	2,593,312	2,309,184	2,312,146
Oil Company	622,736	683,683	751,450	738,618	664,408
Farm	3,162,575	3,360,092	3,403,400	3,158,477	3,499,518
Electric Utility	720,137	887,599	763,709	594,821	540,683
Railroad	3,095,736	3,240,649	3,104,830	2,879,109	3,172,724
Vessel Bunkering	1,991,773	2,258,465	2,064,842	2,046,064	2,218,592
On-Highway Diesel	20,038,691	21,131,692	21,360,477	20,485,364	21,374,872
Military	830,614	852,839	709,232	811,705	652,507
Off-Highway Diesel	1,671,387	1,689,651	1,808,646	1,641,560	1,757,788
All Other	67,435	32,719	2,898	2,413	5,848

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1988-1992.

• On-Highway Diesel data are Federal Highway Administration statistics of highway special fuels use.

Sales to school buses and apartment buildings are considered commercial use.

Table 2. Sales of Residual Fuel Oil by End Use in the United States: 1988-1992
(Thousand Gallons)

End Use	Residual Fuel Oil				
	1988	1989	1990	1991	1992
U.S. Total	21,719,226	21,829,300	19,233,428	17,631,823	16,199,042
Commercial	1,927,533	1,792,634	1,522,125	1,423,948	1,176,049
Industrial	3,239,538	2,665,438	2,255,759	1,934,793	2,126,857
Oil Company	548,930	374,459	318,298	300,939	271,070
Electric Utility	9,464,457	9,680,974	8,679,851	7,071,254	5,961,441
Vessel Bunkering	6,354,536	7,191,889	6,326,322	6,773,174	6,563,220
Military	125,318	92,229	101,921	119,976	91,791
All Other	58,912	31,877	29,152	7,738	8,613

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1988-1992.

Table 3. Sales of Kerosene by End Use in the United States: 1988-1992
(Thousand Gallons)

End Use	Kerosene				
	1988	1989	1990	1991	1992
U.S. Total	1,478,316	1,291,668	652,008	709,716	636,426
Residential	1,063,187	868,728	473,409	535,864	481,511
Commercial	193,476	204,258	87,672	89,542	82,398
Industrial	117,858	124,003	60,432	52,438	46,099
Farm	33,426	30,081	16,691	17,053	20,036
All Other	70,370	64,598	13,804	14,819	6,382

Note: Totals may not equal sum of components due to independent rounding.

Note: Kerosene data in the Sales tables (1-12) are adjusted at the national level. See Technical Note 3 for further explanation.

Sources: • Kerosene data are based on data from the Energy Information Administration's "Petroleum Supply Annual," Volume 1, 1988-1992, (DOE/EIA-0340(88)/1 - (92)/1).

Table 4. Sales of Distillate Fuel Oil by End Use, 1991 and 1992

(Thousand Gallons)

Des' nation	Residential		Commercial		Industrial	
	1991	1992	1991	1992	1991	1992
U.S. Total	6,775,589	7,291,444	3,767,833	3,771,021	2,309,184	2,312,146
PAD District I Total	5,401,656	6,003,780	2,533,817	2,604,432	750,243	781,208
Subdistrict IA Total	2,029,119	2,352,734	719,566	700,243	111,064	156,405
Connecticut	551,718	677,218	146,539	148,381	32,901	29,431
Maine	283,239	266,252	70,914	86,486	21,732	23,478
Massachusetts	817,102	948,330	373,687	336,992	31,770	70,094
New Hampshire	175,089	185,640	55,978	56,911	9,025	14,148
Rhode Island	131,988	164,860	38,076	30,374	7,254	10,461
Vermont	99,984	110,434	34,371	41,119	8,382	8,795
Subdistrict IB Total	2,893,984	3,150,924	1,379,380	1,469,289	281,086	292,950
Delaware	49,927	52,484	21,601	17,577	8,147	7,536
District of Columbia	8,106	8,563	28,833	27,772	11	95
Maryland	205,297	224,705	112,806	129,816	30,518	24,615
New Jersey	543,537	564,623	322,065	320,797	61,028	59,727
New York	1,228,670	1,411,324	626,457	700,658	53,257	47,985
Pennsylvania	858,448	889,225	267,618	272,669	128,126	142,992
Subdistrict IC Total	478,553	500,122	434,871	434,899	358,093	341,853
Florida	11,858	15,594	147,334	151,354	38,931	49,745
Georgia	8,764	8,950	42,347	52,325	53,631	31,161
North Carolina	157,197	176,502	89,432	82,645	68,487	80,200
South Carolina	49,010	34,767	25,659	33,825	32,411	39,116
Virginia	225,534	241,017	104,709	98,540	69,965	49,562
West Virginia	26,389	23,292	25,390	16,210	94,667	92,069
PAD District II Total	1,074,198	1,007,648	578,187	606,887	678,713	731,018
Illinois	51,948	42,976	71,493	77,489	83,494	101,868
Indiana	81,988	81,601	49,773	60,883	92,580	101,157
Iowa	37,525	33,490	23,839	20,996	16,070	17,267
Kansas	990	1,240	15,355	21,576	7,935	9,731
Kentucky	29,758	33,067	30,283	37,771	154,816	160,579
Michigan	192,877	182,056	82,018	76,025	53,275	52,358
Minnesota	173,405	147,363	38,515	32,674	38,726	36,453
Missouri	18,191	15,396	47,017	50,517	28,208	27,356
Nebraska	8,353	6,251	7,743	11,604	4,228	6,630
North Dakota	38,170	27,609	6,758	6,770	17,819	10,357
Ohio	178,617	200,534	68,353	72,390	99,990	124,528
Oklahoma	3	85	20,529	16,100	24,889	19,151
South Dakota	34,008	20,382	8,108	10,555	5,390	10,653
Tennessee	11,357	11,150	25,472	44,807	32,763	35,018
Wisconsin	217,006	204,448	82,932	66,728	18,529	17,914
PAD District III Total	1,099	1,345	199,549	191,736	280,695	277,079
Alabama	580	349	31,406	33,653	86,858	74,830
Arkansas	25	410	10,931	12,343	12,187	11,367
Louisiana	60	2	28,724	19,788	22,361	38,666
Mississippi	56	42	19,417	16,683	15,001	24,007
New Mexico	273	468	14,772	7,861	25,962	13,199
Texas	105	74	94,299	101,406	118,326	115,009
PAD District IV Total	45,628	35,233	66,235	75,602	200,187	164,694
Colorado	921	772	20,191	29,892	38,592	43,586
Idaho	24,051	20,429	14,828	14,854	32,062	11,565
Montana	12,168	7,802	6,958	6,066	46,479	34,000
Utah	5,517	4,135	16,042	16,842	34,505	28,459
Wyoming	2,971	2,096	8,217	7,947	48,529	47,085
PAD District V Total	253,009	243,438	390,044	292,365	399,365	358,147
Alaska	67,421	79,380	41,141	68,050	10,331	20,887
Arizona	214	258	12,799	11,159	54,476	72,538
California	8,407	9,914	187,842	98,593	170,882	68,474
Hawaii	16	14	25,867	21,594	4,507	6,268
Nevada	9,344	10,718	12,399	14,707	103,802	121,422
Oregon	62,806	52,806	41,992	37,929	19,648	31,067
Washington	104,802	90,347	68,004	40,332	35,719	37,492

See footnotes at end of table.

Table 4. Sales of Distillate Fuel Oil by End Use, 1991 and 1992 (Continued)

(Thousand Gallons)

Destination	Oil Company		Farm		Electric Utility	
	1991	1992	1991	1992	1991	1992
U.S. Total	738,618	664,408	3,158,477	3,499,518	594,821	540,683
PAD District I Total	23,613	16,768	439,808	440,178	265,861	239,921
Subdistrict 1A Total	4,591	1,316	29,345	27,984	25,898	18,749
Connecticut	468	403	2,602	5,575	5,120	2,965
Maine	3,323	115	5,002	4,143	847	808
Massachusetts	463	413	6,354	4,780	7,777	11,526
New Hampshire	63	71	4,547	3,003	10,597	1,150
Rhode Island	255	291	1,336	641	1,138	1,914
Vermont	20	22	9,504	9,863	419	388
Subdistrict 1B Total	12,295	9,579	155,839	156,326	122,001	88,152
Delaware	342	343	8,638	5,967	4,085	4,366
District of Columbia	-	-	-	-	36,765	20,315
Maryland	893	781	21,557	22,815	7,554	11,927
New Jersey	2,727	3,085	22,895	9,442	9,926	10,268
New York	804	628	51,073	57,850	19,592	11,431
Pennsylvania	7,529	4,743	51,877	60,250	44,079	29,848
Subdistrict 1C Total	6,726	5,873	254,624	255,868	117,962	133,020
Florida	1,407	1,828	55,587	65,230	61,573	75,601
Georgia	437	291	62,537	55,557	6,640	10,834
North Carolina	114	145	44,997	50,898	13,191	13,776
South Carolina	450	194	46,143	29,816	6,671	6,131
Virginia	815	1,050	38,750	47,997	14,626	11,780
West Virginia	3,503	2,366	6,611	6,370	15,261	14,897
PAD District II Total	63,944	83,440	1,592,161	1,840,728	143,301	125,049
Illinois	1,252	1,720	181,287	207,699	21,523	19,636
Indiana	1,293	1,361	103,471	90,400	15,282	12,972
Iowa	147	156	166,960	225,190	2,100	3,312
Kansas	11,744	4,846	157,317	163,248	4,811	3,577
Kentucky	1,082	2,577	40,060	55,733	12,040	13,363
Michigan	1,376	6,489	79,952	98,024	20,251	27,924
Minnesota	734	878	156,791	193,091	4,800	4,091
Missouri	414	369	64,911	74,465	9,479	4,514
Nebraska	70	29	181,956	194,423	1,064	674
North Dakota	5,907	5,793	100,834	107,954	2,244	2,046
Ohio	3,727	5,027	81,234	94,530	30,367	18,186
Oklahoma	34,842	52,488	44,547	89,645	431	1,422
South Dakota	19	19	87,755	74,701	724	2
Tennessee	695	1,081	45,585	48,291	7,352	10,200
Wisconsin	641	608	99,502	123,334	10,833	3,130
PAD District III Total	548,741	454,554	509,925	546,898	46,022	40,461
Alabama	10,859	8,439	34,228	37,717	9,059	8,643
Arkansas	2,917	2,576	51,514	86,011	8,495	7,774
Louisiana	270,421	230,261	68,185	59,839	3,853	4,885
Mississippi	5,219	8,948	114,997	80,945	3,692	1,154
New Mexico	11,495	10,601	13,239	21,409	5,143	826
Texas	247,830	193,729	227,761	260,976	15,780	17,180
PAD District IV Total	19,907	37,122	201,136	204,607	9,924	6,483
Colorado	3,097	8,270	44,376	72,453	1,731	1,570
Idaho	61	53	75,383	63,207	465	58
Montana	2,909	910	58,483	39,494	1,064	158
Utah	3,650	8,689	10,293	14,963	2,335	1,676
Wyoming	10,190	19,200	12,602	14,490	4,330	3,020
PAD District V Total	82,414	72,524	415,447	467,108	129,713	128,770
Alaska	59,159	56,323	-	1	25,763	36,452
Arizona	309	203	17,389	19,819	2,811	3,193
California	11,198	14,412	271,422	318,799	11,610	6,889
Hawaii	1,176	1,227	9,689	11,489	75,134	79,953
Nevada	239	222	5,596	5,378	5,442	539
Oregon	269	4	42,521	42,851	3,607	1,207
Washington	10,064	132	68,830	68,771	5,346	538

See footnotes at end of table.

Table 4. Sales of Distillate Fuel Oil by End Use, 1991 and 1992 (Continued)

(Thousand Gallons)

Destination	Railroad		Vessel Bunkering		On-Highway	
	1991	1992	1991	1992	1991	1992
U.S. Total	2,879,109	3,172,724	2,046,064	2,218,592	20,485,364	21,374,872
PAD District I Total	485,317	601,734	481,624	556,892	6,506,989	6,888,163
Subdistrict IA Total	32,896	32,567	76,087	88,519	654,206	693,219
Connecticut	9,528	10,952	2,393	5,887	173,819	185,287
Maine	1,904	4,628	15,986	13,847	105,547	113,196
Massachusetts	18,424	12,913	48,199	59,661	245,655	247,409
New Hampshire	69	610	181	370	48,348	50,760
Rhode Island	813	842	8,921	8,581	39,759	37,344
Vermont	2,158	2,620	408	393	41,078	59,223
Subdistrict IB Total	153,478	245,354	154,211	161,017	2,511,511	2,569,627
Delaware	958	1,303	6,944	3,916	52,101	51,978
District of Columbia	5,168	6,346	6	7	21,900	20,881
Maryland	26,865	29,497	9,075	11,887	327,295	341,612
New Jersey	62,367	124,174	93,092	94,652	389,054	373,082
New York	15,890	35,089	13,741	19,676	786,976	800,229
Pennsylvania	42,231	48,964	31,352	30,879	934,185	981,845
Subdistrict IC Total	298,943	323,813	251,325	307,358	3,341,272	3,625,317
Florida	73,588	89,959	116,530	155,609	806,188	893,762
Georgia	61,547	65,351	22,336	35,278	854,594	874,159
North Carolina	42,834	48,648	14,972	10,744	598,207	661,167
South Carolina	25,425	16,008	5,437	8,453	360,481	415,909
Virginia	72,924	81,475	40,966	41,973	547,591	586,726
West Virginia	22,844	22,372	50,976	55,298	174,151	193,594
PAD District II Total	1,189,078	1,242,347	415,179	440,494	6,838,180	7,093,942
Illinois	120,118	117,126	54,882	58,141	877,536	865,402
Indiana	193,917	192,713	9,877	13,578	784,039	753,113
Iowa	29,869	34,501	4,817	4,562	319,894	324,321
Kansas	167,798	145,012	-	-	276,312	258,207
Kentucky	101,029	97,574	139,516	139,600	417,619	513,264
Michigan	35,099	32,927	4,503	9,286	531,309	556,507
Minnesota	68,211	117,065	3,303	4,870	369,176	350,224
Missouri	24,418	16,294	40,054	69,442	584,823	644,586
Nebraska	112,358	126,990	-	-	220,319	242,727
North Dakota	39,764	38,901	-	-	94,596	97,445
Ohio	96,968	122,584	14,645	14,387	888,816	913,607
Oklahoma	85,530	101,745	-	252	352,086	390,810
South Dakota	4,546	4,378	-	-	99,489	102,874
Tennessee	71,537	71,814	140,703	123,277	575,503	598,009
Wisconsin	37,919	22,722	3,078	3,099	448,663	484,846
PAD District III Total	547,940	667,178	630,187	706,156	3,390,672	3,445,063
Alabama	56,905	55,458	75,318	73,199	548,437	578,199
Arkansas	35,047	28,607	1,998	1,782	384,746	399,995
Louisiana	54,595	35,293	323,830	323,747	366,785	348,020
Mississippi	20,193	24,532	51,801	54,647	316,657	317,122
New Mexico	40,974	74,529	-	-	219,554	225,791
Texas	340,227	448,760	177,239	252,781	1,554,493	1,575,936
PAD District IV Total	251,501	254,997	167	112	782,786	828,826
Colorado	77,880	66,556	-	-	216,076	215,220
Idaho	21,382	20,093	167	92	124,668	128,768
Montana	48,427	54,429	-	-	114,876	132,587
Utah	36,677	40,704	-	20	170,272	180,007
Wyoming	67,137	73,215	-	-	156,894	172,244
PAD District V Total	405,272	406,468	516,907	514,938	2,966,737	3,118,878
Alaska	4,730	5,296	138,606	153,274	39,627	49,225
Arizona	4,365	7,120	-	23	300,734	351,527
California	238,832	217,250	170,763	111,884	1,769,575	1,842,723
Hawaii	12	22	87,333	89,697	25,364	24,850
Nevada	6,008	4,164	-	-	140,148	152,457
Oregon	88,845	114,668	54,508	50,246	333,566	329,762
Washington	62,480	57,947	67,898	109,811	357,723	368,334

See footnotes at end of table.

Table 4. Sales of Distillate Fuel Oil by End Use, 1991 and 1992 (Continued)

(Thousand Gallons)

Destination	Military		Off-Highway		All Other		Total	
	1991	1992	1991	1992	1991	1992	1991	1992
U.S. Total	811,705	652,507	1,641,560	1,757,788	2,413	5,848	45,210,737	47,261,552
PAD District I Total	284,845	147,482	466,396	480,043	-	344	17,640,169	18,780,946
Subdistrict IA Total	21,873	18,326	60,026	57,690	-	53	3,764,473	4,147,805
Connecticut	2,224	6,073	17,042	11,590	-	-	944,354	1,083,563
Maine	4,259	3,301	8,167	10,179	-	-	490,919	526,409
Massachusetts	3,079	3,806	20,102	18,229	-	-	1,572,612	1,714,133
New Hampshire	472	2,032	8,283	7,999	-	-	312,652	322,693
Rhode Island	10,209	3,061	2,403	2,805	-	-	242,152	261,153
Vermont	1,431	53	4,029	6,888	-	53	201,785	239,853
Subdistrict IB Total	46,758	71,832	185,638	213,725	-	-	7,896,181	8,418,775
Delaware	195	2,025	4,719	3,565	-	-	157,657	151,061
District of Columbia	5,557	7,064	80	549	-	-	106,425	91,592
Maryland	9,832	25,472	23,428	22,760	-	-	775,120	845,887
New Jersey	4,058	25,086	37,754	28,631	-	-	1,548,301	1,613,569
New York	24,514	7,983	44,284	50,644	-	-	2,865,258	3,143,476
Pennsylvania	2,602	4,202	75,374	107,575	-	-	2,443,420	2,573,190
Subdistrict IC Total	216,414	57,325	220,731	208,628	-	290	5,979,515	6,194,365
Florida	8,767	9,599	55,445	65,585	-	24	1,377,077	1,573,891
Georgia	11,186	9,741	51,947	53,738	-	266	1,176,068	1,197,651
North Carolina	9,042	8,014	32,602	30,305	-	-	1,070,875	1,163,044
South Carolina	113,964	3,492	24,202	20,554	-	-	689,834	608,266
Virginia	73,367	25,276	34,649	28,769	-	-	1,223,897	1,214,165
West Virginia	86	1,203	21,886	9,677	-	-	441,764	437,348
PAD District II Total	44,150	85,695	450,377	487,996	2,381	826	13,069,848	13,746,069
Illinois	1,002	1,991	58,878	54,032	-	-	1,523,412	1,548,079
Indiana	5,596	7,444	28,292	42,988	-	208	1,366,108	1,358,418
Iowa	346	7,088	11,648	25,002	-	-	613,014	695,885
Kansas	2,074	19,718	15,040	17,677	1,765	27	661,140	644,860
Kentucky	6,865	10,286	25,204	30,238	-	-	958,273	1,094,052
Michigan	1,252	7,061	59,049	42,212	-	11	1,060,962	1,090,880
Minnesota	1,481	834	41,132	35,938	103	28	896,377	923,511
Missouri	5,294	6,376	31,187	37,940	-	1	853,995	947,255
Nebraska	2,470	327	10,691	10,325	-	-	549,251	599,980
North Dakota	1,118	605	5,055	2,218	24	123	312,290	299,822
Ohio	10,614	9,769	37,406	51,017	-	-	1,508,738	1,626,559
Oklahoma	2,411	835	31,149	19,395	8	-	596,424	691,927
South Dakota	564	5,401	5,854	8,430	-	-	246,457	237,397
Tennessee	2,177	5,983	35,319	73,011	-	-	948,462	1,020,640
Wisconsin	885	1,977	54,474	37,571	482	428	974,945	966,805
PAD District III Total	185,044	188,467	299,090	366,326	6	4,543	6,838,971	6,889,807
Alabama	3,980	5,063	41,397	55,323	6	-	899,034	930,873
Arkansas	328	449	18,901	43,497	-	-	527,091	594,811
Louisiana	13,524	6,640	49,057	43,400	-	-	1,201,394	1,110,542
Mississippi	4,404	14,974	19,198	27,391	-	649	570,635	571,095
New Mexico	990	2,874	24,929	17,237	-	-	357,332	374,795
Texas	161,817	158,467	145,607	179,479	-	3,894	3,083,485	3,307,690
PAD District IV Total	9,998	15,560	104,736	97,499	12	79	1,692,198	1,720,814
Colorado	6,751	6,950	34,638	31,569	-	24	444,252	476,861
Idaho	902	4,129	20,493	13,288	9	-	314,470	276,537
Montana	289	1,113	13,812	18,354	-	55	305,464	294,967
Utah	1,922	1,693	16,220	17,691	4	-	297,435	314,879
Wyoming	136	1,675	19,573	16,597	-	-	330,577	357,570
PAD District V Total	287,668	215,302	320,962	325,924	14	57	6,169,552	6,143,918
Alaska	17,379	23,039	13,009	20,339	-	-	417,167	512,265
Arizona	1,416	1,729	38,320	26,148	-	-	432,833	493,718
California	189,203	164,303	151,514	147,155	-	11	3,181,248	3,000,408
Hawaii	65,520	9,438	13,859	10,799	-	-	308,477	255,352
Nevada	2,352	3,106	16,332	21,288	4	-	301,666	334,001
Oregon	707	2,125	34,289	38,275	-	45	682,758	700,987
Washington	11,091	11,563	53,638	61,919	10	-	845,403	847,187

^E Estimated data. Annual estimate is based on six months of data.

