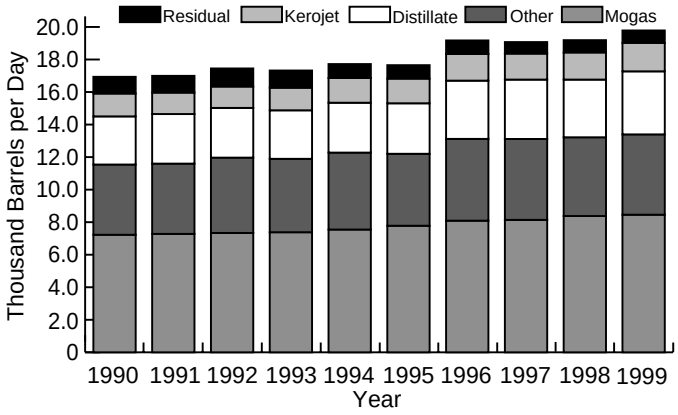
Highlights

The booming economy continued in October. According to the Federal Reserve Board, economic growth remains strong with advances in manufacturing activity and consumer spending, as well as favorable conditions for harvesting in the agricultural sector.[1] In light of the continued strength in the nation's economy it is no surprise that total demand for refined petroleum products, measured as product supplied, set a new record for the month[2] at an average of 19.8 million barrels per day (Table & Figure H1). Data on average heating degree day temperatures from the National Oceanic and Atmospheric Administration reveal that although the temperatures were only slightly warmer than normal for this time of year, the October temperatures were 8.4 percent warmer than this time last year.[3]

Figure H1. Total Demand, 1990-Current, Comparison in October for Petroleum Products



Source: Energy Information Administration, *Petroleum Supply Annual*, DOE/EIA-0340 (various issues), and *Petroleum Supply Monthly*, DOE/EIA-0109 (various issues).

October 1999 highlights include:

- **Demand** for finished motor gasoline set an **October record high** at an average of 8.5 million barrels per day. **Production** also set a **record high for the month** at an average of 8.2 million barrels per day. **Stocks** of finished motor gasoline ended the month at the lowest level for this time of year since 1996, 154.8 million barrels.

- **Demand** for distillate fuel oil set not only a **record for October,** but also for the highest monthly average since December 1989 at 3.9 million barrels per day. Distillate fuel oil **production** averaged 3.6 million barrels per day, slightly below the 1996 record for the month. End-of-month distillate **stocks** totaled 136.3 million barrels, down 11.1 million barrels compared to a year ago.

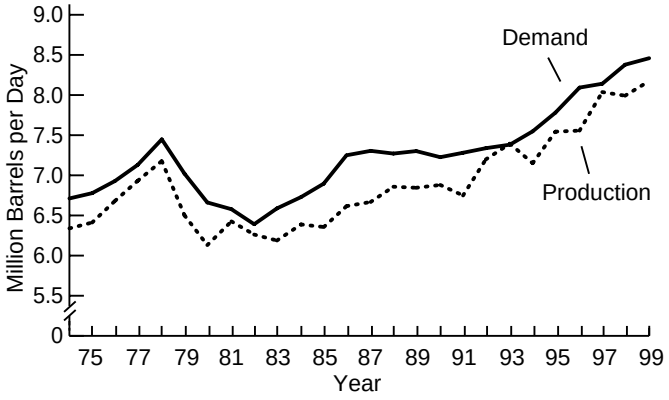
- Residual fuel oil **demand** averaged 763 thousand barrels per day, the highest October average since 1996. **Imports** of residual fuel were 293 thousand barrels per day, the highest average for the month since 1993. **Stocks** ended the month totaling 41.0 million barrels, the highest October month-end total since 1994.

- **Demand** for kerosene-type jet fuel set an **October record high** averaging 1.7 million barrels per day, a **4.9 percent increase** compared to the prior record. **Production** of kerosene-type jet fuel averaged 1.5 million barrels per day, the second highest average for the month. Kerosene-type jet fuel **stocks** ended the month totaling 43.1 million barrels.

- Propane **inventories** posted an expected seasonal draw for October, dropping 941 thousand barrels to a total of 58.5 million barrels. Stocks ended the month 16.8 million barrels below last October's unusually high level.

- **Production** of crude oil averaged 6.1 million barrels per day, the **lowest level for the month since 1950**. Alaskan field production of crude oil averaged 1.1 million barrels per day, the lowest daily average for October since 1977. **Imports** averaged 8.4 million barrels per day, 0.6 million barrels per day below the 1997 record high for the month. **Stocks**, excluding the Strategic Petroleum Reserve (SPR), ended the month totaling 304.9 million barrels or 25.2 million barrels below last October.