Dashes (-) = No data reported.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1991 and 1992.

• On-Highway Diesel data are Federal Highway Administration statistics of highway special fuels use.

Table 5. Sales of Residual Fuel Oil by End Use, 1991 and 1992

(Thousand Gallons)

Destination	Commercial		Industrial		Oil Company		Electric Utility	
	1991	1992	1991	1992	1991	1992	1991	1992
U.S. Total	1,423,948	1,176,049	1,934,793	2,126,857	300,939	271,070	7,071,284	5,961,441
PAD District I Total	1,309,180	1,087,183	1,366,596	1,565,182	108,790	112,525	6,321,426	5,366,875
Subdistrict IA Total	375,884	263,885	365,277	428,608	228	207	1,578,684	1,455,283
Connecticut	22,225	34,537	41,588	47,293	225	207	488,860	376,795
Maine	103,470	48,602	223,857	232,821	-	-	87,938	100,310
Massachusetts	191,593	143,494	59,057	84,287	-	-	931,246	863,872
New Hampshire	28,362	12,604	19,371	39,883	-	-	81,279	107,973
Rhode Island	24,714	20,242	15,897	17,775	-	-	9,212	6,248
Vermont	5,520	4,106	5,507	6,550	-	-	121	84
Subdistrict IB Total	829,311	736,396	385,041	381,492	107,022	110,555	2,810,692	1,862,074
Delaware	2,150	3,454	26,628	31,966	13,086	15,913	103,812	96,185
District of Columbia	9,323	10,404	54	76	-	-	-	-
Maryland	5,606	18,488	30,329	39,622	2,300	1,871	267,100	172,069
New Jersey	67,481	53,029	128,592	118,070	3,411	2,331	361,590	108,238
New York	718,192	616,789	98,142	115,993	1,938	3,674	1,911,519	1,342,151
Pennsylvania	26,559	34,232	101,296	75,766	86,287	86,765	166,670	145,432
Subdistrict IC Total	103,986	87,203	616,278	755,082	1,644	1,763	1,932,081	2,049,316
Florida	90,139	69,753	109,621	158,471	96	115	1,840,430	1,973,541
Georgia	908	244	73,342	132,176	42	262	-	-
North Carolina	4,942	4,344	220,235	261,275	-	-	750	-
South Carolina	1,036	2,038	67,284	69,153	160	177	-	1,015
Virginia	4,821	8,673	102,994	112,687	1,246	1,209	90,901	74,762
West Virginia	2,140	2,151	42,801	20,321	-	-	-	-
PAD District II Total	40,738	32,001	265,678	316,437	121,717	98,127	137,244	138,094
Illinois	1,648	1,679	10,455	7,705	25,298	6,708	81,324	94,468
Indiana	8,599	695	70,048	96,038	53,599	54,236	-	-
Iowa	376	1,440	3,670	2,692	-	-	-	-
Kansas	292	847	2,674	4,657	2,283	1,413	-	-
Kentucky	-	-	10,118	8,172	9,114	8,132	-	-
Michigan	201	458	26,501	28,432	4,914	1,024	35,348	27,265
Minnesota	12,378	7,630	20,709	26,784	10,693	11,442	470	-
Missouri	1,246	120	19,996	23,669	-	358	11,912	15,734
Nebraska	1,117	1,586	7,152	5,641	-	-	-	-
North Dakota	317	468	4,048	3,943	8,486	6,830	305	420
Ohio	1,692	2,859	44,570	51,868	2,797	3,423	7,883	207
Oklahoma	3,203	1,674	6,461	22,213	-	-	-	-
South Dakota	1,470	1,378	1,354	4,207	-	-	1	-
Tennessee	695	2,221	14,129	11,165	111	241	-	-
Wisconsin	7,505	8,945	23,793	19,251	4,423	4,321	-	-
PAD District III Total	24,457	1,018	117,327	96,194	707	2,119	26,919	25,133
Alabama	10,231	-	3,574	14,349	-	-	-	-
Arkansas	-	156	6,090	1,039	-	-	49	-
Louisiana	5,078	234	47,234	38,778	-	-	1,584	743
Mississippi	25	17	10,001	7,414	-	-	25,286	24,390
New Mexico	-	-	4,916	4,944	-	-	-	-
Texas	9,123	611	45,512	29,670	707	2,119	-	-
PAD District IV Total	1,198	1,495	6,604	6,555	11,760	6,342	-	-
Colorado	-	9	1,416	145	-	-	-	-
Idaho	52	536	1,809	307	-	-	-	-
Montana	138	151	228	3,307	5,762	-	-	-
Utah	963	799	3,093	2,531	4,404	6,259	-	-
Wyoming	45	-	58	266	1,595	82	-	-
PAD District V Total	48,376	54,351	178,588	142,488	57,954	51,958	585,664	431,540
Alaska	-	-	11,752	11,669	-	-	-	-
Arizona	462	-	7,407	3,638	-	-	-	-
California	32,074	1,852	53,936	53,753	20,041	19,208	100,677	76
Hawaii	780	41,123	35,696	16,254	33,455	28,838	474,836	413,179
Nevada	97	15	3,431	3,093	-	-	10,151	18,285
Oregon	10,734	9,385	14,565	19,466	-	-	-	-
Washington	4,229	2,176	51,802	34,616	4,468	3,912	-	-

See footnotes at end of table.

Table 5. Sales of Residual Fuel Oil by End Use, 1991 and 1992 (Continued)

(Thousand Gallons)

Destination	Vessel Bunkering		Military		All Other		Total	
	1991	1992	1991	1992	1991	1992	1991	1992
U.S. Total	6,773,174	6,563,220	119,976	91,791	7,738	8,613	17,831,823	16,199,042
PAD District I Total	1,495,920	1,534,340	111,164	79,334	659	181	10,713,735	9,745,420
Subdistrict IA Total	18,844	14,765	17,376	16,959	-	18	2,356,260	2,179,426
Connecticut	175	681	3,688	1,027	-	18	536,741	460,559
Maine	1,931	71	2,939	5,965	-	-	420,133	387,768
Massachusetts	18,469	13,874	2,137	2,924	-	-	1,200,503	1,108,450
New Hampshire	-	140	8,415	4,581	-	-	137,427	165,181
Rhode Island	289	-	110	2,291	-	-	50,201	46,556
Vermont	-	-	107	172	-	-	11,255	10,912
Subdistrict IB Total	897,484	858,215	50,502	34,561	271	117	5,080,423	3,983,410
Delaware	52,719	38,427	2,541	1,691	167	-	201,103	187,636
District of Columbia	-	-	-	278	-	-	9,377	10,754
Maryland	32,604	48,684	25,049	14,403	-	-	362,986	295,136
New Jersey	416,552	366,755	11,931	7,877	104	32	989,661	854,332
New York	158,204	136,307	8,577	7,920	-	-	2,896,571	2,222,834
Pennsylvania	237,405	268,043	2,504	2,396	-	86	620,722	612,719
Subdistrict IC Total	579,582	661,360	43,185	27,814	387	45	3,277,052	3,582,584
Florida	346,895	399,141	3,633	2,318	24	-	2,390,838	2,604,338
Georgia	48,939	130,528	-	-	-	-	123,231	263,210
North Carolina	22,046	14,735	9,295	10,756	-	45	257,269	291,155
South Carolina	12,257	15,734	20,982	4,904	-	-	101,718	93,020
Virginia	149,456	101,221	9,275	9,836	363	-	359,056	308,389
West Virginia	-	-	-	-	-	-	44,942	22,472
PAD District II Total	8,920	17,968	82	-	343	389	574,721	602,986
Illinois	563	1,221	-	-	-	-	119,288	111,781
Indiana	3,762	8,041	-	-	-	-	136,009	159,010
Iowa	-	-	-	-	-	-	4,047	4,132
Kansas	-	-	-	-	-	-	6,249	6,917
Kentucky	-	-	-	-	-	-	19,231	16,304
Michigan	2,090	3,795	11	-	107	50	69,172	61,025
Minnesota	46	100	71	-	235	-	44,602	45,956
Missouri	-	671	-	-	-	-	33,154	40,552
Nebraska	-	-	-	-	-	-	8,269	7,226
North Dakota	-	-	-	-	-	-	13,155	11,661
Ohio	328	2,113	-	-	-	131	57,270	60,600
Oklahoma	-	-	-	-	-	-	9,664	23,887
South Dakota	-	-	-	-	-	-	2,825	5,585
Tennessee	2,118	1,713	-	-	-	-	17,053	15,341
Wisconsin	12	314	-	-	-	178	35,733	33,008
PAD District III Total	2,483,974	2,525,137	1,184	-	61	-	2,554,629	2,649,601
Alabama	134,259	136,732	1,184	-	-	-	149,248	151,081
Arkansas	-	-	-	-	-	-	6,138	1,195
Louisiana	1,042,952	1,130,126	-	-	-	-	1,096,849	1,169,881
Mississippi	165,370	101,225	-	-	-	-	200,682	133,047
New Mexico	-	-	-	-	61	-	4,977	4,944
Texas	1,141,394	1,157,054	-	-	-	-	1,196,736	1,189,454
PAD District IV Total	-	-	-	-	-	38	19,562	14,429
Colorado	-	-	-	-	-	-	1,416	154
Idaho	-	-	-	-	-	-	1,861	843
Montana	-	-	-	-	-	-	6,127	3,458
Utah	-	-	-	-	-	-	8,460	9,589
Wyoming	-	-	-	-	-	38	1,698	386
PAD District V Total	2,784,360	2,465,775	7,547	12,457	6,676	8,038	3,669,175	3,185,604
Alaska	3,073	12,236	-	-	-	-	14,825	23,905
Arizona	-	-	-	-	-	-	7,869	3,638
California	1,768,556	1,247,458	-	852	5	83	1,975,288	1,323,083
Hawaii	105,866	138,828	3,712	8,058	6,600	7,953	660,945	654,231
Nevada	-	-	-	-	-	-	13,679	21,393
Oregon	240,505	225,152	73	55	71	-	265,948	254,058
Washington	666,360	662,102	3,762	3,491	-	-	730,620	906,296

Dashes (-) = No data reported.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1991 and 1992.

Table 6. Sales of Kerosene by End Use, 1991 and 1992

(Thousand Gallons)

Destination	Residential		Commercial		Industrial	
	1991	1992	1991	1992	1991	1992
U.S. Total	535,864	481,511	89,542	82,398	52,438	46,099
PAD District I Total	428,493	385,784	64,402	61,068	31,921	28,430
Subdistrict IA Total	61,757	59,842	22,263	9,357	2,501	5,404
Connecticut	7,333	8,211	7,020	1,894	731	279
Maine	24,892	19,887	5,237	2,757	306	256
Massachusetts	8,331	10,897	8,409	3,054	437	3,764
New Hampshire	11,313	10,502	898	926	251	549
Rhode Island	1,488	1,533	48	130	634	464
Vermont	10,401	8,812	651	596	142	92
Subdistrict IB Total	189,010	150,089	25,381	39,773	17,383	13,623
Delaware	6,951	6,039	543	50	182	80
District of Columbia	168	148	167	181	-	-
Maryland	16,634	13,284	2,192	1,767	645	365
New Jersey	13,810	11,459	8,050	16,348	3,250	6,057
New York	88,129	82,603	8,946	17,148	8,853	3,834
Pennsylvania	63,319	66,555	5,483	4,279	4,453	3,287
Subdistrict IC Total	177,726	175,853	16,758	11,939	12,037	9,402
Florida	8,197	11,500	1,214	1,246	397	172
Georgia	4,755	4,574	2,220	1,535	844	301
North Carolina	70,288	77,044	3,921	1,931	4,320	3,688
South Carolina	30,684	18,528	488	572	3,472	2,508
Virginia	55,525	53,906	6,214	5,325	2,093	1,176
West Virginia	8,277	10,300	2,701	1,329	910	1,557
PAD District II Total	92,932	86,392	18,881	14,258	11,600	11,149
Illinois	4,899	2,544	1,667	1,444	1,591	1,389
Indiana	13,265	7,793	1,811	2,460	1,673	1,054
Iowa	1,414	847	108	166	60	51
Kansas	418	553	153	188	142	44
Kentucky	15,867	15,337	4,283	2,433	2,084	2,622
Michigan	11,719	8,595	720	213	1,579	1,216
Minnesota	1,707	1,605	145	282	26	14
Missouri	1,558	868	185	679	157	68
Nebraska	229	427	113	62	53	32
North Dakota	312	258	21	14	2	4
Ohio	28,414	30,580	7,573	2,837	2,656	3,839
Oklahoma	418	449	404	154	258	292
South Dakota	189	155	5	16	-	11
Tennessee	11,250	15,158	1,325	2,884	1,179	325
Wisconsin	1,271	1,222	370	427	139	188
PAD District III Total	6,358	3,724	3,244	4,978	6,008	4,729
Alabama	2,553	1,275	627	733	746	1,376
Arkansas	589	308	78	214	409	84
Louisiana	570	394	919	430	1,900	830
Mississippi	948	600	258	368	213	436
New Mexico	257	191	840	368	1,541	357
Texas	1,441	956	522	2,866	1,200	1,646
PAD District IV Total	1,448	1,775	944	346	324	318
Colorado	1,011	1,550	446	282	42	52
Idaho	66	68	8	7	57	11
Montana	34	8	10	8	1	1
Utah	211	95	356	39	96	27
Wyoming	126	53	123	10	129	227
PAD District V Total	6,633	3,836	2,070	1,748	2,584	1,475
Alaska	329	28	5	10	7	11
Arizona	29	82	78	27	1,351	14
California	3,346	1,367	969	835	557	588
Hawaii	-	-	6	3	4	9
Nevada	431	403	128	172	314	389
Oregon	564	716	160	196	101	309
Washington	1,933	1,239	724	503	250	156

See footnotes at end of table.

Table 6. Sales of Kerosene by End Use, 1991 and 1992 (Continued)

(Thousand Gallons)

Destination	Farm		All Other		Total	
	1991	1992	1991	1992	1991	1992
U.S. Total	17,053	20,036	14,819	6,382	709,716	636,426
PAD District I Total	8,861	10,948	9,587	3,687	543,235	489,913
Subdistrict IA Total	966	468	2,367	476	89,855	75,567
Connecticut	2	51	830	11	15,916	10,445
Maine	652	233	115	94	31,202	23,227
Massachusetts	31	28	304	63	15,512	17,807
New Hampshire	27	48	1,041	263	13,530	12,288
Rhode Island	1	1	6	2	2,176	2,130
Vermont	253	127	72	44	11,519	9,670
Subdistrict IB Total	3,703	6,165	4,481	2,210	239,968	211,859
Delaware	76	37	87	11	7,839	6,217
District of Columbia	-	-	-	-	335	329
Maryland	403	347	127	101	20,000	15,864
New Jersey	2	28	732	569	25,844	34,481
New York	2,570	3,782	2,642	836	111,140	78,204
Pennsylvania	651	1,972	903	692	74,809	76,785
Subdistrict IC Total	4,193	4,293	2,699	1,001	213,413	202,468
Florida	71	35	75	177	9,954	13,131
Georgia	98	43	240	62	8,168	6,514
North Carolina	2,079	2,359	732	89	81,340	85,111
South Carolina	773	150	334	250	35,751	22,009
Virginia	754	916	1,013	255	65,598	61,579
West Virginia	418	791	304	168	12,612	14,145
PAD District II Total	5,417	6,737	3,161	1,437	131,991	119,972
Illinois	253	298	117	273	8,527	5,947
Indiana	229	1,060	88	136	17,085	12,502
Iowa	454	669	100	27	2,136	1,759
Kansas	287	445	22	148	1,022	1,378
Kentucky	486	575	442	252	23,162	21,218
Michigan	458	461	837	41	15,114	10,525
Minnesota	385	297	16	27	2,278	2,225
Missouri	114	163	701	37	2,715	1,814
Nebraska	323	309	13	2	732	833
North Dakota	69	14	11	1	415	291
Ohio	1,831	1,715	313	173	40,788	39,144
Oklahoma	97	308	137	103	1,314	1,305
South Dakota	109	144	5	-	307	327
Tennessee	181	81	429	114	14,364	18,563
Wisconsin	141	200	130	105	2,051	2,142
PAD District III Total	1,444	1,704	1,396	1,055	16,450	16,190
Alabama	8	41	119	68	4,053	3,493
Arkansas	210	190	222	112	1,508	907
Louisiana	102	205	180	85	3,672	1,943
Mississippi	787	37	370	168	2,578	1,609
New Mexico	48	15	36	30	2,722	961
Texas	288	1,216	469	593	3,921	7,278
PAD District IV Total	584	265	232	42	3,533	2,746
Colorado	463	234	189	29	2,150	2,147
Idaho	19	11	-	4	150	102
Montana	76	1	4	6	126	24
Utah	11	13	36	1	710	175
Wyoming	16	7	3	2	397	299
PAD District V Total	746	384	473	161	12,507	7,604
Alaska	-	-	-	3	341	52
Arizona	8	6	58	1	1,524	130
California	667	233	306	128	5,846	3,152
Hawaii	-	-	-	-	11	13
Nevada	20	7	56	5	949	976
Oregon	35	51	31	23	891	1,295
Washington	16	87	22	2	2,945	1,987

Dashes (-) = No data reported.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1991 and 1992.

Table 7. Sales for Residential Use: Distillate Fuel Oil and Kerosene, 1992
(Thousand Gallons)

Destination	Distillate Fuel Oil			Kerosene
	No. 1	No. 2	Total	
U.S. Total	213,185	7,078,279	7,291,444	481,511
PAD District I Total	26,197	5,977,583	6,003,780	385,784
Subdistrict IA Total	12,196	2,340,538	2,352,734	59,842
Connecticut	321	676,898	677,219	8,211
Maine	9,952	256,300	266,252	19,887
Massachusetts	852	947,477	948,329	10,897
New Hampshire	675	184,964	185,639	10,502
Rhode Island	73	164,787	164,860	1,533
Vermont	322	110,112	110,434	8,812
Subdistrict IB Total	5,230	3,145,694	3,150,924	150,089
Delaware	-	52,484	52,484	6,039
District of Columbia	-	8,563	8,563	148
Maryland	540	224,165	224,705	13,284
New Jersey	229	564,394	564,623	11,459
New York	2,928	1,408,396	1,411,324	52,603
Pennsylvania	1,534	887,691	889,225	66,555
Subdistrict IC Total	8,771	491,351	500,122	175,853
Florida	914	14,680	15,594	11,500
Georgia	534	8,416	8,950	4,574
North Carolina	4,936	171,566	176,502	77,044
South Carolina	656	34,111	34,767	18,528
Virginia	1,314	239,702	241,016	53,906
West Virginia	417	22,875	23,292	10,300
PAD District II Total	126,087	681,561	1,007,648	86,392
Illinois	5,250	37,726	42,976	2,544
Indiana	14,656	66,945	81,601	7,793
Iowa	6,014	27,476	33,490	847
Kansas	431	809	1,240	553
Kentucky	4,462	28,605	33,067	15,337
Michigan	20,887	161,169	182,056	8,595
Minnesota	27,364	119,999	147,363	1,605
Missouri	2,542	12,854	15,396	868
Nebraska	1,916	4,334	6,250	427
North Dakota	4,925	22,684	27,609	258
Ohio	12,086	188,448	200,534	30,580
Oklahoma	42	43	85	449
South Dakota	5,786	14,596	20,382	155
Tennessee	763	10,387	11,150	15,158
Wisconsin	18,963	185,485	204,448	1,222
PAD District III Total	57	1,289	1,346	3,724
Alabama	22	327	349	1,275
Arkansas	2	409	411	308
Louisiana	-	2	2	394
Mississippi	5	36	41	600
New Mexico	27	441	468	191
Texas	-	73	73	956
PAD District IV Total	8,899	26,334	35,233	1,775
Colorado	292	480	772	1,550
Idaho	4,497	15,933	20,430	68
Montana	3,547	4,254	7,801	8
Utah	190	3,945	4,135	95
Wyoming	373	1,722	2,095	53
PAD District V Total	51,925	191,512	243,437	3,836
Alaska	37,076	42,305	79,381	28
Arizona	99	159	258	82
California	1,420	8,494	9,914	1,367
Hawaii	-	14	14	-
Nevada	837	9,881	10,718	403
Oregon	3,817	48,989	52,806	716
Washington	8,677	81,670	90,347	1,239

Dashes (-) = No data reported.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1992.