Figure H2. Finished Motor Gasoline, Year-to-Year October Comparisons, 1974-1999



Source: Energy Information Administration, *Petroleum Supply Annual*, DOE/EIA-0340 (various issues), and *Petroleum Supply Monthly*, DOE/EIA-0109 (various issues).

[1]"The Beige Book Summary", *Federal Reserve Board*, November 3, 1999, accessible via the Internet at http://www.federalreserve.gov/.
[2]October 1999 data are monthly-from-weekly estimates based on the Energy Information Administration's Weekly Petroleum Supply Reporting System.
[3]"Heating Degree Day Data Monthly Summary, Monthly Data for October 1999", *National Oceanic and Atmospheric Administration*, accessible via the Internet at http://www.cpc.ncep.noaa.gov/.

Table H1. Petroleum Supply Summary

(Million Barrels per Day, Except Where Noted)

Category	1999			1998	January - October	
	Estimated October	September	Difference[a]	October	1999	1998
Products Supplied	19.8	19.5	0.2	19.2	19.3	18.9
Finished Motor Gasoline	8.5	8.4	0.1	8.4	8.3	8.2
Distillate Fuel Oil	3.9	3.4	0.5	3.5	3.5	3.5
Residual Fuel Oil	0.8	0.8	(s)	0.8	0.8	0.9
Jet Fuel	1.7	1.6	0.1	1.7	1.7	1.6
Other Petroleum Products[b]	4.9	5.4	-0.4	4.8	4.9	4.7
Crude Oil Inputs	14.7	15.1	-0.4	14.0	14.9	14.9
Operating Utilization Rate (%)	91.4	95.0	-3.6	92.7	94.0	96.9
Imports	10.4	10.6	-0.2	10.9	10.7	10.7
Crude Oil	8.4	8.5	-0.1	8.7	8.7	8.7
Strategic Petroleum Reserve	0.0	(s)	(s)	0.0	(s)	0.0
Other	8.4	8.5	-0.1	8.7	8.7	8.7
Products	2.0	2.1	-0.1	2.2	2.0	2.0
Finished Motor Gasoline	0.3	0.3	(s)	0.4	0.4	0.3
Distillate Fuel Oil	0.2	0.2	(s)	0.2	0.2	0.2
Residual Fuel Oil	0.3	0.3	(s)	0.3	0.3	0.3
Jet Fuel	0.1	0.1	(s)	0.1	0.1	0.1
Other Petroleum Products[c]	1.1	1.1	(s)	1.2	1.1	1.1
Exports	0.9	0.9	0.1	0.9	0.9	1.0
Crude Oil	0.1	(s)	0.1	0.1	0.1	0.1
Products	0.8	0.9	(s)	0.8	0.8	0.8
Total Net Imports	9.4	9.7	-0.2	10.0	9.8	9.8
Stock Change[d]	-0.8	-0.3	-0.5	-0.1	-0.2	0.3
Crude Oil	(s)	-0.4	0.4	0.7	-0.1	0.1
Products	-0.8	(s)	-0.8	-0.8	-0.2	0.2
Total Stocks (million barrels)	1,596	1,608	-12	1,649	—	—
Crude Oil	879	878	1	894	—	—
Strategic Petroleum Reserve[e]	574	575	-1	564	—	—
Other	305	303	2	330	—	—
Products	717	730	-13	755	—	—
Finished Motor Gasoline	155	159	-4	160	—	—
Distillate Fuel Oil	136	145	-9	147	—	—
Residual Fuel Oil	41	39	2	41	—	—
Jet Fuel	43	48	-5	43	—	—
Other Petroleum Products[c]	342	339	3	364	—	—

[a] Difference is equal to volume for current month minus volume for previous month.

[b] Includes crude oil product supplied, natural gas liquids, liquefied refinery gases (LRG's), other liquids, and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil, and jet fuel.

[c] Includes natural gas liquids, liquefied refinery gases (LRG's), other liquids, and all finished petroleum products except finished motor gasoline, jet fuel, distillate fuel oil, and residual fuel oil.

[d] A negative number indicates a decrease in stocks and a positive number indicates an increase.

[e] Crude oil stocks in the Strategic Petroleum Reserve include non-U.S. stocks held under foreign or commercial storage agreements.