• Kerosene data are based on data from the Energy Information Administration's "Petroleum Supply Annual," Volume 1, 1992, (DOE/EIA-0340(92)/1)

Table 8. Sales for Commercial Use: Distillate Fuel Oil, Residual Fuel Oil, and Kerosene, 1992
(Thousand Gallons)

Destination	Distillate Fuel Oil						Residual Fuel Oil	Kerosene
	No. 1 Distillate	No. 2 Distillate			No. 4 Fuel	Total Distillate		
		No. 2 Fuel Oil	No. 2 Diesel	No. 2 Total				
U.S. Total	146,536	1,747,264	1,428,990	3,176,255	448,230	3,771,021	1,176,049	82,398
PAD District I Total	34,147	1,532,975	592,984	2,125,960	444,326	2,604,432	1,087,183	61,068
Subdistrict IA Total	8,142	495,011	95,478	590,487	101,615	700,243	263,585	9,357
Connecticut	298	104,399	25,508	129,907	18,177	148,381	34,537	1,894
Maine	1,139	66,314	11,365	77,678	7,648	86,466	48,602	2,757
Massachusetts	5,422	237,253	34,323	271,576	59,995	336,992	143,494	3,054
New Hampshire	761	37,530	11,666	49,196	6,954	56,911	12,604	926
Rhode Island	11	22,805	1,813	24,618	5,745	30,374	20,242	130
Vermont	511	26,711	10,802	37,513	3,095	41,119	4,106	596
Subdistrict IB Total	19,563	857,283	251,149	1,108,432	341,295	1,469,289	736,396	39,773
Delaware	61	8,527	7,843	16,370	1,146	17,577	3,454	50
District of Columbia	-	17,191	1,916	19,107	8,685	27,772	10,404	181
Maryland	3,080	88,272	35,791	124,063	2,674	129,816	18,488	1,767
New Jersey	13,429	215,513	42,777	258,290	49,079	320,797	53,029	16,348
New York	2,324	348,121	83,033	431,154	267,180	700,658	616,789	17,148
Pennsylvania	669	179,659	79,789	259,448	12,552	272,669	34,232	4,279
Subdistrict IC Total	6,442	180,682	246,359	427,041	1,417	434,899	87,203	11,939
Florida	2,920	38,545	109,889	148,434	-	151,354	69,753	1,246
Georgia	128	19,077	33,120	52,197	-	52,325	244	1,535
North Carolina	1,845	36,833	43,688	80,521	279	82,645	4,344	1,931
South Carolina	71	12,916	20,833	33,749	5	33,825	2,038	572
Virginia	921	67,361	29,226	96,588	1,032	98,540	8,673	5,325
West Virginia	556	5,949	9,603	15,552	101	16,210	2,151	1,329
PAD District II Total	50,939	150,411	402,380	552,792	3,157	606,887	32,001	14,258
Illinois	5,354	14,326	57,705	72,031	104	77,489	1,679	1,444
Indiana	8,650	19,346	32,726	52,072	161	60,883	695	2,460
Iowa	1,779	4,491	14,726	19,218	-	20,996	1,440	166
Kansas	3,548	1,314	16,715	18,028	-	21,576	847	188
Kentucky	1,735	11,257	24,645	35,902	134	37,771	-	2,433
Michigan	9,372	21,566	45,028	66,593	60	76,025	458	213
Minnesota	4,688	12,489	15,437	27,926	60	32,674	7,630	282
Missouri	3,070	7,731	39,716	47,448	-	50,517	120	679
Nebraska	2,155	2,608	6,841	9,449	-	11,604	1,586	62
North Dakota	649	2,914	3,208	6,121	-	6,770	468	14
Ohio	698	15,971	53,188	69,159	2,533	72,390	2,859	2,837
Oklahoma	134	3,105	12,861	15,966	-	16,100	1,674	154
South Dakota	2,007	4,194	4,354	8,548	-	10,555	1,378	16
Tennessee	2,290	5,274	37,242	42,516	-	44,807	2,221	2,884
Wisconsin	4,810	23,825	37,989	61,814	105	66,728	8,945	427
PAD District III Total	2,400	11,179	178,150	189,330	6	191,736	1,018	4,978
Alabama	9	2,079	31,566	33,645	-	33,653	-	733
Arkansas	232	215	11,896	12,111	-	12,343	156	214
Louisiana	1,395	2,526	15,868	18,394	-	19,788	234	430
Mississippi	104	65	16,509	16,573	6	16,683	17	368
New Mexico	208	490	7,164	7,654	-	7,861	-	368
Texas	453	5,805	95,148	100,954	-	101,406	611	2,866
PAD District IV Total	9,068	11,800	54,735	66,536	-	75,602	1,495	346
Colorado	3,641	5,214	21,038	26,251	-	29,892	9	282
Idaho	2,368	3,490	8,996	12,486	-	14,854	536	7
Montana	1,194	1,390	3,482	4,872	-	6,066	151	8
Utah	1,142	739	14,961	15,700	-	16,842	799	39
Wyoming	721	968	6,258	7,226	-	7,947	-	10
PAD District V Total	49,985	40,898	200,740	241,638	742	292,365	54,351	1,748
Alaska	38,756	12,784	15,829	28,614	680	68,050	-	10
Arizona	194	2,397	8,568	10,966	-	11,159	-	27
California	7,186	8,760	82,587	91,346	62	98,593	1,652	835
Hawaii	606	703	20,285	20,987	-	21,594	41,123	3
Nevada	669	2,360	11,678	14,038	-	14,707	15	172
Oregon	1,298	5,812	30,819	36,631	-	37,929	9,385	196
Washington	1,276	8,082	30,974	39,056	-	40,332	2,176	503

Dashes (-) = No data reported.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1992

• Kerosene data are based on data from the Energy Information Administration's "Petroleum Supply Annual," Volume 1, 1992, (DOE/EIA-0340(92)/1)

Table 9. Sales for Industrial Use and for Oil Company Use: Distillate Fuel Oil, Residual Fuel Oil, and Kerosene, 1992
(Thousand Gallons)

Destination	Industrial Use								Oil Company Use	
	No. 1 Distillate	No. 2 Distillate			No. 4 Fuel	Total Distillate	Residual Fuel Oil	Kerosene	Distillate Fuel Oil	Residual Fuel Oil
		No. 2 Fuel Oil	No. 2 Diesel	No. 2 Total						
U.S. Total	64,009	575,731	1,585,527	2,161,259	86,878	2,312,146	2,126,857	46,099	664,408	271,070
PAD District I Total	4,726	334,521	368,768	703,289	73,193	781,208	1,565,182	28,430	16,768	112,525
Subdistrict IA Total	875	111,718	17,867	129,585	26,346	156,405	428,608	5,404	1,316	207
Connecticut	27	20,490	2,096	22,586	6,818	29,431	47,293	279	403	207
Maine	52	18,935	2,098	21,032	2,392	23,476	232,821	256	115	-
Massachusetts	586	48,896	10,269	59,165	10,342	70,094	84,287	3,764	413	-
New Hampshire	10	10,864	688	11,552	2,587	14,148	39,883	549	71	-
Rhode Island	-	8,011	585	8,596	1,864	10,461	17,775	464	291	-
Vermont	-	4,521	1,932	6,453	2,342	8,795	6,550	92	22	-
Subdistrict IB Total	575	111,953	135,716	247,669	34,706	282,950	381,492	13,623	9,579	110,555
Delaware	1	1,931	4,287	6,218	1,317	7,536	31,966	80	343	15,913
District of Columbia	-	14	68	82	13	95	76	-	-	-
Maryland	373	8,882	13,980	22,842	1,400	24,615	39,622	365	781	1,871
New Jersey	19	37,125	8,186	45,312	14,396	59,727	118,070	6,057	3,085	2,331
New York	30	23,214	13,443	36,657	11,298	47,985	115,993	3,834	628	3,674
Pennsylvania	151	40,786	95,773	136,559	6,282	142,992	75,786	3,287	4,743	86,765
Subdistrict IC Total	3,477	110,850	215,385	326,235	12,141	341,853	755,082	9,402	5,873	1,763
Florida	29	2,819	45,676	48,495	1,220	49,745	159,471	172	1,828	115
Georgia	107	7,658	21,929	29,586	1,467	31,161	132,176	301	291	262
North Carolina	153	44,790	29,916	74,706	5,341	80,200	281,275	3,888	145	-
South Carolina	37	14,385	24,401	38,786	294	39,116	69,153	2,508	194	177
Virginia	182	29,385	16,252	45,637	3,743	49,562	112,687	1,176	1,050	1,209
West Virginia	2,969	11,813	77,211	89,024	76	92,069	20,321	1,557	2,366	-
PAD District II Total	28,007	172,907	527,888	700,795	2,215	731,018	316,437	11,149	83,440	98,127
Illinois	2,996	15,777	83,054	98,831	41	101,868	7,705	1,389	1,720	6,708
Indiana	5,230	12,571	83,300	95,871	56	101,157	96,038	1,054	1,361	54,236
Iowa	1,343	7,295	8,628	15,923	-	17,267	2,692	51	156	-
Kansas	898	3,972	4,517	8,489	344	9,731	4,657	44	4,846	1,413
Kentucky	1,760	29,585	129,217	158,803	16	160,579	8,172	2,622	2,577	8,132
Michigan	2,222	19,079	31,056	50,136	-	52,358	28,432	1,216	6,489	1,024
Minnesota	6,231	19,363	10,563	29,926	296	36,453	26,784	14	878	11,442
Missouri	1,515	8,599	16,982	25,580	261	27,356	23,669	68	369	358
Nebraska	567	564	5,404	5,969	95	6,630	5,641	32	29	-
North Dakota	2,063	331	7,963	8,294	-	10,357	3,943	4	5,793	6,830
Ohio	525	44,846	78,566	123,412	590	124,528	51,868	3,839	5,027	3,423
Oklahoma	409	940	17,788	18,727	15	19,151	22,213	292	52,488	-
South Dakota	949	862	8,710	9,572	132	10,653	4,207	11	19	-
Tennessee	178	2,689	31,808	34,497	343	35,018	11,165	325	1,081	241
Wisconsin	1,122	6,435	10,331	16,765	27	17,914	19,251	188	608	4,321
PAD District III Total	1,645	16,253	258,988	275,242	192	277,079	96,194	4,729	454,554	2,119
Alabama	501	5,213	69,116	74,329	-	74,830	14,349	1,376	8,439	-
Arkansas	4	593	10,630	11,223	141	11,367	1,039	84	2,576	-
Louisiana	5	130	38,492	38,622	40	38,666	38,778	830	230,261	-
Mississippi	491	5,767	17,738	23,505	11	24,007	7,414	436	8,948	-
New Mexico	457	139	12,603	12,742	-	13,199	4,944	357	10,601	-
Texas	188	4,411	110,410	114,821	-	115,009	29,670	1,646	193,729	2,119
PAD District IV Total	14,352	29,825	120,149	149,974	369	164,694	6,555	318	37,122	6,342
Colorado	1,696	23,366	18,523	41,889	-	43,586	145	52	8,270	-
Idaho	1,185	3,037	7,343	10,380	-	11,565	307	11	53	-
Montana	4,814	1,609	27,492	29,100	85	34,000	3,307	1	910	-
Utah	1,238	1,350	25,865	27,215	6	28,459	2,531	27	8,689	6,259
Wyoming	5,418	464	40,925	41,389	278	47,085	266	227	19,200	82
PAD District V Total	15,279	22,225	309,734	331,959	10,909	358,147	142,488	1,475	72,524	51,958
Alaska	10,807	1,364	8,716	10,079	-	20,887	11,669	11	56,323	-
Arizona	1	205	62,791	62,997	9,540	72,538	3,638	14	203	-
California	532	1,281	65,556	66,838	1,105	68,474	53,753	588	14,412	19,208
Hawaii	-	1,915	4,353	6,268	-	6,268	16,254	9	1,227	28,838
Nevada	3,447	1,252	116,699	117,951	24	121,422	3,093	389	222	-
Oregon	222	4,486	26,358	30,844	-	31,067	19,466	309	4	-
Washington	269	11,721	25,261	36,982	241	37,492	34,616	156	132	3,912

Dashes (-) = No data reported.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA 821, "Annual Fuel Oil and Kerosene Sales Report," for 1992

• Kerosene data are based on data from the Energy Information Administration's "Petroleum Supply Annual," Volume 1, 1992, (DOE/EIA-0340(92)/1).

Table 10. Sales for Farm Use: Distillate Fuel Oil and Kerosene; Sales for Electric Utility Use: Distillate Fuel Oil and Residual Fuel Oil, 1992
(Thousand Gallons)

Destination	Farm				Electric	
	Diesel	Other Distillate	Total Distillate	Kerosene	Distillate Fuel Oil	Residual Fuel Oil
U.S. Total	3,252,532	246,986	3,499,518	20,036	540,683	8,961,441
PAD District I Total	362,011	78,167	440,178	10,945	239,921	5,366,675
Subdistrict IA Total	15,814	12,170	27,984	488	15,749	1,455,283
Connecticut	1,887	3,688	5,575	51	2,965	376,795
Maine	2,504	1,639	4,143	233	806	100,310
Massachusetts	2,204	2,556	4,760	28	11,526	863,872
New Hampshire	1,370	1,633	3,003	48	1,150	107,973
Rhode Island	310	330	641	1	1,914	6,248
Vermont	7,540	2,323	9,863	127	388	84
Subdistrict IB Total	107,584	48,762	156,326	6,165	88,152	1,862,074
Delaware	5,609	358	5,967	37	4,366	96,165
District of Columbia	-	-	-	-	20,315	-
Maryland	20,506	2,309	22,815	347	11,927	172,069
New Jersey	6,335	3,107	9,442	28	10,268	106,238
New York	37,207	20,643	57,850	3,782	11,431	1,342,151
Pennsylvania	37,906	22,345	60,250	1,972	29,846	145,432
Subdistrict IC Total	238,633	17,235	255,868	4,293	133,020	2,049,318
Florida	65,222	7	65,230	35	75,601	1,973,541
Georgia	55,556	1	55,557	43	10,834	-
North Carolina	46,404	4,494	50,898	2,359	13,776	-
South Carolina	28,438	1,377	29,816	150	6,131	1,015
Virginia	38,137	9,861	47,997	916	11,780	74,762
West Virginia	4,875	1,494	6,370	791	14,897	-
PAD District II Total	1,889,057	151,670	1,840,728	6,737	125,049	138,094
Illinois	198,629	9,070	207,699	298	19,636	94,468
Indiana	81,586	8,814	90,400	1,060	12,972	-
Iowa	207,340	17,850	225,190	669	3,312	-
Kansas	161,105	2,143	163,248	445	3,577	-
Kentucky	50,491	5,242	55,733	575	13,363	-
Michigan	84,034	13,990	98,024	461	27,924	27,265
Minnesota	162,190	30,901	193,091	297	4,091	-
Missouri	73,730	735	74,465	163	4,514	15,734
Nebraska	187,170	7,253	194,423	309	674	-
North Dakota	100,635	7,319	107,954	14	2,046	420
Ohio	81,819	12,712	94,530	1,715	18,186	207
Oklahoma	89,645	-	89,645	308	1,422	-
South Dakota	69,401	5,300	74,701	144	2	-
Tennessee	48,291	-	48,291	81	10,200	-
Wisconsin	92,992	30,342	123,334	200	3,130	-
PAD District III Total	546,274	624	546,898	1,704	40,481	25,133
Alabama	37,345	371	37,717	41	8,643	-
Arkansas	85,982	30	86,011	190	7,774	-
Louisiana	59,839	-	59,839	205	4,885	743
Mississippi	80,931	14	80,945	37	1,154	24,390
New Mexico	21,409	-	21,409	15	826	-
Texas	260,767	209	260,976	1,216	17,180	-
PAD District IV Total	198,728	5,879	204,607	265	6,483	-
Colorado	71,986	467	72,453	234	1,570	-
Idaho	59,716	3,491	63,207	11	58	-
Montana	38,193	1,301	39,494	1	158	-
Utah	14,685	278	14,963	13	1,676	-
Wyoming	14,147	343	14,490	7	3,020	-
PAD District V Total	456,462	10,845	467,108	384	128,770	431,540
Alaska	-	1	1	-	36,452	-
Arizona	19,819	-	19,819	6	3,193	-
California	318,702	98	318,799	233	6,889	76
Hawaii	9,688	1,801	11,489	-	79,953	413,179
Nevada	5,283	95	5,378	7	539	18,285
Oregon	36,106	6,745	42,851	51	1,207	-
Washington	66,865	1,906	68,771	87	538	-

Dashes (-) = No data reported.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1992.

• Kerosene data are based on data from the Energy Information Administration's "Petroleum Supply Annual," Volume 1, 1992, (DOE/EIA 0340(92)/1).

Table 11. Sales for Transportation Use: Distillate Fuel Oil and Residual Fuel Oil, 1992
(Thousand Gallons)

Destination	Railroad Use	Vessel Bunkering		On-Highway Diesel	Total Transportation Use	
	Distillate Fuel Oil	Distillate Fuel Oil	Residual Fuel Oil	Distillate Fuel Oil	Distillate Fuel Oil	Residual Fuel Oil
U.S. Total	3,172,724	2,218,592	6,563,220	21,374,872	26,766,188	6,563,220
PAD District I Total	601,734	556,892	1,534,340	6,888,163	8,046,789	1,534,340
Subdistrict IA Total	32,567	88,519	14,768	693,219	814,305	14,768
Connecticut	10,952	5,687	681	185,287	201,927	681
Maine	4,628	13,847	71	113,196	131,872	71
Massachusetts	12,913	59,661	13,874	247,409	319,984	13,874
New Hampshire	610	370	140	50,760	51,740	140
Rhode Island	842	8,561	-	37,344	46,747	-
Vermont	2,420	393	-	59,223	62,236	-
Subdistrict IB Total	245,154	161,017	658,215	2,569,627	2,975,998	658,215
Delaware	1,303	3,916	38,427	51,978	57,197	38,427
District of Columbia	6,346	7	-	20,881	27,234	-
Maryland	29,497	11,887	48,684	341,612	382,996	48,684
New Jersey	124,174	94,652	366,755	373,082	591,909	366,755
New York	35,069	19,676	136,307	800,229	854,974	136,307
Pennsylvania	48,964	30,879	268,043	981,845	1,061,689	268,043
Subdistrict IC Total	323,813	307,356	661,360	3,625,317	4,266,486	661,360
Florida	89,959	155,609	399,141	893,762	1,139,330	399,141
Georgia	65,351	35,278	130,528	874,159	974,788	130,528
North Carolina	48,648	10,744	14,735	661,167	720,559	14,735
South Carolina	16,008	8,453	15,734	415,909	440,370	15,734
Virginia	81,475	41,973	101,221	586,726	710,174	101,221
West Virginia	22,372	55,298	-	193,594	271,264	-
PAD District II Total	1,242,347	440,494	17,968	7,093,942	8,776,782	17,968
Illinois	117,126	58,141	1,221	865,402	1,040,669	1,221
Indiana	192,713	13,578	8,041	753,113	959,404	8,041
Iowa	34,501	4,562	-	324,321	363,384	-
Kansas	145,012	-	-	258,207	403,219	-
Kentucky	97,574	139,600	-	513,264	750,438	-
Michigan	32,927	9,286	3,795	556,507	598,720	3,795
Minnesota	117,065	4,870	100	350,224	472,159	100
Missouri	16,294	69,442	671	644,586	730,322	671
Nebraska	126,990	-	-	242,727	369,717	-
North Dakota	38,901	-	-	97,445	136,346	-
Ohio	122,584	14,387	2,113	913,607	1,050,577	2,113
Oklahoma	101,745	252	-	390,810	492,807	-
South Dakota	4,378	-	-	102,874	107,252	-
Tennessee	71,814	123,277	1,713	596,009	791,100	1,713
Wisconsin	22,722	3,099	314	484,846	510,667	314
PAD District III Total	667,178	706,156	2,525,137	3,445,063	4,818,398	2,525,137
Alabama	55,458	73,199	136,732	578,199	706,857	136,732
Arkansas	28,607	1,782	-	399,995	430,384	-
Louisiana	35,293	323,747	1,130,126	348,020	707,059	1,130,126
Mississippi	24,532	54,647	101,225	317,122	396,301	101,225
New Mexico	74,529	-	-	225,791	300,320	-
Texas	448,760	252,781	1,157,054	1,575,936	2,277,476	1,157,054
PAD District IV Total	254,997	112	-	828,826	1,083,935	-
Colorado	66,556	-	-	215,220	281,776	-
Idaho	20,093	92	-	128,768	148,953	-
Montana	54,429	-	-	132,587	187,016	-
Utah	40,704	20	-	180,007	220,731	-
Wyoming	73,215	-	-	172,244	245,459	-
PAD District V Total	406,468	514,938	2,485,775	3,118,878	4,040,284	2,485,775
Alaska	5,296	153,274	12,236	49,225	207,795	12,236
Arizona	7,120	23	-	351,527	358,671	-
California	217,250	111,884	1,247,458	1,842,723	2,171,857	1,247,458
Hawaii	22	89,697	138,828	24,850	114,569	138,828
Nevada	4,164	-	-	152,457	156,621	-
Oregon	114,668	50,248	225,152	329,762	494,678	225,152
Washington	57,947	109,811	862,102	368,334	536,093	862,102

Dashes (-) = No data reported.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1992.

• On-Highway Diesel data are Federal Highway Administration statistics of highway special fuels use.

Table 12. Sales for Military, Off-Highway, and All Other Uses: Distillate Fuel Oil, Residual Fuel Oil, and Kerosene, 1992
(Thousand Gallons)

Destination	Military				Off-Highway Diesel Distillate Fuel Oil			All Other		
	Diesel	Other Distillate	Total Distillate	Residual Fuel Oil	Construction	Other	Total	Distillate Fuel Oil	Residual Fuel Oil	Kerosene
U.S. Total	535,297	117,210	652,507	91,791	1,532,611	228,177	1,757,788	5,848	8,613	6,382
PAD District I Total	61,393	66,090	147,482	79,334	432,940	47,103	480,043	344	181	3,687
Subdistrict IA Total	4,105	14,221	18,326	16,959	51,048	6,645	57,690	53	18	476
Connecticut	293	5,780	6,073	1,027	11,589	1	11,590	-	18	11
Maine	2,251	1,049	3,301	5,965	5,689	4,510	10,179	-	-	94
Massachusetts	1,158	2,648	3,806	2,924	17,938	291	18,229	-	-	83
New Hampshire	334	1,898	2,032	4,581	6,880	1,119	7,999	-	-	263
Rhode Island	38	3,023	3,061	2,291	2,788	18	2,805	-	-	2
Vermont	30	23	53	172	8,181	707	8,888	53	-	44
Subdistrict IB Total	31,612	40,219	71,832	34,561	206,716	7,009	213,725	-	117	2,210
Delaware	489	1,536	2,025	1,891	3,378	187	3,565	-	-	11
District of Columbia	1,198	5,865	7,064	275	549	-	549	-	-	-
Maryland	4,591	20,881	25,472	14,403	22,749	12	22,760	-	-	101
New Jersey	20,502	4,585	25,086	7,877	26,858	1,974	28,831	-	32	569
New York	3,520	4,462	7,983	7,920	50,303	341	50,644	-	-	836
Pennsylvania	1,312	2,890	4,202	2,396	103,080	4,495	107,575	-	86	692
Subdistrict IC Total	25,676	31,650	57,325	27,814	175,179	33,449	208,628	290	45	1,001
Florida	8,990	810	9,599	2,318	63,209	2,376	65,585	24	-	177
Georgia	6,274	3,467	9,741	-	34,625	19,113	53,738	268	-	62
North Carolina	1,172	6,842	8,014	10,756	25,347	4,958	30,305	-	45	89
South Carolina	1,587	1,905	3,492	4,904	15,962	4,592	20,554	-	-	250
Virginia	7,499	17,777	25,276	9,836	26,915	1,854	28,769	-	-	255
West Virginia	154	1,049	1,203	-	9,120	557	9,677	-	-	168
PAD District II Total	68,494	17,201	85,695	-	480,391	27,605	487,996	828	359	1,437
Illinois	1,426	565	1,991	-	53,443	589	54,032	-	-	273
Indiana	5,487	1,957	7,444	-	39,889	3,100	42,988	208	-	136
Iowa	7,088	-	7,088	-	20,791	4,211	25,002	-	-	27
Kansas	19,256	462	19,718	-	16,343	1,334	17,677	27	-	148
Kentucky	7,716	2,570	10,286	-	28,415	1,823	30,238	-	-	252
Michigan	6,410	651	7,061	-	38,294	3,919	42,212	11	50	41
Minnesota	834	-	834	-	34,184	1,754	35,938	28	-	27
Missouri	2,429	3,947	6,376	-	36,744	1,195	37,940	1	-	37
Nebraska	327	-	327	-	9,198	1,127	10,325	-	-	2
North Dakota	583	22	605	-	2,065	153	2,218	123	-	1
Ohio	9,533	237	9,769	-	49,408	1,610	51,017	-	131	173
Oklahoma	835	-	835	-	18,608	787	19,395	-	-	103
South Dakota	331	5,070	5,401	-	7,289	1,141	8,430	-	-	-
Tennessee	4,340	1,643	5,983	-	71,327	1,684	73,011	-	-	114
Wisconsin	1,901	76	1,977	-	34,394	3,177	37,571	428	178	105
PAD District III Total	185,907	2,560	188,467	-	302,358	63,968	366,326	4,543	-	1,055
Alabama	4,640	423	5,063	-	40,416	14,906	55,323	-	-	88
Arkansas	449	-	449	-	35,387	8,111	43,497	-	-	112
Louisiana	6,640	-	6,640	-	40,145	3,255	43,400	-	-	85
Mississippi	14,974	-	14,974	-	14,380	13,011	27,391	649	-	168
New Mexico	2,874	-	2,874	-	16,254	982	17,237	-	-	30
Texas	156,330	2,137	158,467	-	155,776	23,703	179,479	3,894	-	593
PAD District IV Total	15,235	325	15,560	-	88,577	8,921	97,499	79	38	42
Colorado	6,709	241	6,950	-	31,281	287	31,569	24	-	29
Idaho	4,129	-	4,129	-	8,206	5,082	13,288	-	-	4
Montana	1,028	84	1,113	-	15,886	2,467	18,354	55	-	6
Utah	1,693	-	1,693	-	17,326	365	17,691	-	-	1
Wyoming	1,675	-	1,675	-	15,878	719	16,597	-	38	2
PAD District V Total	204,269	11,034	215,302	12,457	248,345	77,579	325,924	57	8,036	161
Alaska	19,814	3,225	23,039	-	13,333	7,006	20,339	-	-	3
Arizona	1,729	-	1,729	-	24,836	1,313	26,148	-	-	1
California	162,558	1,744	164,303	852	132,092	15,064	147,155	11	83	128
Hawaii	9,438	-	9,438	8,058	10,799	-	10,799	-	7,953	-
Nevada	1,959	1,147	3,106	-	20,917	371	21,288	-	-	5
Oregon	1,979	146	2,125	55	11,493	26,782	38,275	45	-	23
Washington	6,792	4,771	11,563	3,491	34,875	27,044	61,919	-	-	2

Dashes (-) = No data reported.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1992.

• Kerosene data are based on data from the Energy Information Administration's "Petroleum Supply Annual," Volume 1, 1992, (DOE/EIA-0340(92)/1)

Adjusted Sales of Fuel Oil and Kerosene in 1992

The following tables contain estimates of distillate fuel oil that have been adjusted at the PAD district level to equal published EIA volume estimates of petroleum products supplied in the U.S. marketplace. The kerosene and residual fuel oil sales estimates have been adjusted at the national level. Historically, kerosene estimates have always been adjusted at the PAD district level. However, in 1992, certain kerosene estimates at the PAD district level resulted in negative numbers. Hence, the adjustment procedure was changed to display sales volumes of kerosene for all PAD districts.

The products supplied estimates can be found in the 1988 through 1992 *Petroleum Supply Annual*. For certain sales categories, data obtained from alternate sources are used instead of the adjusted numbers. See "Technical Note 3" in Appendix for further explanation of data adjustments.

Total domestic adjusted sales of fuel oil and kerosene declined slightly from 63.3 billion gallons in 1991 to 63.2 billions gallons in 1992. While adjusted sales of distillate increased 2.3 percent in 1992, residual fuel oil dropped 5.3 percent. Kerosene adjusted sales declined by 10.3 percent.

Sales to chemical plants are classified as industrial use.

Table 13. Adjusted Sales of Distillate Fuel Oil by End Use in the United States: 1988-1992
(Thousand Gallons)

End Use	Distillate Fuel Oil				
	1988	1989	1990	1991	1992
U.S. Total	47,985,420	48,393,450	46,305,126	44,775,360	45,791,466
Residential	7,662,046	7,501,098	6,022,902	5,993,482	6,238,133
Commercial	4,135,079	3,858,743	3,502,778	3,471,468	3,347,133
Industrial	2,617,639	2,565,293	2,452,322	2,326,519	2,218,843
Oil Company	872,133	845,217	968,764	910,761	785,120
Farm	3,420,671	3,196,928	3,293,792	3,285,639	3,504,846
Electric Utility	800,085	1,078,887	733,681	590,801	468,795
Railroad	3,259,250	3,264,229	3,210,111	3,026,292	3,217,231
Vessel Bunkering	2,310,367	2,356,444	2,197,004	2,167,640	2,240,170
On-Highway Diesel	20,038,691	21,131,692	21,360,477	20,485,364	21,374,872
Military	980,877	928,316	784,401	828,733	650,178
Off-Highway Diesel	1,821,819	1,837,497	1,776,352	1,686,262	1,739,068
All Other	66,763	29,106	2,541	2,399	7,075

Note: Totals may not equal sum of components due to independent rounding.

Note: Distillate fuel oil data in the Adjusted Sales tables (13-24) are adjusted at the PAD District level. See Technical Note 3 for further explanation.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1988-1992.

• Electric Utility data are based on data obtained on Form EIA-759, "Monthly Power Plant Report," and Form FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

• On-Highway Diesel data are Federal Highway Administration statistics of highway special fuels use.

• Energy Information Administration's "Petroleum Supply Annual," Volume 1, 1988-1992, (DOE/EIA 0340(88)/1 - (92)/1).

More diesel is used for on-highway use than for any other use.

Table 14. Adjusted Sales of Residual Fuel Oil by End Use in the United States: 1988-1992
(Thousand Gallons)

End Use	Residual Fuel Oil				
	1988	1989	1990	1991	1992
U.S. Total	21,179,880	21,002,814	18,837,682	17,750,250	16,816,674
Commercial	1,827,715	1,850,418	1,503,301	1,426,656	1,289,987
Industrial	3,071,782	2,453,976	2,227,855	1,938,473	2,332,911
Oil Company	520,515	344,751	314,358	301,511	297,332
Electric Utility	9,540,878	9,797,966	8,433,489	7,169,599	5,587,235
Vessel Bunkering	6,025,511	6,621,100	6,248,095	6,788,055	7,199,078
Military	^a 137,287	105,255	81,992	120,204	100,684
All Other	55,882	29,348	28,791	7,752	9,448

^a Estimated data. Annual estimate is based on eleven months of data.

Note: Totals may not equal sum of components due to independent rounding.

Note: Residual fuel oil data in the Adjusted Sales tables (13-24) are adjusted at the national level. See Technical Note 3 for further explanation.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1988-1992.

• Electric Utility data are based on data obtained on Form EIA-759, "Monthly Power Plant Report," and Form FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

• For 1988 through 1990, military data for residual fuel oil are based on the Defense Fuel Supply Center's "DEIS Report." EIA-821 survey results are used for 1991 and 1992.

• Energy Information Administration's "Petroleum Supply Annual," Volume 1, 1989-1992, (DOE/EIA-0340(88)/1 - (92)/1).

Table 15. Adjusted Sales of Kerosene by End Use in the United States: 1988-1992
(Thousand Gallons)

End Use	Kerosene				
	1988	1989	1990	1991	1992
U.S. Total	1,478,316	1,291,668	652,008	709,716	636,426
Residential	770,042	618,322	439,870	491,929	481,511
Commercial	306,584	349,566	95,737	97,186	82,398
Industrial	188,117	171,124	76,687	76,055	48,099
Farm	45,990	36,907	21,834	24,868	20,036
All Other	167,583	115,750	17,780	19,678	6,382

Note: Totals may not equal sum of components due to independent rounding.

Note: Kerosene data in the Adjusted Sales tables (13-24) are adjusted at the national level for 1992 and at the PAD district level for prior years. See Technical Note 3 for further explanation.

Sources: • Kerosene data are based on data from the Energy Information Administration's "Petroleum Supply Annual," Volume 1, 1988-1992, (DOE/EIA-0340(88)/1 - (92)/1).

Table 16. Adjusted Sales of Distillate Fuel Oil by End Use, 1991 and 1992

(Thousand Gallons)

Destination	Residential		Commercial		Industrial	
	1991	1992	1991	1992	1991	1992
U.S. Total	5,993,482	6,238,133	3,471,468	3,347,133	2,326,819	2,218,843
PAD District I Total	4,618,822	5,004,006	2,166,811	2,170,731	841,487	881,118
Subdistrict IA Total	1,734,978	1,980,947	818,288	883,838	84,984	130,380
Connecticut	471,740	584,445	125,297	123,872	28,132	24,530
Maine	216,529	221,915	60,834	72,067	18,582	19,567
Massachusetts	698,853	790,410	319,517	280,875	27,164	58,421
New Hampshire	149,708	154,726	47,864	47,134	7,717	11,792
Rhode Island	112,854	137,407	32,557	25,318	8,203	8,719
Vermont	85,490	92,044	29,389	34,272	7,167	7,331
Subdistrict IB Total	2,474,466	2,626,219	1,179,423	1,224,817	240,339	238,832
Delaware	42,689	43,745	18,470	14,650	8,966	6,281
District of Columbia	6,931	7,137	24,653	23,147	9	79
Maryland	175,537	187,286	96,454	108,199	26,094	20,518
New Jersey	464,744	470,600	278,378	267,377	52,181	49,781
New York	1,050,560	1,176,304	535,644	583,982	45,537	39,994
Pennsylvania	734,006	741,148	228,824	227,263	109,552	119,180
Subdistrict IC Total	409,181	416,840	371,832	382,478	308,183	284,928
Florida	9,968	12,997	125,977	126,150	33,288	41,461
Georgia	7,494	7,460	36,208	43,611	45,857	25,972
North Carolina	134,410	147,110	76,468	68,883	58,559	66,845
South Carolina	41,905	28,978	21,940	28,192	27,713	32,602
Virginia	192,841	200,882	89,530	82,131	59,823	41,308
West Virginia	22,563	19,414	21,709	13,511	80,944	76,737
PAD District II Total	1,068,789	984,218	573,660	592,776	673,400	714,020
Illinois	51,542	41,977	70,934	75,688	82,841	99,499
Indiana	81,346	79,704	49,384	59,467	91,855	88,805
Iowa	37,232	32,711	23,652	20,508	15,944	16,865
Kansas	982	1,211	15,235	21,074	7,873	9,505
Kentucky	29,525	32,298	30,046	36,893	153,604	156,845
Michigan	191,368	177,823	81,376	74,258	52,858	51,140
Minnesota	172,048	143,937	38,214	31,914	38,423	35,606
Missouri	18,049	15,038	46,648	49,343	27,988	26,720
Nebraska	8,288	6,105	7,682	11,335	4,195	6,476
North Dakota	37,871	26,967	6,705	6,613	17,680	10,116
Ohio	177,219	195,871	67,818	70,707	99,208	121,632
Oklahoma	3	83	20,368	15,726	24,694	18,706
South Dakota	33,741	19,908	8,045	10,310	5,348	10,405
Tennessee	11,268	10,891	25,272	43,765	32,506	34,204
Wisconsin	215,307	199,694	82,282	65,177	18,384	17,497
PAD District III Total	1,444	1,730	262,092	246,547	368,671	356,288
Alabama	761	449	41,249	43,274	114,081	96,222
Arkansas	33	527	14,357	15,871	16,007	14,617
Louisiana	79	3	37,727	25,445	29,389	49,720
Mississippi	73	53	25,503	21,453	19,703	30,870
New Mexico	359	602	19,402	10,109	34,100	16,972
Texas	138	95	123,854	130,395	155,411	147,887
PAD District IV Total	58,038	41,301	81,347	88,621	245,836	193,086
Colorado	1,132	905	24,798	35,040	47,397	51,091
Idaho	29,538	23,947	18,211	17,412	39,377	13,558
Montana	14,944	9,145	8,545	7,111	57,083	39,855
Utah	6,775	4,847	19,702	19,742	42,378	33,360
Wyoming	3,648	2,456	10,091	9,316	59,601	55,194
PAD District V Total	281,590	206,879	387,857	248,458	397,126	304,361
Alaska	67,043	67,459	40,911	57,830	10,273	17,750
Arizona	213	220	12,727	9,483	54,170	61,644
California	8,359	8,425	186,788	83,787	169,924	58,191
Hawaii	16	12	25,722	18,351	4,482	5,327
Nevada	9,291	9,109	12,330	12,498	103,220	103,187
Oregon	62,454	44,875	41,757	32,233	19,538	26,401
Washington	104,214	76,779	67,622	34,275	35,518	31,861

See footnotes at end of table.

Table 16. Adjusted Sales of Distillate Fuel Oil by End Use, 1991 and 1992 (Continued)
(Thousand Gallons)

Destination	Oil Company		Farm		Electric Utility	
	1991	1992	1991	1992	1991	1992
U.S. Total	910,761	785,120	3,285,639	3,604,846	590,801	468,795
PAD District I Total	20,180	13,976	376,053	366,877	264,065	208,022
Subdistrict IA Total	3,926	1,087	26,061	23,324	26,723	16,286
Connecticut	400	336	2,225	4,646	5,085	2,571
Maine	2,841	98	4,277	3,453	841	699
Massachusetts	396	344	5,433	3,967	7,725	9,994
New Hampshire	54	59	3,888	2,503	10,626	997
Rhode Island	218	242	1,142	534	1,130	1,659
Vermont	17	19	8,127	8,220	416	337
Subdistrict IB Total	10,513	7,984	133,248	130,294	121,176	76,432
Delaware	293	286	7,386	4,974	4,057	3,766
District of Columbia	—	—	—	—	36,517	17,614
Maryland	764	651	18,432	19,016	7,503	10,341
New Jersey	2,332	2,571	19,405	7,870	9,659	8,903
New York	688	523	43,669	48,217	19,459	9,911
Pennsylvania	6,437	3,953	44,357	50,217	43,781	28,678
Subdistrict IC Total	5,751	4,895	217,714	213,260	117,165	118,334
Florida	1,203	1,523	47,529	54,368	61,157	65,549
Georgia	374	242	53,472	46,306	6,595	9,394
North Carolina	98	120	36,474	42,423	13,102	11,944
South Carolina	384	162	39,454	24,851	6,626	5,316
Virginia	897	875	33,132	40,005	14,527	10,214
West Virginia	2,995	1,972	5,552	5,309	15,158	12,916
PAD District II Total	63,443	61,500	1,679,697	1,797,927	142,332	108,422
Illinois	1,242	1,680	179,868	202,870	21,377	17,025
Indiana	1,283	1,330	102,661	88,298	15,178	11,248
Iowa	146	152	165,653	219,954	2,085	2,872
Kansas	11,652	4,734	156,086	159,452	4,778	3,101
Kentucky	1,073	2,517	39,747	54,437	11,959	11,567
Michigan	1,365	6,338	79,326	95,745	20,115	24,211
Minnesota	728	658	155,563	188,602	4,768	3,547
Missouri	411	360	64,403	72,734	9,415	3,914
Nebraska	70	28	180,531	189,902	1,056	584
North Dakota	5,861	5,658	100,045	105,444	2,229	1,774
Ohio	3,698	4,910	80,598	92,332	30,162	15,766
Oklahoma	34,569	51,268	44,198	87,560	428	1,233
South Dakota	19	19	87,068	72,964	719	1
Tennessee	689	1,056	45,228	47,168	7,302	8,844
Wisconsin	636	594	98,723	120,466	10,760	2,714
PAD District III Total	720,728	584,498	669,746	703,240	46,711	36,061
Alabama	14,263	10,851	44,956	48,499	8,998	7,493
Arkansas	3,832	3,312	67,660	110,600	8,437	6,740
Louisiana	355,176	296,066	89,555	76,946	3,827	4,235
Mississippi	6,654	11,507	151,040	104,084	3,667	1,000
New Mexico	15,098	13,631	17,388	27,530	5,108	717
Texas	325,505	249,111	299,146	335,582	15,674	14,896
PAD District IV Total	24,448	43,515	247,025	239,843	9,887	6,621
Colorado	3,803	9,694	54,500	84,930	1,719	1,361
Idaho	75	62	92,581	74,092	462	51
Montana	3,573	1,067	71,826	46,295	1,056	137
Utah	4,482	10,165	12,641	17,540	2,319	1,453
Wyoming	12,515	22,507	15,477	16,986	4,301	2,619
PAD District V Total	81,951	61,632	413,118	396,958	128,837	111,649
Alaska	58,827	47,865	—	1	25,589	31,605
Arizona	308	173	17,292	16,842	2,792	2,768
California	11,135	12,248	269,901	270,922	11,532	5,973
Hawaii	1,169	1,043	9,634	9,764	74,626	69,322
Nevada	237	169	5,565	4,570	5,405	467
Oregon	267	3	42,282	36,415	3,583	1,046
Washington	10,007	112	68,444	58,443	5,310	467

See footnotes at end of table.