(s) = Less than 0.05 million barrels per day, or less than 0.05 percent, or less than 0.5 million barrels.

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

Source: Energy Information Administration (EIA), 1998,*Petroleum Supply Annual*, Volume 2; appropriate issues of the *Petroleum Supply Monthly* and the *Weekly Petroleum Status Report*.

Data for the current month are preliminary estimates, based on weekly submissions. For an explanation of estimation methodology and accuracy, see Appendix A of *Weekly Petroleum Status Report* and the article, "Accuracy of Petroleum Supply Data", published in the October 1998*, Petroleum Supply Monthly.*

Table H2. U.S. Refinery Inputs, Capacities[1] and Utilization Rates: 1998-1999
(Thousand Barrels per Day, Except Where Noted)

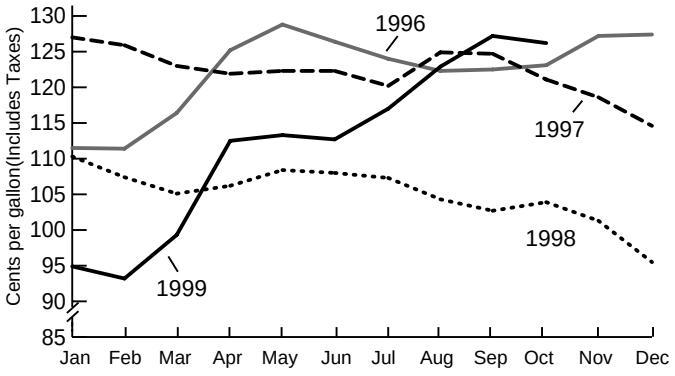
Item	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1998												
Gross Refinery Inputs	14,661	14,262	14,901	15,301	15,464	15,671	15,705	15,806	15,040	14,222	15,095	15,169
Operating Refinery Capacity[2]	15,538	15,558	15,550	15,547	15,573	15,686	15,691	15,685	15,699	15,343	15,478	15,797
Idle Capacity[3]	173	158	184	144	135	135	135	143	129	537	449	154
Idle Three Months or Less	47	20	46	0	0	0	0	14	0	420	369	37
Idle More than Three Months	127	138	138	144	135	135	135	129	129	117	80	117
Operable Refinery Capacity	15,711	15,716	15,735	15,692	15,708	15,821	15,826	15,828	15,828	15,880	15,927	15,951
Utilization Rate (percent)												
Operating Capacity	94.4	91.7	95.8	98.4	99.3	99.9	100.1	100.8	95.8	92.7	97.5	96.0
Operable Capacity	93.3	90.7	94.7	97.5	98.4	99.1	99.2	99.9	95.0	89.6	94.8	95.1
1999												
Gross Refinery Inputs	14,762	14,719	14,802	15,333	15,253	15,195	15,447	15,546	15,353			
Operating Refinery Capacity[2]	15,953	15,955	16,139	16,140	15,984	16,137	16,134	16,134	16,164			
Idle Capacity[3]	200	227	131	132	288	139	153	153	153			
Idle Three Months or Less	71	98	2	0	158	7	21	48	14			
Idle More than Three Months	129	129	129	132	130	132	132	105	139			
Operable Refinery Capacity	16,153	16,181	16,270	16,271	16,271	16,276	16,287	16,287	16,317			
Utilization Rate (percent)												
Operating Capacity	92.5	92.3	91.7	95.0	95.4	94.2	95.7	96.4	95.0			
Operable Capacity	91.4	91.0	91.0	94.2	93.7	93.4	94.8	95.4	94.1			

[1]Capacities are on a calendar day basis.
[2]Operating capacity equals the operable capacity less the total idle capacity.
[3] Idle capacity is the component of operable capacity that is not in operation and not under active repair, but is capable of being placed in operation within 30 days; and capacity not in operation but is under active repair that can be completed within 90 days.
Note: Totals may not equal sum of components due to independent rounding.
Sources: Energy Information Administration (EIA), 1998, *Petroleum Supply Annual*, Volume 2, Table 16; EIA, *Petroleum Supply Monthly,* 1999 data issue, Table 28.

Motor Gasoline

Along with an increase in the popularity of sport utility vehicles and pickup trucks, demand for gasoline continues to increase as the average fuel efficiency of vehicles sold in the U.S. declines.[4] **Demand** for finished motor gasoline set an **October record high** averaging 8.5 million barrels per day (Figure H2). Conventional motor gasoline prices dropped from September to an average of $1.262 per gallon, including taxes, this month (Figure H3).[5] Conventional motor gasoline prices were, on average, $0.223 a gallon higher than this time last year. **Production** of finished motor gasoline set a **record for the month** at an average of 8.2 million barrels per day. **Imports** of finished motor gasoline averaged 323 thousand barrels per day which is normal for this time of year. Finished motor gasoline **stocks** ended the month at 154.8 million barrels, their **lowest month-end total since August 1997**. Stocks of oxygenated motor gasoline reflect the largest percentage decline compared to this time last year. Oxygenated stocks ended the month at 0.9 million barrels compared to 1.3 million barrels a year ago. Stocks of reformulated motor gasoline totaled 39.9 million barrels and other finished motor gasoline ended the month at 113.9 million barrels.

Figure H3. Retail Prices for Conventional Motor Gasoline, 1996-current



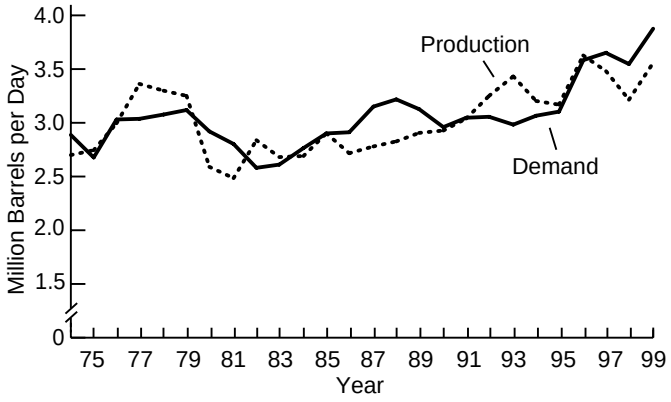
Source: Energy Information Administration, *Weekly Petroleum Status Report,* DOE/EIA-0208 (various issues).

[4]"Industries Bemoan EPA Stand on New Diesel", *The Oil Daily*, November 4, 1999, p. 1 & 2.
[5]"Table 16. U.S. Retail Motor Gasoline and On-Highway Diesel Fuel Prices, 1998 to Present", *Weekly Petroleum Status Report*, November 10, 1999, p. 27.

Distillate Fuel Oil

Strong demand from the agricultural sector, supported by milder weather, helped push demand for distillates to an unusually high average for this time of year.[6] Distillate fuel oil **demand** averaged 3.9 million barrels per day (Figure H4). This is not only a record for the month, but the **highest daily average** since December 1989. The large increase in demand may be partially attributed to year 2000 fears. Heating oil distributers along the East Coast have noticed some customers stocking up on supplies and trying to reschedule January deliveries prior to the turn of the century.[7] **Production** of distillate fuel oil averaged 3.6 million barrels per day, only 69 thousand barrels per day shy of the 1996 record for the month. Distillate fuel oil **imports** were low compared to the last few years, averaging only 170 thousand barrels per day. Total distillate fuel oil **stocks** ended the month at 136.3 million barrels, down 11.1 million barrels from 1998's unusually high October level. Heating oils, typically high-sulfur distillates, ended the month at 69.1 million barrels compared to 78.6 million barrels this time last year. Low-sulfur distillates ended the month at 67.2 million barrels, down slightly from a year ago.

Figure H4. Distillate, Year-to-Year October Comparisons, 1974-1999

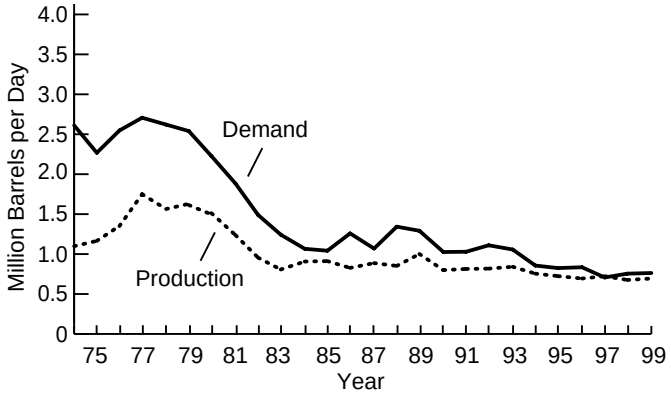


Source: Energy Information Administration, *Petroleum Supply Annual*, DOE/EIA-0340 (various issues), and *Petroleum Supply Monthly*, DOE/EIA-0109 (various issues).