Table 16. Adjusted Sales of Distillate Fuel Oil by End Use, 1991 and 1992 (Continued)
(Thousand Gallons)

Destination	Railroad		Vessel Bunkering		On-Highway	
	1991	1992	1991	1992	1991	1992
U.S. Total	3,026,292	3,217,231	2,167,640	2,240,170	20,485,364	21,374,872
PAD District I Total	414,988	501,531	411,807	464,186	6,506,989	6,888,183
Subdistrict IA Total	28,127	27,144	65,058	73,779	854,208	893,219
Connecticut	8,147	9,128	2,046	4,740	173,819	185,287
Maine	1,828	3,858	13,869	11,841	105,547	113,196
Massachusetts	15,753	10,763	41,212	49,726	245,655	247,409
New Hampshire	59	809	154	308	48,348	50,760
Rhode Island	696	702	7,628	7,136	39,759	37,344
Vermont	1,845	2,184	349	327	41,078	59,223
Subdistrict IB Total	131,230	204,497	131,886	134,204	2,511,511	2,569,627
Delaware	819	1,086	5,938	3,264	52,101	51,978
District of Columbia	4,419	5,289	5	6	21,900	20,881
Maryland	22,970	24,565	7,759	9,908	327,295	341,612
New Jersey	53,326	103,496	79,598	78,890	389,054	373,082
New York	13,586	29,230	11,749	16,399	578,976	800,229
Pennsylvania	36,109	40,810	26,807	25,737	934,185	981,845
Subdistrict IC Total	285,808	269,890	214,893	256,174	3,341,272	3,625,317
Florida	62,904	74,979	99,730	129,697	806,168	893,762
Georgia	52,625	54,458	19,099	29,404	854,694	874,159
North Carolina	36,454	40,547	12,801	8,955	598,207	681,167
South Carolina	21,739	13,342	4,649	7,045	380,461	415,909
Virginia	62,353	67,907	35,027	34,984	547,591	586,726
West Virginia	19,532	18,647	43,587	46,090	174,151	193,594
PAD District II Total	1,179,770	1,213,460	411,829	430,251	6,638,160	7,093,942
Illinois	119,177	114,402	54,453	56,789	877,536	885,402
Indiana	192,399	188,232	9,800	13,262	784,039	753,113
Iowa	29,635	33,699	4,581	4,456	319,894	324,321
Kansas	166,464	141,640	—	—	276,312	258,207
Kentucky	100,238	95,306	138,424	136,354	417,619	513,264
Michigan	34,824	32,162	4,468	9,070	531,309	556,507
Minnesota	67,677	114,343	3,277	4,757	369,176	350,224
Missouri	24,227	15,915	39,740	67,827	584,823	644,586
Nebraska	111,478	124,038	—	—	220,319	242,727
North Dakota	39,452	37,997	—	—	94,596	97,445
Ohio	96,209	119,733	14,530	14,052	886,816	913,607
Oklahoma	84,860	99,380	—	246	352,086	390,810
South Dakota	4,510	4,276	—	—	99,489	102,874
Tennessee	70,977	70,144	139,601	120,410	575,503	596,009
Wisconsin	37,622	22,194	3,054	3,027	448,663	484,846
PAD District III Total	719,676	887,908	827,700	908,026	3,390,672	3,445,063
Alabama	74,740	71,312	98,924	94,125	548,437	578,199
Arkansas	46,031	36,784	2,825	2,292	384,746	399,995
Louisiana	71,706	45,382	425,325	416,297	366,785	348,020
Mississippi	26,521	31,545	68,037	70,269	316,657	317,122
New Mexico	53,816	95,835	—	—	219,554	225,791
Texas	446,862	577,047	232,790	325,043	1,554,493	1,575,936
PAD District IV Total	308,882	298,910	206	131	782,786	828,626
Colorado	95,648	78,017	—	—	216,076	215,220
Idaho	26,260	23,554	206	108	124,668	128,768
Montana	59,475	63,802	—	—	114,876	132,587
Utah	45,046	47,713	—	23	170,272	180,007
Wyoming	82,454	85,824	—	—	156,894	172,244
PAD District V Total	402,999	346,425	515,998	437,606	2,966,737	3,118,878
Alaska	4,703	4,500	137,829	130,256	39,627	49,225
Arizona	4,340	6,051	—	20	300,734	351,527
California	237,493	184,624	189,805	95,082	1,769,575	1,842,723
Hawaii	12	19	86,843	76,226	25,364	24,850
Nevada	5,974	3,539	—	—	140,148	152,457
Oregon	88,747	97,447	54,202	42,702	333,566	329,762
Washington	62,130	49,245	67,318	93,320	357,723	368,334

See footnotes at end of table.

Table 16. Adjusted Sales of Distillate Fuel Oil by End Use, 1991 and 1992 (Continued)
(Thousand Gallons)

Destination	Military		Off-Highway		All Other		Total	
	1991	1992	1991	1992	1991	1992	1991	1992
U.S. Total	828,733	650,178	1,686,262	1,739,068	2,399	7,078	44,776,380	45,791,466
PAD District I Total	243,583	122,923	398,786	400,104	-	286	16,063,026	16,791,894
Subdistrict IA Total	18,531	15,274	51,325	48,084	-	44	3,317,182	3,573,163
Connecticut	1,901	5,061	14,572	9,660	-	-	833,364	934,078
Maine	3,641	2,751	6,983	8,484	-	-	435,172	457,627
Massachusetts	2,633	3,172	17,188	15,194	-	-	1,381,328	1,470,275
New Hampshire	404	1,693	7,082	6,667	-	-	275,802	277,448
Rhode Island	8,729	2,551	2,055	2,338	-	-	212,970	223,948
Vermont	1,223	44	3,445	5,741	-	44	178,546	209,787
Subdistrict IB Total	39,980	59,870	158,728	178,134	-	-	7,132,470	7,447,710
Delaware	167	1,688	4,035	2,972	-	-	142,920	134,707
District of Columbia	4,751	5,887	68	458	-	-	99,253	80,499
Maryland	8,407	21,230	20,031	18,970	-	-	711,246	762,314
New Jersey	3,489	20,909	32,281	23,863	-	-	1,381,626	1,407,342
New York	20,961	6,653	37,865	42,210	-	-	2,566,694	2,753,653
Pennsylvania	2,225	3,503	64,447	89,661	-	-	2,230,730	2,309,195
Subdistrict IC Total	185,042	47,779	188,734	173,886	-	242	5,613,374	5,771,022
Florida	7,496	8,001	47,408	54,663	-	20	1,302,827	1,463,171
Georgia	9,565	8,119	44,417	44,789	-	222	1,130,399	1,144,146
North Carolina	7,731	6,679	27,876	25,258	-	-	1,004,179	1,079,932
South Carolina	97,444	2,910	20,694	17,132	-	-	643,009	576,440
Virginia	62,732	21,067	29,626	23,978	-	-	1,127,880	1,110,076
West Virginia	74	1,003	18,713	8,065	-	-	405,080	397,257
PAD District II Total	43,804	83,702	446,851	476,649	2,362	807	13,021,218	13,577,676
Illinois	994	1,845	58,417	52,776	-	-	1,518,379	1,530,052
Indiana	5,552	7,271	28,071	41,989	-	203	1,361,568	1,342,920
Iowa	344	6,923	11,556	24,421	-	-	610,722	686,882
Kansas	2,058	19,260	14,922	17,266	1,751	27	658,133	635,477
Kentucky	6,811	10,047	25,007	29,535	-	-	954,053	1,079,081
Michigan	1,242	6,897	58,587	41,231	-	10	1,056,838	1,075,392
Minnesota	1,470	815	40,810	35,103	102	28	892,255	909,732
Missouri	5,252	6,228	30,942	37,057	-	1	851,898	939,722
Nebraska	2,451	319	10,607	10,084	-	-	546,677	591,599
North Dakota	1,110	591	5,015	2,166	24	120	310,588	294,892
Ohio	10,531	9,542	37,114	49,831	-	-	1,503,902	1,607,986
Oklahoma	2,393	815	30,905	18,944	7	-	594,512	684,769
South Dakota	559	5,276	5,808	8,234	-	-	245,307	234,269
Tennessee	2,160	5,844	35,043	71,313	-	-	945,550	1,009,648
Wisconsin	878	1,931	54,047	36,698	478	418	970,836	955,255
PAD District III Total	243,041	242,345	392,832	410,048	8	5,841	7,642,320	7,857,612
Alabama	5,228	6,511	54,372	71,138	8	-	1,006,018	1,028,073
Arkansas	431	577	24,825	55,932	-	-	568,985	647,247
Louisiana	17,763	8,538	64,433	55,807	-	-	1,461,744	1,326,479
Mississippi	5,784	19,255	25,215	35,221	-	835	649,055	643,215
New Mexico	1,301	3,695	32,743	22,164	-	-	398,868	417,045
Texas	212,534	203,768	191,244	230,787	-	5,007	3,557,650	3,795,553
PAD District IV Total	12,280	16,239	128,631	114,289	15	93	1,897,350	1,872,444
Colorado	8,291	8,147	42,540	37,005	-	28	495,904	521,439
Idaho	1,107	4,841	25,168	15,576	11	-	357,664	301,966
Montana	354	1,304	16,963	21,514	-	65	348,697	322,882
Utah	2,360	1,984	19,921	20,738	4	-	325,899	337,593
Wyoming	167	1,963	24,039	19,455	-	-	369,186	388,563
PAD District V Total	286,056	182,969	319,162	276,977	13	48	6,151,446	5,691,840
Alaska	17,282	19,579	12,936	17,284	-	-	415,021	443,354
Arizona	1,408	1,469	38,105	22,221	-	-	432,089	472,419
California	188,142	139,628	150,665	125,056	-	10	3,173,320	2,826,668
Hawaii	65,153	8,021	13,782	9,177	-	-	306,803	222,112
Nevada	2,339	2,640	16,241	18,091	4	-	300,754	306,746
Oregon	703	1,806	34,097	32,527	-	39	680,796	645,257
Washington	11,029	9,827	53,337	52,620	10	-	842,663	775,283

■ Estimated data. Annual estimate is based on six months of data.

Dashes (-) = No data reported.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1991 and 1992.

• Electric Utility data are based on data obtained on Form EIA 759, "Monthly Power Plant Report," and Form FEPC-423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

• For 1988 through 1990, railroad data for distillate fuel oil are based on the Association of American Railroads' statistics for railroads of Class I and Amtrak Companies. EIA 821 survey results are used for 1991 and 1992.

• On Highway Diesel data are Federal Highway Administration statistics of highway special fuels use.

Table 17. Adjusted Sales of Residual Fuel Oil by End Use, 1991 and 1992

(Thousand Gallons)

Destination	Commercial		Industrial		Oil Company		Electric Utility	
	1991	1992	1991	1992	1991	1992	1991	1992
U.S. Total	1,426,656	1,289,987	1,938,473	2,332,911	301,511	297,332	7,169,599	5,887,236
PAD District I Total	1,311,670	1,192,512	1,369,195	1,716,820	108,997	123,426	6,409,343	5,029,803
Subdistrict IA Total	376,599	289,121	365,972	470,133	225	228	1,600,609	1,363,933
Connecticut	22,267	37,883	41,667	51,874	225	228	475,381	353,144
Maine	103,667	53,311	224,282	255,377	-	-	89,159	94,013
Massachusetts	191,957	157,396	59,170	92,452	-	-	944,198	809,646
New Hampshire	28,416	13,825	19,408	43,747	-	-	82,409	101,166
Rhode Island	24,781	22,203	15,927	19,498	-	-	9,340	5,856
Vermont	5,531	4,504	5,517	7,185	-	-	123	79
Subdistrict IB Total	830,888	807,739	385,773	418,451	107,225	121,265	2,849,782	1,745,190
Delaware	2,154	3,789	26,678	35,063	13,111	17,455	105,256	90,148
District of Columbia	9,340	11,411	54	83	-	-	-	-
Maryland	5,617	20,279	30,386	43,461	2,304	2,052	270,815	161,268
New Jersey	67,609	58,166	128,837	129,509	3,418	2,557	366,619	99,569
New York	719,557	676,545	98,329	127,230	1,941	4,030	1,938,104	1,257,902
Pennsylvania	26,610	37,548	101,489	83,106	86,451	95,171	168,988	136,303
Subdistrict IC Total	104,184	95,651	617,450	828,236	1,547	1,933	1,958,952	1,920,680
Florida	90,310	76,511	109,830	174,921	98	126	1,866,026	1,849,660
Georgia	910	268	73,481	144,981	42	288	-	-
North Carolina	4,952	4,765	220,654	286,587	-	-	761	-
South Carolina	1,038	2,235	87,412	75,852	160	194	-	951
Virginia	4,830	9,514	103,190	123,605	1,248	1,326	92,165	70,069
West Virginia	2,144	2,359	42,883	22,290	-	-	-	-
PAD District II Total	40,815	35,102	266,183	347,094	121,949	107,634	139,153	129,426
Illinois	1,651	1,842	10,475	8,451	25,346	7,358	82,455	88,538
Indiana	8,615	762	70,182	105,343	53,701	59,490	-	-
Iowa	377	1,580	3,677	2,953	-	-	-	-
Kansas	292	929	2,679	5,108	2,288	1,550	-	-
Kentucky	-	-	10,137	8,964	9,131	8,919	-	-
Michigan	201	503	26,551	31,187	4,923	1,124	35,840	25,553
Minnesota	12,401	8,369	20,748	29,379	10,713	12,551	477	-
Missouri	1,248	132	20,034	25,962	-	392	12,078	14,746
Nebraska	1,119	1,739	7,166	6,187	-	-	-	-
North Dakota	317	513	4,056	4,325	8,502	7,492	310	394
Ohio	1,695	3,136	44,655	56,893	2,803	3,754	7,993	194
Oklahoma	3,209	1,836	6,473	24,365	-	-	-	-
South Dakota	1,473	1,511	1,357	4,615	-	-	1	-
Tennessee	697	2,437	14,156	12,247	111	264	-	-
Wisconsin	7,519	9,812	23,838	21,116	4,431	4,739	-	-
PAD District III Total	24,503	1,117	117,550	105,514	708	2,324	27,294	23,555
Alabama	10,251	-	3,580	15,739	-	-	-	-
Arkansas	-	171	6,101	1,139	-	-	49	-
Louisiana	5,088	257	47,324	42,535	-	-	1,606	696
Mississippi	25	19	10,020	8,133	-	-	25,838	22,859
New Mexico	-	-	4,925	5,423	-	-	-	-
Texas	9,140	670	45,599	32,544	708	2,324	-	-
PAD District IV Total	1,200	1,640	6,617	7,190	11,783	6,956	-	-
Colorado	-	10	1,419	159	-	-	-	-
Idaho	52	588	1,813	337	-	-	-	-
Montana	138	166	228	3,627	5,773	-	-	-
Utah	965	876	3,099	2,776	4,412	6,866	-	-
Wyoming	45	-	58	291	1,598	90	-	-
PAD District V Total	48,468	59,517	178,928	155,293	58,074	55,992	593,809	404,482
Alaska	-	-	11,774	12,800	-	-	-	-
Arizona	463	-	7,421	3,990	-	-	-	-
California	32,135	1,812	54,038	58,961	20,079	21,069	102,077	72
Hawaii	782	45,107	35,763	17,828	33,519	31,632	481,440	387,243
Nevada	97	17	3,438	3,392	-	-	10,292	17,137
Oregon	10,754	10,294	14,593	21,352	-	-	-	-
Washington	4,237	2,387	51,900	37,969	4,476	4,291	-	-

See footnotes at end of table.

Table 17. Adjusted Sales of Residual Fuel Oil by End Use, 1991 and 1992 (Continued)

(Thousand Gallons)

Destination	Vessel Bunkering		Military		All Other		Total	
	1991	1992	1991	1992	1991	1992	1991	1992
U.S. Total	6,786,055	7,199,078	120,204	100,684	7,752	9,448	17,750,250	16,816,674
PAD District I Total	1,498,765	1,682,990	111,375	87,020	660	198	10,810,004	9,832,770
Subdistrict IA Total	18,880	16,196	17,409	18,602	-	20	2,379,694	2,158,233
Connecticut	175	747	3,675	1,127	-	20	543,391	445,022
Maine	1,935	78	2,945	6,542	-	-	421,987	409,321
Massachusetts	16,501	15,218	2,141	3,207	-	-	1,213,966	1,077,919
New Hampshire	-	153	8,431	5,025	-	-	138,664	163,946
Rhode Island	270	-	111	2,513	-	-	50,407	50,069
Vermont	-	-	107	188	-	-	11,278	11,955
Subdistrict IB Total	899,190	941,361	50,699	37,910	272	129	5,123,829	4,072,045
Delaware	52,819	42,149	2,546	1,855	168	-	202,732	190,458
District of Columbia	-	-	-	302	-	-	9,394	11,796
Maryland	32,686	53,400	25,097	15,798	-	-	366,885	296,258
New Jersey	417,344	402,287	11,954	8,640	104	35	995,885	700,764
New York	158,505	149,513	8,593	8,687	-	-	2,925,029	2,223,907
Pennsylvania	237,857	294,011	2,509	2,628	-	94	623,903	648,862
Subdistrict IC Total	580,694	725,434	43,267	30,509	388	50	3,306,481	3,502,492
Florida	347,554	437,811	3,640	2,542	24	-	2,417,480	2,541,570
Georgia	49,032	143,174	-	-	-	-	123,465	288,711
North Carolina	22,088	16,162	9,312	11,798	-	50	257,767	319,362
South Carolina	12,280	17,258	21,022	5,380	-	-	101,911	101,870
Virginia	149,740	111,028	9,293	10,789	364	-	360,830	326,330
West Virginia	-	-	-	-	-	-	45,027	24,649
PAD District II Total	8,937	19,708	82	-	343	394	577,462	639,358
Illinois	564	1,339	-	-	-	-	120,491	107,529
Indiana	3,769	8,820	-	-	-	-	136,267	174,415
Iowa	-	-	-	-	-	-	4,054	4,533
Kansas	-	-	-	-	-	-	5,259	7,587
Kentucky	-	-	-	-	-	-	19,268	17,884
Michigan	2,094	4,163	11	-	107	55	69,728	62,584
Minnesota	46	109	71	-	236	-	44,682	50,409
Missouri	-	736	-	-	-	-	33,360	41,969
Nebraska	-	-	-	-	-	-	8,285	7,926
North Dakota	-	-	-	-	-	-	13,184	12,724
Ohio	329	2,318	-	-	-	144	57,474	66,439
Oklahoma	-	-	-	-	-	-	9,682	26,201
South Dakota	-	-	-	-	-	-	2,831	6,126
Tennessee	2,122	1,879	-	-	-	-	17,086	16,827
Wisconsin	12	344	-	-	-	195	35,821	36,206
PAD District III Total	2,488,698	2,769,778	1,186	-	61	-	2,660,001	2,902,287
Alabama	134,514	149,978	1,186	-	-	-	149,532	165,718
Arkansas	-	-	-	-	-	-	6,151	1,310
Louisiana	1,044,935	1,239,615	-	-	-	-	1,098,954	1,283,103
Mississippi	165,684	111,032	-	-	-	-	201,367	142,043
New Mexico	-	-	-	-	61	-	4,986	5,423
Texas	1,143,564	1,269,152	-	-	-	-	1,199,011	1,304,690
PAD District IV Total	-	-	-	-	-	42	19,600	15,827
Colorado	-	-	-	-	-	-	1,419	169
Idaho	-	-	-	-	-	-	1,865	924
Montana	-	-	-	-	-	-	6,139	3,793
Utah	-	-	-	-	-	-	8,476	10,518
Wyoming	-	-	-	-	-	42	1,701	423
PAD District V Total	2,789,655	2,726,602	7,561	13,663	6,688	8,814	3,683,184	3,426,432
Alaska	3,079	13,422	-	-	-	-	14,853	26,221
Arizona	-	-	-	-	-	-	7,884	3,990
California	1,771,919	1,368,314	-	935	5	91	1,980,253	1,451,253
Hawaii	106,068	152,278	3,719	8,838	6,612	8,723	667,903	651,649
Nevada	-	-	-	-	-	-	13,827	20,546
Oregon	240,962	246,965	73	61	71	-	266,454	278,672
Washington	667,628	945,624	3,769	3,830	-	-	732,010	994,100

Dashes (-) = No data reported.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1991 and 1992.