Residual Fuel Oil

Demand for residual fuel oil averaged 763 thousand barrels per day, the highest average for the month in the last three years (Figure H5). Residual fuel oil **production** was normal for the month averaging 694 thousand barrels per day. **Imports** of residual fuel oil were 293 thousand barrels per day, the highest daily average for October since 1993. End-of-month **stocks** totaled 41.0 million barrels, the highest total for the month in five years.

Figure H5. Residual, Year-to-Year October Comparisons, 1974-1999

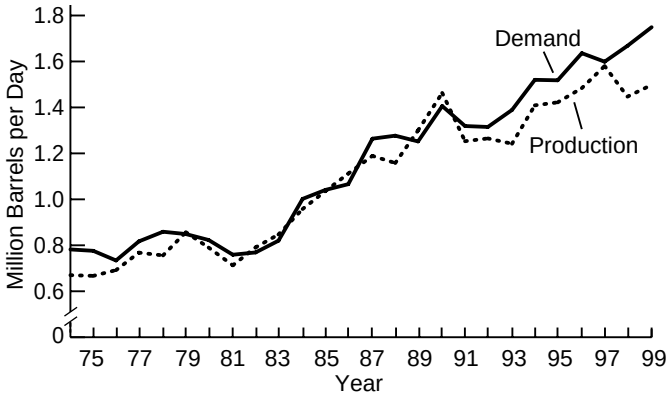


Source: Energy Information Administration, *Petroleum Supply Annual*, DOE/EIA-0340 (various issues), and *Petroleum Supply Monthly*, DOE/EIA-0109 (various issues).

Kerosene-Type Jet Fuel

As economic conditions in the U.S. remain healthy, demand for air travel continues to increase. **Demand** for kerosene-type jet fuel soared to an average of 1.7 million barrels per day (Figure H6). This was not only an October record high but close to the all-time high of December 1998. One measure of demand from the Airlines is available seat miles (one seat flown one mile). According to the Air Transport Association, domestic available seat miles were up 5.6 percent compared to last October and up 4.5 percent from last month.[8] **Production** of kerosene-type jet fuel averaged 1.5 million barrels per day, the second highest average ever for the month. Total **imports** of jet fuel, kerosene- and naphtha-type, were in the upper range for the month at an average of 135 thousand barrels per day. **Stocks** of kerosene-type jet fuel totaled 43.1 million barrels, slightly higher than last October's month-end total.

Figure H6. Kerojet, Year-to-Year October Comparisons, 1974-1999



Source: Energy Information Administration, *Petroleum Supply Annual*, DOE/EIA-0340 (various issues), and *Petroleum Supply Monthly*, DOE/EIA-0109 (various issues).

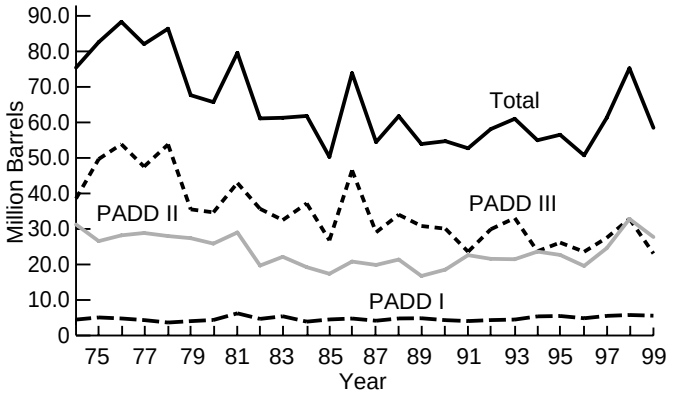
[6]"Refinery turnarounds and closed arbitrage push US West Coast distillates prices up", *Platt's Oilgram Price Report*, October 28, 1999, p. 10.
[7]"Heating Oil Hoarding Reported", *The Oil Daily*, November 18, 1999, p. 7.
[8]"Preliminary Scheduled Passenger Traffic Statistics", *Air Transport Association*, November 12, 1999, accessible via the Internet at http://www.air-transport.org/.

Propane

The early season stock draws have pushed U.S. inventories toward the lower limit of the normal seasonal range (Figure H7). Propane inventories were drawn down 941 thousand barrels from September to a total of 58.5 million barrels by the end of October. Only Gulf Coast stocks ended the month below the normal seasonal range. Gulf Coast propane inventories ended the month at 23.1 million barrels, a draw of 1.4 million barrels during the month. Inventories along the East Coast dropped 184 thousand barrels to 5.6 million barrels. In the Midwest stocks increased 1.4 million barrels to close the month at 27.7 million barrels.

Although propane inventories for the 1999-2000 heating season are at a 16.8 million barrel deficit compared to last October, they remain within the normal range and appear adequate for normal winter demand.[9]

Figure H7. Propane Stocks, Year-to-Year October Comparisons, 1974-1999



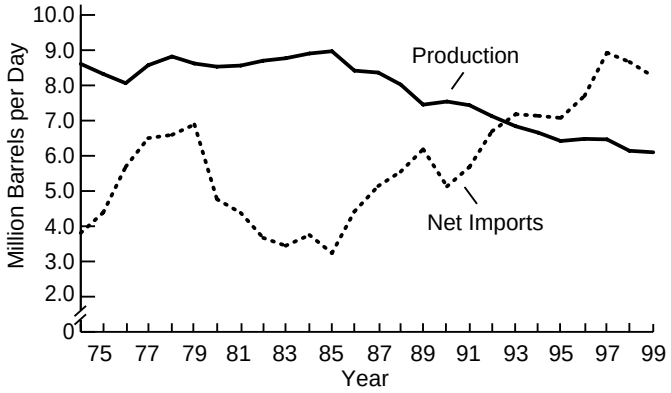
Source: Energy Information Administration, *Petroleum Supply Annual*, DOE/EIA-0340 (various issues), and *Petroleum Supply Monthly*, DOE/EIA-0109 (various issues).

Crude Oil

Domestic **production** of crude oil averaged 6.1 million barrels per day in October. While this was the highest daily average for any month this year, it is the **lowest for October since 1950**. Alaskan field production of crude oil averaged 1.1 million barrels per day, the lowest average for this time of year since 1977. Imports of crude oil were 0.6 million barrels per day below the record for the month set in 1997. **Imports** of crude oil averaged 8.4 million barrels per day. Refiners are paying substantially higher prices for crude oil as compliance to OPEC production cuts by it's members remains strong. Net imports of crude oil, (gross imports minus exports), averaged 8.3 million barrels per day which is the lowest October monthly average in three years (Figure H8).

Crude oil **stocks**, excluding the Strategic Petroleum Reserve (SPR), ended the month at 304.9 million barrels. Compared to this time last year stocks are down 25.2 million barrels and at the lowest level for October since 1976. Total crude oil stocks ended the month at 879.2 million barrels; this includes non-U.S. stocks held under foreign or commercial storage agreements.

Figure H8. Crude Oil, Year-to-Year October Comparisons for Production and Net Imports, 1974-1999

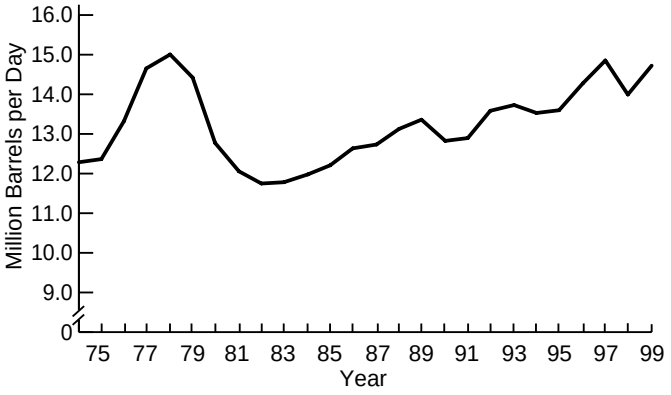


Source: Energy Information Administration, *Petroleum Supply Annual*, DOE/EIA-0340 (various issues), and *Petroleum Supply Monthly*, DOE/EIA-0109 (various issues).

Refinery Operations

Inputs of crude oil declined from September's average as seasonal maintenance got underway at refineries. While crude oil **inputs** were down from September's daily average, they were the highest for October since 1997, averaging 14.7 million barrels per day (Figure H9). The estimated refinery **operable utilization rate** (gross input divided by operable capacity) was higher than this time last year, averaging 90.5 percent of capacity compared to 89.6 percent a year ago.

Figure H9. Year-to-Year October Comparisons for Crude Oil Inputs, 1974-1999



Source: Energy Information Administration, *Petroleum Supply Annual*, DOE/EIA-0340 (various issues), and *Petroleum Supply Monthly*, DOE/EIA-0109 (various issues).

[9]"Short-Term Energy Outlook", *Energy Information Administration*, November 1999, accessible via the Internet at http://.www.eia.doe.gov/.