• Electric Utility data are based on data obtained on Form EIA-759, "Monthly Power Plant Report," and Form FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

• For 1988 through 1990, military data for residual fuel oil are based on the Defense Fuel Supply Center's "DEIS Report." EIA-821 survey results are used for 1991 and 1992.

• Energy Information Administration's "Petroleum Supply Annual," Volume 1, 1991 and 1992, (DOE/EIA-0340(91)/1 - (92)/1)

Table 18. Adjusted Sales of Kerosene by End Use, 1991 and 1992
(Thousand Gallons)

Destination	Residential		Commercial		Industrial	
	1991	1992	1991	1992	1991	1992
U.S. Total	491,929	481,511	97,186	82,398	76,055	46,099
PAD District I Total	283,715	365,784	42,642	61,068	21,136	28,430
Subdistrict IA Total	40,891	59,842	14,741	9,357	1,656	5,404
Connecticut	4,855	8,211	4,648	1,894	484	279
Maine	16,482	19,887	3,467	2,757	203	256
Massachusetts	4,192	10,897	5,568	3,054	289	3,764
New Hampshire	7,490	10,502	595	926	166	549
Rhode Island	985	1,533	32	130	420	464
Vermont	6,887	8,812	431	596	94	92
Subdistrict IB Total	125,148	150,089	16,805	39,773	11,510	13,623
Delaware	4,602	6,039	359	50	120	80
District of Columbia	111	148	111	181	-	-
Maryland	11,014	13,284	1,451	1,767	427	365
New Jersey	9,144	11,459	5,330	16,348	2,152	6,057
New York	58,352	52,603	5,924	17,148	5,862	3,834
Pennsylvania	41,925	66,555	3,630	4,279	2,949	3,287
Subdistrict IC Total	117,676	175,853	11,096	11,939	7,970	9,402
Florida	5,427	11,500	804	1,246	263	172
Georgia	3,148	4,574	1,470	1,535	559	301
North Carolina	46,539	77,044	2,596	1,931	2,860	3,688
South Carolina	20,316	18,528	323	572	2,299	2,508
Virginia	36,764	53,906	4,114	5,325	1,386	1,176
West Virginia	5,481	10,300	1,789	1,329	603	1,557
PAD District II Total	153,446	86,392	31,176	14,258	19,154	11,149
Illinois	8,090	2,544	2,752	1,444	2,628	1,389
Indiana	21,903	7,793	2,989	2,460	2,762	1,054
Iowa	2,335	847	178	166	99	51
Kansas	691	553	253	188	235	44
Kentucky	26,199	15,337	7,071	2,433	3,441	2,622
Michigan	19,350	8,595	1,189	213	2,608	1,216
Minnesota	2,818	1,605	239	282	44	14
Missouri	2,573	868	306	679	260	68
Nebraska	379	427	186	62	87	32
North Dakota	515	258	35	14	3	4
Ohio	46,917	30,580	12,504	2,837	4,386	3,839
Oklahoma	691	449	667	154	425	292
South Dakota	311	155	8	16	-	11
Tennessee	18,576	15,158	2,188	2,884	1,946	325
Wisconsin	2,098	1,222	610	427	230	188
PAD District III Total	26,820	3,724	13,684	4,978	25,344	4,729
Alabama	10,769	1,275	2,644	733	3,145	1,376
Arkansas	2,484	308	328	214	1,725	84
Louisiana	2,404	394	3,877	430	8,015	830
Mississippi	3,998	600	1,087	368	898	436
New Mexico	1,085	191	3,545	368	6,498	357
Texas	6,080	956	2,204	2,866	5,062	1,646
PAD District IV Total	2,823	1,775	1,841	346	632	318
Colorado	1,971	1,550	869	282	82	52
Idaho	129	68	16	7	110	11
Montana	67	8	20	8	2	1
Utah	412	95	695	39	186	27
Wyoming	245	53	240	10	251	227
PAD District V Total	25,125	3,836	7,843	1,748	9,789	1,475
Alaska	1,247	28	19	10	26	11
Arizona	110	82	296	27	5,117	14
California	12,676	1,367	3,671	835	2,112	588
Hawaii	1	-	24	3	15	9
Nevada	1,632	403	484	172	1,190	389
Oregon	2,138	716	605	196	383	309
Washington	7,322	1,239	2,744	503	946	156

See footnotes at end of table.

Table 18. Adjusted Sales of Kerosene by End Use, 1991 and 1992 (Continued)

(Thousand Gallons)

Destination	Farm		All Other		Total	
	1991	1992	1991	1992	1991	1992
U.S. Total	24,868	20,036	19,678	6,382	709,716	636,426
PAD District I Total	5,667	10,946	6,328	3,687	359,688	489,913
Subdistrict IA Total	639	488	1,567	476	59,495	75,567
Connecticut	1	51	550	11	10,538	10,445
Maine	432	233	76	94	20,660	23,227
Massachusetts	21	28	201	63	10,271	17,807
New Hampshire	18	48	689	263	8,958	12,288
Rhode Island	-	1	4	2	1,441	2,130
Vermont	167	127	48	44	7,627	9,670
Subdistrict IB Total	2,462	6,165	2,973	2,210	158,888	211,859
Delaware	50	37	58	11	5,190	6,217
District of Columbia	-	-	-	-	222	329
Maryland	267	347	84	101	13,243	15,864
New Jersey	1	28	484	569	17,112	34,461
New York	1,702	3,782	1,749	836	73,588	78,204
Pennsylvania	431	1,972	598	692	49,833	76,785
Subdistrict IC Total	2,776	4,293	1,787	1,001	141,305	202,488
Florida	47	35	50	177	6,591	13,131
Georgia	65	43	159	62	5,401	6,514
North Carolina	1,376	2,359	485	89	53,857	85,111
South Carolina	512	150	221	250	23,672	22,009
Virginia	499	916	671	255	43,434	61,579
West Virginia	277	791	202	168	8,351	14,145
PAD District II Total	8,944	6,737	5,219	1,437	217,938	119,972
Illinois	417	298	193	273	14,080	5,947
Indiana	378	1,060	145	136	28,177	12,502
Iowa	749	669	166	27	3,527	1,759
Kansas	473	445	36	148	1,688	1,378
Kentucky	803	575	730	252	38,245	21,218
Michigan	756	461	1,052	41	24,955	10,525
Minnesota	635	297	26	27	3,762	2,225
Missouri	188	163	1,157	37	4,483	1,814
Nebraska	534	309	22	2	1,208	833
North Dakota	114	14	18	1	686	291
Ohio	3,023	1,715	517	173	67,347	39,144
Oklahoma	160	308	226	103	2,169	1,305
South Dakota	180	144	8	-	508	327
Tennessee	299	81	708	114	23,717	18,563
Wisconsin	233	200	215	105	3,387	2,142
PAD District III Total	6,091	1,704	5,887	1,055	77,826	16,190
Alabama	35	41	502	68	17,095	3,493
Arkansas	888	190	934	112	6,359	907
Louisiana	431	205	760	85	15,487	1,943
Mississippi	3,320	37	1,562	168	10,865	1,609
New Mexico	201	15	151	30	11,481	961
Texas	1,216	1,216	1,977	593	16,539	7,278
PAD District IV Total	1,139	265	453	42	8,888	2,746
Colorado	903	234	368	29	4,193	2,147
Idaho	37	11	-	4	292	102
Montana	149	1	8	6	245	24
Utah	21	13	71	1	1,384	175
Wyoming	30	7	7	2	773	299
PAD District V Total	2,827	384	1,791	161	47,376	7,604
Alaska	-	-	1	3	1,294	52
Arizona	30	6	221	1	5,774	130
California	2,528	233	1,158	128	22,144	3,152
Hawaii	-	-	-	-	40	13
Nevada	77	7	213	5	3,597	976
Oregon	132	51	116	23	3,374	1,295
Washington	60	87	82	2	11,154	1,987

Dashes (-) = No data reported.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1991 and 1992.

• Energy Information Administration's "Petroleum Supply Annual," Volume 1, 1991 and 1992, (DOE/EIA-0340(91)/1 - (92)/1).

Table 19. Adjusted Sales for Residential Use: Distillate Fuel Oil and Kerosene, 1992
(Thousand Gallons)

Destination	Distillate Fuel Oil			Kerosene
	No. 1	No. 2	Total	
U.S. Total	199,622	6,038,511	6,238,133	481,511
PAD District I Total	21,835	4,982,171	5,004,006	385,784
Subdistrict IA Total	10,185	1,950,782	1,960,947	59,842
Connecticut	267	564,178	564,445	8,211
Maine	8,295	213,619	221,914	19,887
Massachusetts	710	789,699	790,409	10,897
New Hampshire	563	154,163	154,726	10,502
Rhode Island	61	137,346	137,407	1,533
Vermont	268	91,776	92,044	8,812
Subdistrict IB Total	4,359	2,621,860	2,626,219	150,089
Delaware	-	43,745	43,745	6,039
District of Columbia	-	7,137	7,137	148
Maryland	450	186,836	187,286	13,284
New Jersey	191	470,409	470,600	11,459
New York	2,440	1,173,864	1,176,304	52,603
Pennsylvania	1,279	739,869	741,148	66,555
Subdistrict IC Total	7,311	409,529	416,840	175,853
Florida	762	12,235	12,997	11,500
Georgia	445	7,014	7,459	4,574
North Carolina	4,114	142,996	147,110	77,044
South Carolina	547	28,431	28,978	18,528
Virginia	1,096	199,786	200,882	53,906
West Virginia	347	19,066	19,413	10,300
PAD District II Total	123,155	861,063	984,218	86,392
Illinois	5,128	36,849	41,977	2,544
Indiana	14,315	65,388	79,703	7,793
Iowa	5,875	26,837	32,712	847
Kansas	421	790	1,211	553
Kentucky	4,358	27,940	32,298	15,337
Michigan	20,401	157,422	177,823	8,595
Minnesota	26,727	117,209	143,936	1,605
Missouri	2,483	12,555	15,038	868
Nebraska	1,872	4,233	6,105	427
North Dakota	4,810	22,157	26,967	258
Ohio	11,805	184,066	195,871	30,580
Oklahoma	41	42	83	449
South Dakota	5,652	14,257	19,909	155
Tennessee	745	10,146	10,891	15,158
Wisconsin	18,522	181,172	199,694	1,222
PAD District III Total	73	1,657	1,730	3,724
Alabama	28	421	449	1,275
Arkansas	2	526	528	308
Louisiana	-	3	3	394
Mississippi	7	47	54	600
New Mexico	35	567	602	191
Texas	-	94	94	956
PAD District IV Total	10,432	30,869	41,301	1,775
Colorado	342	563	905	1,550
Idaho	5,271	18,677	23,948	68
Montana	4,158	4,987	9,145	8
Utah	223	4,624	4,847	95
Wyoming	438	2,019	2,457	53
PAD District V Total	44,127	162,751	206,878	3,836
Alaska	31,508	35,951	67,459	28
Arizona	84	135	219	82
California	1,206	7,219	8,425	1,367
Hawaii	-	12	12	-
Nevada	711	8,397	9,108	403
Oregon	3,243	41,632	44,875	716
Washington	7,374	69,405	76,779	1,239

Dashes (-) = No data reported.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1992.

• Energy Information Administration's "Petroleum Supply Annual," Volume 1, 1992, (DOE/EIA-0340(92)/1).

Table 20. Adjusted Sales for Commercial Use: Distillate Fuel Oil, Residual Fuel Oil, and Kerosene, 1992
(Thousand Gallons)

Destination	Distillate Fuel Oil						Residual Fuel Oil	Kerosene
	No. 1 Distillate	No. 2 Distillate			No. 4 Fuel	Total Distillate		
		No. 2 Fuel Oil	No. 2 Diesel	No. 2 Total				
U.S. Total	134,406	1,487,576	1,351,095	2,838,671	374,056	3,347,133	1,289,987	82,398
PAD District I Total	28,460	1,277,698	494,238	1,771,936	370,335	2,170,731	1,192,512	61,068
Subdistrict IA Total	6,766	412,580	79,577	492,157	84,693	583,636	289,121	9,357
Connecticut	248	87,014	21,260	108,274	15,150	123,672	37,883	1,897
Maine	950	55,271	9,472	64,743	8,375	72,067	53,311	2,757
Massachusetts	4,519	197,744	28,608	226,352	50,004	280,875	157,396	3,054
New Hampshire	634	31,280	9,723	41,004	5,796	47,434	13,825	926
Rhode Island	9	19,007	1,511	20,518	4,789	25,316	22,203	130
Vermont	426	22,283	9,003	31,286	2,580	34,272	4,504	596
Subdistrict IB Total	16,308	714,524	209,327	923,851	284,461	1,224,617	807,739	39,773
Delaware	51	7,107	6,537	13,644	955	14,650	3,789	50
District of Columbia	-	14,329	1,597	15,925	7,222	23,147	11,411	181
Maryland	2,567	73,573	29,831	103,403	2,228	108,199	20,279	1,767
New Jersey	11,193	178,624	35,654	215,278	40,906	267,377	58,166	16,348
New York	1,937	290,150	69,208	359,356	222,688	583,982	676,545	17,148
Pennsylvania	557	149,741	66,503	216,244	10,462	227,263	37,548	4,279
Subdistrict IC Total	5,369	150,594	205,334	355,928	1,181	362,478	95,651	11,939
Florida	2,434	32,127	91,590	123,716	-	126,150	76,511	1,246
Georgia	107	15,900	27,605	43,505	-	43,611	268	1,535
North Carolina	1,538	30,699	36,413	67,112	233	68,883	4,785	1,931
South Carolina	59	10,765	17,364	28,129	4	28,192	2,235	572
Virginia	768	56,144	24,359	80,503	860	82,131	9,514	5,325
West Virginia	464	4,959	8,004	12,983	84	13,511	2,359	1,329
PAD District II Total	49,754	146,914	393,024	539,938	3,083	592,776	35,102	14,258
Illinois	5,230	13,993	56,363	70,356	102	75,688	1,842	1,444
Indiana	8,449	18,896	31,965	50,861	157	59,467	762	2,460
Iowa	1,738	4,387	14,384	18,771	-	20,508	1,580	166
Kansas	3,465	1,283	16,326	17,609	-	21,074	929	188
Kentucky	1,695	10,995	24,072	35,067	131	36,893	-	2,433
Michigan	9,154	21,064	43,981	65,045	59	74,258	503	213
Minnesota	4,579	12,198	15,078	27,276	58	31,914	8,369	282
Missouri	2,998	7,552	38,793	46,344	-	49,343	132	679
Nebraska	2,105	2,547	6,682	9,230	-	11,335	1,739	62
North Dakota	634	2,846	3,133	5,979	-	6,613	513	14
Ohio	681	15,600	51,951	67,551	2,475	70,707	3,136	2,837
Oklahoma	131	3,033	12,562	15,595	-	15,726	1,836	154
South Dakota	1,061	4,096	4,253	8,349	-	10,310	1,511	16
Tennessee	2,237	5,152	36,376	41,528	-	43,765	2,437	2,884
Wisconsin	4,698	23,271	37,106	60,376	102	65,177	9,812	427
PAD District III Total	3,086	14,375	229,078	243,453	8	246,547	1,117	4,978
Alabama	11	2,673	40,589	43,263	-	43,274	-	733
Arkansas	299	276	15,296	15,573	-	15,871	171	214
Louisiana	1,794	3,248	20,404	23,652	-	25,445	257	430
Mississippi	134	83	21,228	21,311	8	21,453	19	368
New Mexico	267	630	9,212	9,842	-	10,109	-	368
Texas	582	7,465	122,348	129,813	-	130,395	670	2,866
PAD District IV Total	10,628	13,833	64,161	77,994	-	88,621	1,640	346
Colorado	4,268	6,112	24,660	30,772	-	35,040	10	282
Idaho	2,776	4,091	10,545	14,636	-	17,412	588	7
Montana	1,400	1,629	4,082	5,711	-	7,111	166	8
Utah	1,339	866	17,538	18,404	-	19,742	876	39
Wyoming	845	1,135	7,336	8,471	-	9,316	-	10
PAD District V Total	42,478	34,756	170,593	205,349	630	248,458	59,617	1,748
Alaska	32,936	10,864	13,452	24,316	578	57,830	-	10
Arizona	165	2,037	7,281	9,319	-	9,483	-	27
California	6,106	7,444	70,184	77,628	52	83,787	1,812	835
Hawaii	515	597	17,238	17,835	-	18,351	45,107	3
Nevada	568	2,006	9,924	11,930	-	12,498	17	172
Oregon	1,103	4,939	26,191	31,130	-	32,233	10,294	196
Washington	1,084	6,868	26,322	33,191	-	34,275	2,387	503

Dashes (-) = No data reported.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1992.
• Energy Information Administration's "Petroleum Supply Annual," Volume 1, 1992, (DOE/EIA-0340(92)/1)

Table 21. Adjusted Sales for Industrial and Oil Company Use: Distillate Fuel Oil, Residual Fuel Oil, and Kerosene, 1992
(Thousand Gallons)

Destination	Industrial Use								Oil Company Use	
	No. 1 Distillate	No. 2 Distillate			No. 4 Fuel	Total Distillate	Residual Fuel Oil	Kerosene	Distillate Fuel Oil	Residual Fuel Oil
		No. 2 Fuel Oil	No. 2 Diesel	No. 2 Total						
U.S. Total	63,218	522,460	1,560,057	2,082,507	73,118	2,218,843	2,332,911	46,099	785,120	297,332
PAD District I Total	3,939	278,815	307,360	586,175	61,005	651,118	1,716,820	28,430	13,976	123,426
Subdistrict IA Total	582	93,114	14,725	107,839	21,959	130,360	470,133	5,404	1,097	228
Connecticut	22	17,078	1,747	18,825	5,683	24,530	51,874	278	336	228
Maine	43	15,782	1,748	17,530	1,994	19,567	255,377	256	96	-
Massachusetts	489	40,754	8,559	49,313	8,620	58,421	92,452	3,764	344	-
New Hampshire	8	9,055	573	9,628	2,156	11,792	43,747	549	59	-
Rhode Island	-	6,677	488	7,165	1,554	8,719	19,498	464	242	-
Vermont	-	3,768	1,610	5,379	1,952	7,331	7,185	92	19	-
Subdistrict IB Total	479	93,310	113,116	206,426	28,927	235,832	418,451	13,623	7,984	121,265
Delaware	1	1,610	3,573	5,183	1,098	6,281	35,063	80	286	17,455
District of Columbia	-	12	57	68	11	79	83	-	-	-
Maryland	311	7,403	11,635	19,038	1,167	20,516	43,461	365	651	2,052
New Jersey	16	30,943	6,823	37,766	11,998	49,781	129,509	6,057	2,571	2,557
New York	25	19,349	11,204	30,553	9,416	39,994	127,230	3,834	523	4,030
Pennsylvania	126	33,994	79,825	113,819	5,236	119,180	83,106	3,287	3,953	95,171
Subdistrict IC Total	2,898	92,391	179,518	271,909	10,120	284,926	828,236	9,402	4,895	1,933
Florida	24	2,350	38,070	40,420	1,017	41,461	174,921	172	1,523	126
Georgia	89	6,382	18,277	24,660	1,223	25,972	144,981	301	242	288
North Carolina	127	37,331	24,934	62,266	4,452	66,845	286,587	3,688	120	-
South Carolina	31	11,990	20,338	32,327	245	32,602	75,852	2,508	162	194
Virginia	151	24,492	13,545	38,037	3,119	41,308	123,605	1,176	875	1,326
West Virginia	2,475	9,846	64,353	74,199	63	76,737	22,290	1,557	1,972	-
PAD District II Total	27,356	168,887	515,614	684,501	2,163	714,020	347,094	11,149	81,500	107,634
Illinois	2,926	15,410	81,122	96,533	40	99,499	8,451	1,389	1,680	7,358
Indiana	5,108	12,278	81,363	93,642	54	98,805	105,343	1,054	1,330	59,490
Iowa	1,312	7,125	8,428	15,553	-	16,865	2,953	51	152	-
Kansas	877	3,880	4,412	8,292	336	9,505	5,108	44	4,734	1,550
Kentucky	1,719	28,897	126,213	155,110	16	156,845	8,964	2,622	2,517	8,919
Michigan	2,170	18,636	30,334	48,970	-	51,140	31,187	1,216	6,338	1,124
Minnesota	6,086	18,913	10,318	29,230	289	35,606	29,379	14	858	12,551
Missouri	1,480	8,399	16,587	24,985	255	26,720	25,962	68	360	392
Nebraska	554	551	5,279	5,830	93	6,476	6,187	32	28	-
North Dakota	2,015	324	7,778	8,101	-	10,116	4,325	4	5,658	7,492
Ohio	513	43,803	76,740	120,543	577	121,632	56,893	3,839	4,910	3,754
Oklahoma	399	918	12,374	18,292	14	18,706	24,365	292	51,268	-
South Dakota	927	842	8,508	9,350	129	10,405	4,615	11	19	-
Tennessee	174	2,626	31,068	33,695	335	34,204	12,247	325	1,056	264
Wisconsin	1,096	6,285	10,090	16,375	26	17,497	21,116	188	594	4,739
PAD District III Total	2,116	20,900	333,025	353,925	247	356,288	105,514	4,729	584,498	2,324
Alabama	644	6,703	88,874	95,577	-	96,222	15,739	1,376	10,851	-
Arkansas	5	762	13,669	14,431	181	14,617	1,139	84	3,312	-
Louisiana	6	167	49,495	49,663	51	49,720	42,535	830	296,086	-
Mississippi	631	7,416	22,809	30,225	15	30,870	8,133	436	11,507	-
New Mexico	587	179	16,205	16,385	-	16,972	5,423	357	13,631	-
Texas	242	5,672	141,973	147,645	-	147,887	32,544	1,646	249,111	2,324
PAD District IV Total	16,823	34,961	140,839	175,801	433	193,056	7,190	318	43,515	6,956
Colorado	1,988	27,390	21,713	49,103	-	51,091	159	52	9,694	-
Idaho	1,389	3,560	8,608	12,168	-	13,556	337	11	62	-
Montana	5,643	1,886	32,226	34,111	100	39,855	3,627	1	1,067	-
Utah	1,452	1,582	30,320	31,902	7	33,360	2,776	27	10,185	6,866
Wyoming	6,351	544	47,973	48,517	326	55,194	291	227	22,507	90
PAD District V Total	12,984	18,887	263,219	282,106	9,271	304,361	156,293	1,475	61,632	56,992
Alaska	9,184	1,159	7,407	8,566	-	17,750	12,800	11	47,865	-
Arizona	1	175	53,362	53,536	8,107	61,644	3,990	14	173	-
California	452	1,089	55,711	56,800	939	58,191	58,961	588	12,248	21,069
Hawaii	-	1,628	3,699	5,327	-	5,327	17,828	9	1,043	31,632
Nevada	2,930	1,064	99,173	100,237	20	103,187	3,392	389	189	-
Oregon	189	3,812	22,400	26,212	-	26,401	21,352	309	3	-
Washington	229	9,961	21,467	31,428	205	31,861	37,969	156	112	4,291

Dashes (-) = No data reported

Note: Totals may not equal sum of components due to independent rounding

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1992

• Energy Information Administration's "Petroleum Supply Annual," Volume 1, 1992, (DOE/EIA-0340(92)/1)

**Table 22. Adjusted Sales for Farm Use: Distillate Fuel Oil and Kerosene;
Adjusted Sales for Electric Utility Use: Distillate Fuel Oil
and Residual Fuel Oil, 1992
(Thousand Gallons)**

Destination	Farm				Electric	
	Diesel	Other Distillate	Total Distillate	Kerosene	Distillate Fuel Oil	Residual Fuel Oil
U.S. Total	3,274,811	230,035	3,504,846	20,036	468,798	5,587,235
PAD District I Total	301,727	65,180	366,877	10,945	208,022	5,029,803
Subdistrict IA Total	13,180	10,143	23,324	488	16,256	1,363,933
Connecticut	1,572	3,074	4,646	51	2,571	353,144
Maine	2,087	1,366	3,453	233	699	94,013
Massachusetts	1,837	2,130	3,967	28	9,994	809,646
New Hampshire	1,142	1,361	2,503	48	997	101,186
Rhode Island	259	275	534	1	1,659	5,856
Vermont	6,284	1,936	8,220	127	337	79
Subdistrict IB Total	89,652	40,642	130,294	6,165	76,432	1,745,190
Delaware	4,675	298	4,974	37	3,786	90,148
District of Columbia	-	-	-	-	17,614	-
Maryland	17,091	1,925	19,016	347	10,341	161,268
New Jersey	5,280	2,590	7,870	28	8,903	99,569
New York	31,011	17,205	48,217	3,782	9,911	1,257,902
Pennsylvania	31,594	18,624	50,217	1,972	25,878	136,303
Subdistrict IC Total	198,895	14,365	213,260	4,293	115,334	1,920,680
Florida	54,361	6	54,368	35	65,549	1,849,660
Georgia	46,305	1	46,306	43	9,394	-
North Carolina	38,677	3,746	42,423	2,359	11,944	-
South Carolina	23,703	1,148	24,851	150	5,316	951
Virginia	31,786	8,219	40,005	916	10,214	70,069
West Virginia	4,063	1,246	5,309	791	12,916	-
PAD District II Total	1,649,784	148,144	1,797,927	6,737	108,422	129,426
Illinois	194,011	8,859	202,870	298	17,025	88,538
Indiana	79,689	8,609	88,298	1,060	11,248	-
Iowa	202,519	17,435	219,954	669	2,872	-
Kansas	157,359	2,093	159,452	445	3,101	-
Kentucky	49,317	5,120	54,437	575	11,587	-
Michigan	82,080	13,664	95,745	461	24,211	25,553
Minnesota	158,419	30,183	188,602	297	3,547	-
Missouri	72,016	718	72,734	163	3,914	14,746
Nebraska	182,818	7,084	189,902	309	584	-
North Dakota	98,295	7,149	105,444	14	1,774	394
Ohio	79,916	12,416	92,332	1,715	15,768	194
Oklahoma	87,560	-	87,560	308	1,233	-
South Dakota	67,787	5,177	72,964	144	1	-
Tennessee	47,168	-	47,168	81	8,844	-
Wisconsin	90,830	29,616	120,446	200	2,714	-
PAD District III Total	702,437	803	703,240	1,704	35,081	23,555
Alabama	48,021	478	48,499	41	7,493	-
Arkansas	110,562	38	110,600	190	6,740	-
Louisiana	76,946	-	76,946	205	4,235	696
Mississippi	104,067	18	104,084	37	1,000	22,859
New Mexico	27,530	-	27,530	15	717	-
Texas	335,313	269	335,582	1,216	14,896	-
PAD District IV Total	232,951	6,892	239,843	265	5,621	-
Colorado	84,183	548	84,930	204	1,361	-
Idaho	70,000	4,092	74,092	11	51	-
Montana	44,770	1,525	46,295	1	137	-
Utah	17,214	325	17,540	13	1,453	-
Wyoming	16,583	402	16,986	7	2,619	-
PAD District V Total	387,912	9,047	396,958	384	111,649	404,452
Alaska	-	1	1	-	31,605	-
Arizona	16,842	-	16,842	6	2,768	-
California	270,840	83	270,922	233	5,973	72
Hawaii	8,293	1,530	9,764	-	69,322	387,243
Nevada	4,490	81	4,570	7	467	17,137
Oregon	30,683	5,732	36,415	51	1,046	-
Washington	56,824	1,620	58,443	87	467	-

Dashes (-) = No data reported.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1992.

• Electric Utility data are based on data obtained on Form EIA-759, "Monthly Power Plant Report," and Form FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

• Energy Information Administration's "Petroleum Supply Annual," Volume 1, 1992, (DOE/EIA 0340(92)/1)

Table 23. Adjusted Sales for Transportation Use: Distillate Fuel Oil and Residual Fuel Oil, 1992
(Thousand Gallons)

Destination	Railroad Use	Vessel Bunkering		On-Highway Diesel	Total Transportation Use	
	Distillate Fuel Oil	Distillate Fuel Oil	Residual Fuel Oil	Distillate Fuel Oil	Distillate Fuel Oil	Residual Fuel Oil
U.S. Total	3,217,231	2,240,170	7,199,078	21,374,872	26,832,273	7,199,078
PAD District I Total	501,531	464,186	1,682,990	6,888,163	7,853,860	1,682,990
Subdistrict IA Total	27,144	73,779	16,198	693,219	794,141	16,198
Connecticut	9,128	4,740	747	185,287	199,156	747
Maine	3,858	11,541	78	113,106	128,585	78
Massachusetts	10,763	49,726	15,218	247,409	307,898	15,218
New Hampshire	509	308	153	50,760	51,577	153
Rhode Island	702	7,136	-	37,344	45,181	-
Vermont	2,184	327	-	59,223	61,734	-
Subdistrict IB Total	204,497	134,204	941,361	2,569,627	2,808,328	941,361
Delaware	1,086	3,264	42,149	51,978	56,328	42,149
District of Columbia	5,289	6	-	20,881	26,176	-
Maryland	24,585	9,908	53,400	341,612	376,105	53,400
New Jersey	103,496	78,880	402,287	373,082	555,469	402,287
New York	29,230	16,399	149,513	800,229	845,858	149,513
Pennsylvania	40,810	25,737	294,011	981,845	1,048,393	294,011
Subdistrict IC Total	269,890	256,174	725,434	3,825,317	4,151,381	725,434
Florida	74,979	129,697	437,811	893,762	1,098,437	437,811
Georgia	54,468	29,404	143,174	874,159	958,031	143,174
North Carolina	40,547	8,955	16,162	661,167	710,669	16,162
South Carolina	13,342	7,045	17,258	415,909	436,297	17,258
Virginia	67,907	34,984	111,028	586,726	689,617	111,028
West Virginia	18,647	46,090	-	193,594	258,330	-
PAD District II Total	1,213,460	430,251	19,708	7,093,942	8,737,653	19,708
Illinois	114,402	56,789	1,339	865,402	1,036,594	1,339
Indiana	188,232	13,262	8,820	753,113	954,607	8,820
Iowa	33,699	4,456	-	324,321	362,476	-
Kansas	141,640	-	-	258,207	399,847	-
Kentucky	95,306	136,354	-	513,264	744,924	-
Michigan	32,162	9,070	4,163	556,507	597,739	4,163
Minnesota	114,343	4,757	109	350,224	469,324	109
Missouri	15,915	67,827	736	644,586	728,328	736
Nebraska	124,038	-	-	242,727	366,765	-
North Dakota	37,997	-	-	97,445	135,442	-
Ohio	119,733	14,052	2,318	913,607	1,047,393	2,318
Oklahoma	99,380	246	-	390,810	490,435	-
South Dakota	4,276	-	-	102,874	107,150	-
Tennessee	70,144	120,410	1,879	596,009	786,564	1,879
Wisconsin	22,194	3,027	344	484,846	510,067	344
PAD District III Total	857,905	908,026	2,769,778	3,445,063	5,210,994	2,769,778
Alabama	71,312	94,125	149,978	578,199	743,636	149,978
Arkansas	36,784	2,292	-	399,995	439,071	-
Louisiana	45,382	416,297	1,239,615	348,020	809,698	1,239,615
Mississippi	31,545	70,269	111,032	317,122	418,936	111,032
New Mexico	95,835	-	-	225,791	321,626	-
Texas	577,047	325,043	1,269,152	1,575,836	2,478,026	1,269,152
PAD District IV Total	298,910	131	-	828,826	1,127,867	-
Colorado	78,017	-	-	215,220	293,237	-
Idaho	23,554	108	-	128,768	152,430	-
Montana	63,802	-	-	132,587	196,389	-
Utah	47,713	23	-	180,007	227,744	-
Wyoming	85,824	-	-	172,244	258,068	-
PAD District V Total	345,425	437,606	2,726,602	3,118,878	3,901,909	2,726,602
Alaska	4,500	130,256	13,422	49,225	183,981	13,422
Arizona	6,051	20	-	351,527	357,598	-
California	184,624	95,082	1,368,314	1,842,723	2,122,429	1,368,314
Hawaii	19	76,226	152,278	24,850	101,095	152,278
Nevada	3,539	-	-	152,457	155,996	-
Oregon	97,447	42,702	246,965	329,762	469,911	246,965
Washington	49,245	93,320	945,624	368,334	510,899	945,624

Dashes (-) = No data reported.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1992.

• For 1988 through 1990, railroad data for distillate fuel oil are based on the Association of American Railroads' statistics for railroads of Class I and Amtrak Companies. EIA-821 survey results are used for 1991 and 1992.

• On-Highway Diesel data are Federal Highway Administration statistics of highway special fuels use.

• Energy Information Administration's "Petroleum Supply Annual," Volume 1, 1992, (DOE/EIA-0340(92)/1).

Table 24. Adjusted Sales for Military, Off-Highway, and All Other Uses: Distillate Fuel Oil, Residual Fuel Oil, and Kerosene, 1992
(Thousand Gallons)

Destination	Military				Off-Highway Diesel Distillate Fuel Oil			All Other		
	Diesel	Other Distillate	Total Distillate	Residual Fuel Oil	Construction	Other	Total	Distillate Fuel Oil	Residual Fuel Oil	Kerosene
U.S. Total	548,573	101,808	650,381	100,684	1,514,205	224,864	1,739,069	7,075	9,448	6,382
PAD District I Total	51,169	71,754	122,923	87,020	360,845	39,260	400,104	286	198	3,687
Subdistrict IA Total	3,421	11,853	15,274	18,602	42,845	5,539	48,084	44	20	478
Connecticut	244	4,817	5,061	1,127	9,659	1	9,660	-	20	11
Maine	1,877	875	2,751	6,542	4,725	3,759	8,484	-	-	94
Massachusetts	965	2,207	3,172	3,207	14,951	242	15,194	-	-	63
New Hampshire	278	1,415	1,693	5,025	5,734	933	6,667	-	-	263
Rhode Island	32	2,520	2,551	2,513	2,323	15	2,338	-	-	2
Vermont	25	19	44	188	5,152	589	5,741	44	-	44
Subdistrict IB Total	26,348	33,522	59,870	37,910	172,293	5,842	178,134	-	129	2,210
Delaware	407	1,280	1,688	1,855	2,816	156	2,972	-	-	11
District of Columbia	999	4,889	5,887	302	458	-	458	-	-	-
Maryland	3,827	17,403	21,230	15,798	18,961	10	18,970	-	-	101
New Jersey	17,088	3,821	20,909	8,640	22,218	1,645	23,863	-	35	569
New York	2,934	3,719	6,653	8,687	41,926	284	42,210	-	-	836
Pennsylvania	1,094	2,409	3,503	2,628	85,914	3,746	89,661	-	94	692
Subdistrict IC Total	21,400	26,379	47,779	30,509	146,007	27,879	173,886	242	50	1,001
Florida	7,493	508	8,001	2,542	52,683	1,980	54,663	20	-	177
Georgia	5,230	2,889	8,119	-	28,859	15,930	44,789	222	-	62
North Carolina	976	5,703	6,679	11,798	21,126	4,132	25,258	-	50	89
South Carolina	1,322	1,588	2,910	5,380	13,304	3,827	17,132	-	-	250
Virginia	6,251	14,817	21,067	10,789	22,433	1,545	23,978	-	-	255
West Virginia	128	874	1,003	-	7,601	464	8,065	-	-	168
PAD District II Total	66,901	16,801	83,702	-	449,686	26,963	476,649	807	394	1,437
Illinois	1,393	552	1,945	-	52,200	576	52,776	-	-	273
Indiana	5,359	1,911	7,271	-	38,961	3,028	41,989	203	-	136
Iowa	8,923	-	8,923	-	20,307	4,113	24,421	-	-	27
Kansas	18,809	451	19,260	-	15,963	1,303	17,266	27	-	148
Kentucky	7,537	2,511	10,047	-	27,754	1,781	29,535	-	-	252
Michigan	6,261	636	6,897	-	37,403	3,828	41,231	10	55	41
Minnesota	815	-	815	-	33,389	1,713	35,103	28	-	27
Missouri	2,372	3,855	6,228	-	35,890	1,167	37,057	1	-	37
Nebraska	319	-	319	-	8,984	1,100	10,084	-	-	2
North Dakota	569	22	591	-	2,017	150	2,166	120	-	1
Ohio	9,311	231	9,542	-	48,259	1,572	49,831	-	144	173
Oklahoma	815	-	815	-	18,175	769	18,944	-	-	103
South Dakota	324	4,952	5,276	-	7,120	1,114	8,234	-	-	-
Tennessee	4,239	1,605	5,844	-	69,668	1,645	71,313	-	-	114
Wisconsin	1,857	74	1,931	-	33,594	3,103	36,698	418	195	105
PAD District III Total	239,083	3,292	242,345	-	388,793	82,255	471,048	5,841	-	1,055
Alabama	5,966	544	6,511	-	51,970	19,168	71,138	-	-	68
Arkansas	577	-	577	-	45,503	10,429	55,932	-	-	112
Louisiana	8,538	-	8,538	-	51,622	4,185	55,807	-	-	85
Mississippi	19,255	-	19,255	-	18,490	16,730	35,221	835	-	168
New Mexico	3,695	-	3,695	-	20,901	1,263	22,164	-	-	30
Texas	201,021	2,748	203,768	-	200,307	30,479	230,787	5,007	-	593
PAD District IV Total	17,858	381	18,239	-	103,831	10,458	114,289	93	42	42
Colorado	7,865	282	8,147	-	36,668	337	37,005	28	-	29
Idaho	4,841	-	4,841	-	9,619	5,957	15,576	-	-	4
Montana	1,205	99	1,304	-	18,622	2,892	21,514	65	-	6
Utah	1,984	-	1,984	-	20,310	428	20,738	-	-	1
Wyoming	1,963	-	1,963	-	18,612	843	19,455	-	42	2
PAD District V Total	173,592	9,377	182,969	13,683	211,049	65,928	276,977	48	8,814	161
Alaska	16,838	2,740	19,579	-	11,331	5,953	17,284	-	-	3
Arizona	1,469	-	1,469	-	21,106	1,115	22,221	-	-	1
California	138,145	1,482	139,628	935	112,254	12,801	125,056	10	91	128
Hawaii	8,021	-	8,021	8,838	9,177	-	9,177	-	8,723	-
Nevada	1,665	975	2,640	-	17,776	315	18,091	-	-	5
Oregon	1,682	124	1,806	61	9,767	22,760	32,527	39	-	23
Washington	5,772	4,054	9,827	3,830	29,638	22,982	52,620	-	-	2

Dashes (-) = No data reported.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1992.

• For 1988 through 1990, military data for residual fuel oil are based on the Defense Fuel Supply Center's "DEIS Report." EIA-821 survey results are used for 1991 and 1992.

• Energy Information Administration's "Petroleum Supply Annual," Volume 1, 1992, (DOE/EIA-0340(92)/1)

Appendix

Technical Notes

Plants burning fuel oil or kerosene to generate electricity are classified as electric utility use.

Appendix

Technical Notes

Note 1: EIA-821: Annual Fuel Oil and Kerosene Sales Report, 1992

Background

The EIA-821, "Annual Fuel Oil and Kerosene Sales Report" survey was implemented to meet Energy Information Administration (EIA) legislative mandates and data user needs. Form EIA-821 is used to gather data on the sales to end users of distillate fuel oil, residual fuel oil, and kerosene. The data are used to determine the level of demand by end-use category and product at the State, regional, and national levels. This mandatory report is authorized by the Federal Energy Administration Act of 1974 (P. L. 93-275).

The predecessor survey to the EIA-821 was the EIA-172, "Sales Report of Fuel Oil and Kerosene" survey. The EIA-172 was conducted for reference years 1979 through 1982. Due to a serious deterioration in the sample of respondents during the 4-year period, the Form EIA-172 data were not collected for 1983. Instead, estimates for 1983 were published and a new sample of respondents was designed and selected from an improved sampling frame. The EIA-821 survey commenced with reference year 1984.

Discussion of Sampling Frame

The target population for the fuel oil and kerosene sales survey is the universe of companies that sell fuel oil and kerosene to end users.

The EIA-863 data base provided the sampling frame for the 1992 EIA-821 survey. The EIA-863, "Petroleum Product Sales Identification Survey," was mailed to approximately 27,000 companies in January 1992 to collect 1991 State-level sales volume data for No. 2 distillate, residual fuel, and motor gasoline. Companies also indicated if they sold kerosene. The No. 2 distillate data were further identified by residential and nonresidential end use, and non-end-use sales; the residual and motor gasoline data were identified by end use and non-end-use sales. The mailing list for the EIA-863 survey was constructed by merging and unduplicating the 1988 frame file and more than 51

State and commercial lists. In addition, company/State-level volumes for distillate fuel oil, residual fuel oil, and motor gasoline from the 1991 EIA-821 survey were merged with the EIA-863 to yield a combined data file. The transformed and edited version of the frame was then used to design and select the 1992 EIA-821 sample.

It should be noted that truck stops selling No. 2 diesel fuel were not specifically included in the EIA-863 survey. Therefore, the EIA-821 survey does not include all sales of No. 2 distillate through retail truck stops. However, to compensate for this shortage in coverage, data from the Federal Highway Administration are presented in the tables for on-highway diesel sales.

The sampling frame also lacked full coverage of kerosene retailers, many of whom are hardware stores and service stations. To account for all kerosene volumes supplied to the marketplace, aggregate reported kerosene volumes are set equal to the products supplied volumes published in the *Petroleum Supply Annual*.

Discussion of the Sample Design

The purpose of the EIA-821 sample design was to produce State-level estimates of total sales for the following five target variables: (1) residential No. 2 distillate, (2) other retail No. 2 distillate, (3) wholesale No. 2 distillate, (4) retail residual, and (5) wholesale residual. A separate sample was initially designed for each target variable.

Companies were divided into two basic types of strata: certainty and noncertainty. Companies selected with certainty were:

- all refiners and gas plant operators
- companies doing business in four or more States
- companies accounting for 5 percent or more of the distillate or residual fuel oil volume for any target variable or particular end-use category sold in a State.
- companies accounting for 5 percent or more of the kerosene volume sold in a State in an earlier EIA-821 survey.

- augmented frame units, e.g., vessel bunkering, for which no attribute data were available.

Firms determined not to be selling distillate or residual fuel oil or kerosene were removed from the frame file. Volumes for nonrespondents to the EIA-863 who had reported in the previous frame survey or in a sample survey were imputed. The imputed nonrespondents and the noncertainty companies were stratified by sales volume for each target variable. Strata boundaries were determined using the Dalenius-Hodges procedures, allowing the number of strata and the strata boundaries to vary by State. Nonrespondents for whom no previous information was available were classified in a separate stratum and sampled with reduced probabilities of selection.

Neyman allocation was used to allocate the number of companies required for each strata to obtain the required levels of accuracy: a 2.5 percent coefficient of variation for residual fuel oil and a 5 percent coefficient of variation for distillate fuel oil. Sample selections were then performed simultaneously from the same random list for the five samples to produce a final linked sample of approximately 4,500 companies. This method reduced the total survey sample size while improving volume estimates. Selected companies were asked to report sales by end-use categories for distillate and residual fuel oil and kerosene.

Imputation and Estimation

Survey data gathered from the respondents may contain incomplete reporting, total nonresponse, or values that fail editing. Missing data are estimated, or implicitly imputed for, using the strata means and treated the same as reported data. The weighted estimate is defined as follows:

$$\hat{V} = \sum_h N_h \left(\sum_i W_{hi} V_{hi} / \sum_i W_{hi} \right)$$

where:

- $\hat{V}$ = total estimated volume,
- $\sum_h$ = denotes summation over strata,
- N_h = stratum population for stratum h,
- $\sum_i$ = denotes summation over units within stratum h,
- V_{hi} = volume reported for unit i in stratum h,
- W_{hi} = weight attached to unit i in stratum h.

where: W_{hi} is inversely proportional to the probability of inclusion in the linked sample.

The degree of imputation by product and end use at the U.S. total level ranged as follows for the 1992 EIA-821 data: distillate, 0.8 percent for railroad use to 9.6 percent for all other uses; residual fuel oil, 0.0 percent for oil company use to 5.8 percent for military use; and kerosene, 1.0 percent for all other uses to 2.6 percent for farm use.

Collection Methods

The EIA-821 form was mailed in January 1993 to all companies selected for participation in the 1992 reference year survey. The completed form was due to EIA on March 1, 1993. A second request was sent by certified mail to nonrespondents approximately 1 month after the filing deadline. Follow-up telephone calls were made to collect outstanding data and to verify reported data. Late submissions and re-submissions were processed when received.

Data Processing

As EIA-821 forms were received, they were logged into an automated Survey Control File which maintained company identification and survey form status information for each company selected to participate in the survey. The data were reviewed manually, entered onto the computer files, and then processed through an automated edit program which detected missing data and outlying values. Data that failed the edits were resolved through telephone calls to the data reporters and corrections were entered onto the computer files. Preliminary estimates were generated and processed through a series of validation procedures to flag and rectify potential misreporting of data. Statistical reports, including publication tables, were produced using only acceptable and verified data.

Note 2: Reliability of the Data

Two types of errors are associated with data produced from a sample survey-- sampling errors and nonsampling errors. Sampling errors occur because the estimates are based on a sample rather than on a census. The particular sample used for the EIA-821 survey is one of a large number of samples of equal size which could have been selected from the sampling frame using the same sample design. Each of these samples would produce a different estimate. If the estimates were averaged over all possible samples, the result would be the same as the estimate derived from a census of the sampling frame. The sampling error is a measure of variability among the estimates from all possible samples and, thus, is a measure of the

precision with which an estimate from a particular sample approximates the results of a census.

Nonsampling errors and possibly biases can arise from a number of sources: (1) inability to obtain information about all cases in the sample, (2) response errors, (3) differences in the interpretation of questions or definitions, (4) mistakes in recording or coding of the data obtained, and (5) other errors of collection, response, coverage, and estimation for missing data. Bias is the difference between the average of the estimates over all possible samples of the same size and design, and the true value being estimated. It is not possible to estimate bias using the results of one sample.

Data obtained from alternate sources are not subject to sampling errors, but may be subject to nonsampling errors, the magnitudes of which are unknown. For example, kerosene estimates may have more nonsampling errors due to a lack of coverage of kerosene retailers. Nonsampling errors for survey estimates and estimates adjusted to alternate sources cannot be determined, but attempts are made throughout survey processing to minimize this type of error.

Data in Tables 1 through 12 are based on survey data which are subject to sampling errors. Coefficients of variation, which are estimates of sampling errors, are presented for the retail target variables in the following table for the 1992 survey. The coefficients of variation (CV) were estimated by:

$$CV(\hat{V}) = \frac{\sqrt{VAR(\hat{V})}}{\hat{V}}$$

where:

$$VAR(\hat{V}) = \sum_h n_h (1 - \frac{n_h}{N_h}) S_h^2$$

$$S_h^2 = \frac{\sum_{i=1}^{n_h} W_i^2 V_i^2 + \bar{V}_h^2 \sum_{i=1}^{n_h} W_i^2 - 2 \bar{V}_h \sum_{i=1}^{n_h} W_i^2 V_i}{n_h - 1}$$

$$\bar{V}_h = \frac{\sum_{i=1}^{n_h} W_i V_i}{\sum_{i=1}^{n_h} W_i}$$

$\hat{V}$ = total estimated volume,
 N_h = stratum population for stratum h,
 n_h = number of sample units in stratum h,
 V_i = volume for unit i,
 W_i = weight for unit i.

Response rates also offer some indication of the reliability and comprehensiveness of survey results. For the 1992 EIA-821 survey, the overall response rate (the number of submissions received, divided by the number of submissions solicited and expected, times 100) was 91.6 percent.

Coefficients of Variation for Sales of Fuel Oil, 1992

Geographic Area	Residential Distillate Fuel Oil	Non-Residential Retail Distillate Fuel Oil	Retail Residual Fuel Oil
U.S. Average	1.5	0.8	0.1
PAD District I Average	1.8	1.2	0.1
Subdistrict IA Average	2.3	1.4	0.1
Connecticut	3.0	3.9	0.0
Maine	4.1	4.3	0.0
Massachusetts	5.1	1.9	0.1
New Hampshire	4.6	2.2	0.0
Rhode Island	3.8	3.8	0.0
Vermont	4.2	4.4	0.0
Subdistrict IB Average	2.9	1.9	0.1
Delaware	4.2	4.7	0.0
District of Columbia	1.8	1.1	0.0
Maryland	4.4	3.4	0.0
New Jersey	3.3	4.6	0.1
New York	5.7	4.2	0.1
Pennsylvania	4.2	2.8	0.1
Subdistrict IC Average	3.7	1.8	0.0
Florida	11.3	3.5	0.0
Georgia	5.0	4.7	0.0
North Carolina	6.8	3.4	0.0
South Carolina	5.2	3.6	0.0
Virginia	5.7	5.3	0.0
West Virginia	5.4	3.0	0.0
PAD District II Average	2.2	1.4	0.1
Illinois	6.6	5.0	0.0
Indiana	5.5	3.6	0.1
Iowa	7.4	15.0	0.0
Kansas	17.8	4.7	0.0
Kentucky	8.0	2.9	0.0
Michigan	4.8	3.0	0.0
Minnesota	5.5	3.7	0.0
Missouri	5.9	4.0	0.1
Nebraska	7.2	6.0	0.0
North Dakota	6.0	3.2	0.0
Ohio	5.5	2.8	0.0
Oklahoma	60.7	6.1	0.0
South Dakota	7.1	4.3	16.2
Tennessee	12.5	3.2	0.0
Wisconsin	6.5	4.2	0.0
PAD District III Average	28.4	2.1	0.1
Alabama	7.3	3.8	0.0
Arkansas	92.5	4.3	0.0
Louisiana	75.5	3.4	0.0
Mississippi	30.8	4.0	0.0
New Mexico	3.2	3.1	0.0
Texas	25.6	3.8	0.1
PAD District IV Average	4.6	1.7	0.1
Colorado	7.8	3.6	4.9
Idaho	7.5	4.3	0.0
Montana	7.2	2.9	0.0
Utah	4.2	2.9	0.0
Wyoming	5.0	3.7	0.0
PAD District V Average	2.8	2.7	0.1
Alaska	6.1	4.2	0.0
Arizona	1.3	4.6	0.1
California	7.0	5.4	0.0
Hawaii	0.0	0.2	0.0
Nevada	1.7	2.5	0.0
Oregon	6.7	4.6	0.0
Washington	3.7	4.5	0.0

Note: Coefficients of variation that are less than 0.1 and greater than zero are displayed as 0.1.

Sources: • Energy Information Administration Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report," for 1992.

Note 3: Data Adjustments

Alternate Source Data

After all preliminary tabulations were verified, comparisons were made between the survey results and available alternate source data. The following end-use categories were replaced by alternate source data at the U.S., Petroleum Administration for Defense (PAD) district, or State level:

Tables 1 through 12:

On-Highway Diesel. Distillate fuel oil by State was calculated from the Federal Highway Administration data on highway use of special fuels. Of the 1988 through 1992 special fuels, more than 98 percent is diesel.

Tables 13 through 24:

Electric Utility. National-level distillate and residual fuel oil sales for electric utility use were calculated from annual aggregations of data collected on forms EIA-759, "Monthly Power Plant Report," and FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Plants." Form EIA-759 consumption data for light oils include No. 2 fuel oil, kerosene, and jet fuel; the heavy oils include No. 4 fuel oil, residual fuel oil, and crude oil. Using receipt data from Form FERC-423, the No. 4 fuel oil receipts were deleted from the heavy oil consumption data and added to the light oil consumption data. The resultant distillate (light oils) and residual (heavy oils) consumption data were added to the stock change of light oils and heavy oils, respectively, from Form EIA-759 to obtain the estimate of sales. Allocations at the State level were based on the EIA-821 survey.

Military. For 1987-1990, the national data on residual fuel oil issued to defense installations (Defense Fuel Supply Center's Defense Energy Information System (DFSC DEIS) Report) were allocated by State based on the EIA-821 survey. Survey results are used for 1992.

On-Highway Diesel. Distillate fuel oil by State was calculated from the Federal Highway Administration data on highway use of special fuels. Of the 1988 through 1992 special fuels, more than 98 percent is diesel.

Railroad. For 1987-1990, distillate fuel oil used by Class I railroads and Amtrak at the U.S. level was obtained from the Association of American Railroads. State-level allocations were based on the EIA-821 survey. Survey results are used for 1992.

1988 through 1992 Adjustments

Kerosene volumes for 1992 in Tables 1 through 24 are adjusted at the national level to equal products supplied volumes as published in the "Detailed Statistics" section of the *Petroleum Supply Annual* (PSA). The 1992 survey resulted in 672,606 thousand gallons of kerosene at the national level. The products supplied volume at the national level for kerosene was 636,426 thousand gallons. Hence, the adjustment factor at the national level for 1992 was 0.95.

For 1988 through 1991, kerosene volumes are adjusted at the national level in Tables 1 through 12 and at the PAD district level in Tables 13 through 24.

Volumes of distillate fuel oil in Tables 13 through 24 were adjusted at the PAD district level to equal products supplied volumes. The adjustment factors at the PAD district level for 1992 are as follows:

Distillate Fuel Oil

- PAD District I: .83
- PAD District II: .98
- PAD District III: 1.29
- PAD District IV: 1.17
- PAD District V: .85

For Tables 13 through 24, total sales at the PAD district level equal the products supplied volumes as reported in the PSA, 1988 through 1992. For example, the 1992 survey yielded a volume for distillate residential use in PAD District II of 1,007,648 thousand gallons. The total distillate volume for PAD District II was 6,527,078 from the survey, after subtracting the volume coming from alternate sources. The product supplied total distillate volume for PAD District II was 6,375,312 after removing alternate source volume. Hence, the adjusted 1992 estimate of distillate for residential use in PAD District II was $(6,375,312/6,527,078) \times 1,007,648 = 984,218$.

For distillate fuel oil in Tables 13 through 24, the PAD district adjustments were made to each State and product-use category except on-highway diesel use, and electric utility use.

Volumes of residual fuel oil in Tables 13 through 24 were adjusted at the national level to equal the products supplied estimate. The 1992 survey yielded 16,199,042 thousand gallons of residual fuel oil, while the products supplied volume at the national level was 16,816,142 thousand gallons. Thus, the adjustment factor at the national level for 1992 was 1.10, after subtracting the volumes coming from alternate sources. For residual fuel oil, the adjustments were made to each State and end-use category except electric utility use.

Note 4: End-Use Descriptions and Petroleum Product Definitions

End-Use Descriptions

Residential Use. Includes sales for use in private households for space heating, water heating, cooking, etc. Sales to farm houses are reported under "Farm Use."

Commercial Use. Includes sales for use in nonmanufacturing establishments such as motels, apartment buildings, restaurants, retail stores, institutions, government buildings, schools, and laundries for space heating, water heating, and cooking. Volumes used by companies in the marketing and distribution of petroleum products are also included.

Industrial Use. Includes sales to mines, smelters, and plants engaged in producing manufactured products, processing and assembling goods, etc. Also includes space heating. Excludes oil company use, as defined below.

Oil Company Use. Includes sales to drilling companies, pipelines or other related oil companies not engaged in the selling of petroleum products. Includes fuel oil that was purchased or produced and used by company facilities for the operation of drilling equipment, other field or refinery operations, and space heating at petroleum refineries, pipeline companies, and oil-drilling companies. Oil used to bunker vessels is counted under vessel bunkering. Sales to other oil companies for field use are included, but sales for use as refinery charging stocks are excluded.

Farm Use. Includes sales for use in tractors, irrigation pumps and other agricultural machinery, as well as that used for crop drying, smudge pot fuel, space heating of buildings (including farm houses), cooking, and any other use by the agriculture industry.

Electric Utility Companies. Includes sales to electric utility companies, including that used for the generation of electricity. Volumes imported and used directly by electric utility companies are also included.

Railroad Use. Includes sales to railroads, for any use, including that used for heating buildings operated by railroads.

Vessel Bunkering. Includes sales for the fueling of commercial or private boats, such as pleasure craft, fishing boats, tugboats, and ocean-going vessels,

including vessels operated by oil companies. Excluded are volumes sold to the U.S. Armed Forces.

On-Highway Diesel Use. Includes sales for use in motor vehicles.

Military Use. Includes sales to the Armed Forces, including volumes sold to the Defense Fuel Supply Center (DFSC) for use by all branches of the Department of Defense (DOD).

Off-Highway Diesel Use. Includes sales for use in:

1. **Construction.** Construction equipment including earthmoving equipment, cranes, stationary generators, air compressors, etc.
2. **Other.** Sales for off-highway uses other than construction. Sales for logging are included in this category. Volumes for off-highway diesel use by the agriculture industry are reported under "Farm Use."

All Other Uses. Sales for all other uses not included in any other end-use category are reported here.

Definitions of Petroleum Products and Other Related Terms

ASTM. The acronym for the American Society for Testing and Materials.

Distillate Fuel Oil. A general classification for one of the petroleum fractions produced in conventional distillation operations. It is used primarily for space heating, on- and off-highway diesel engine fuel (including railroad engine fuel and fuel for agricultural machinery), and electric power generation. Included are products known as No. 1, No. 2, and No. 4 fuel oils and No. 1, No. 2, and No. 4 diesel fuels.

1. **No. 1 Distillate.** A petroleum distillate which meets the specifications for No. 1 heating or fuel oil as defined in ASTM D 396 and/or the specifications for No. 1 diesel fuel as defined in ASTM Specification D 975.
 - a. **No. 1 Diesel Fuel.** A volatile distillate fuel oil with a boiling range between 300 and 575 degrees Fahrenheit and used in high-speed diesel engines generally operated under wide variations in speed and load. Includes type C-B diesel fuel used for city buses and similar operations. Properties are defined in ASTM Specification D 975.

- b. **No. 1 Fuel Oil.** A light distillate fuel oil intended for use in vaporizing pot-type burners. ASTM Specification D 396 specifies for this grade maximum distillation temperatures of 400 degrees Fahrenheit at the 10-percent point and 550 degrees Fahrenheit at the 90-percent point, and kinematic viscosities between 1.4 and 2.2 centistokes at 100 degrees Fahrenheit.

2. **No. 2 Distillate.** A petroleum distillate which meets the specifications for No. 2 heating oil or fuel oil as defined in ASTM D 396 and/or the specifications for No. 2 diesel fuel as defined in ASTM Specification D 975.

- a. **No. 2 Diesel Fuel.** A gas oil type distillate of lower volatility with distillation temperatures at the 90-percent point between 540 and 640 degrees Fahrenheit for use in high speed diesel engines generally operated under uniform speed and load conditions. Includes Type R-R diesel fuel used for railroad locomotive engines, and Type T-T for diesel-engine trucks. Properties are defined in ASTM Specification D 975.

- b. **No. 2 Fuel Oil.** A distillate fuel oil for use in atomizing type burners for domestic heating or for moderate capacity commercial-industrial burner units. ASTM Specification D 396 specifies for this grade distillation temperatures at the 90-percent point between 540 and 640 degrees Fahrenheit, and kinematic viscosities between 2.0 and 3.6 centistokes at 100 degrees Fahrenheit.

3. **No. 4 Fuel.** A fuel oil for commercial burner installations not equipped for preheating facilities. It is used extensively in industrial plants. This grade is a blend of distillate fuel oil and residual fuel oil stocks that conforms to ASTM Specification D 396 or Federal Specification VV-F-815C; its kinematic viscosity is between 5.8 and 26.4 centistokes at 100 degrees Fahrenheit. Also included is No. 4-D, a fuel oil for low- and medium-speed diesel engines that conforms to ASTM Specification D 975.

Kerosene. A petroleum distillate that boils at a temperature between 300 and 550 degrees Fahrenheit, that has a flash point higher than 100 degrees Fahrenheit by ASTM Method D 56, that has a gravity range from 40 to 46 degrees API, and that has a burning point in the range of 150 degrees to 175 degrees Fahrenheit. Included are the two classifications recognized by

ASTM Specification D 3699: No. 1-K and No. 2-K, and all grades of kerosene called range or stove oil which have properties similar to No. 1 fuel oil, but with a gravity of about 43 degrees API and a maximum end-point of 625 degrees Fahrenheit. Kerosene is used in space heaters, cook stoves, and water heaters and is suitable for use as an illuminant when burned in wick lamps. **NOTE:** Respondents to the EIA-821 survey were instructed to report all volumes in accordance with what the product was sold as, regardless of the actual specifications of that product. For example, if a No. 2 distillate was sold as a heating oil or fuel oil, the volume would be reported in the category "No. 2 Fuel Oil" even if the product conformed to the higher specifications of a diesel fuel.

PAD District. Petroleum Administration for Defense Districts

PAD District I:

Subdistrict IA. Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont

Subdistrict IB. Delaware, District of Columbia, Maryland, New Jersey, New York, and Pennsylvania

Subdistrict IC. Florida, Georgia, North Carolina, South Carolina, Virginia, and West Virginia

PAD District II:

Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Ohio, Oklahoma, Tennessee, and Wisconsin

PAD District III:

Alabama, Arkansas, Louisiana, Mississippi, New Mexico, and Texas

PAD District IV:

Colorado, Idaho, Montana, Utah, and Wyoming

PAD District V:

Alaska, Arizona, California, Hawaii, Nevada, Oregon, and Washington

Residual Fuel Oils. The topped crude of refinery operations, which includes No. 5 and No. 6 fuel oils, as defined in ASTM Specification D 396 and Federal Specification, VV-F-815C; Navy Special fuel oil as

defined in Military Specification MIL-F-859E including Amendment 2 (NATO symbol F-77); and Bunker C fuel oil. Residual fuel oil is used for the production of electric power, space heating, vessel bunkering, and various industrial purposes.

United States. The 50 States and the District of Columbia.

Storage and distribution of petroleum products are becoming more challenging in the 1990s due to a wide variety of new air quality regulations.

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