2. What Happened to Heating Fuel Prices in the Winter of 1999-2000?

Introduction

In mid-January 2000, a combination of adverse weather conditions, low heating oil inventories, natural gas capacity and delivery constraints in some areas of the Northeast, and distillate delivery and production problems created rapid price increases in the distillate fuel oil (heating oil and diesel fuel oil)[10] and natural gas markets in the Northeast. When spot prices for distillate fuel oil in the Northeast surged, retail prices for heating oil and diesel fuel quickly rose in response.[11] This is not the first time heating oil prices have spiked in the Northeast. There were similar spikes in December 1989 and to a lesser degree in January 1994 (see Appendix C).

Historically, distillate fuel oil prices have risen sharply only during the high-demand winter months. In each case, including the experience in January and February 2000, cold weather increased demand unexpectedly and hindered the arrival of new supply, as frozen rivers and, in some cases, high winds slowed the docking and unloading of barges and tankers. Stocks (inventories) were drawn down rapidly because the demand for distillate ful oil exceeded new supply. Because space heating in the Northeast depends heavily on distillate fuel oil from imports and from the Gulf Coast, which can take weeks to arrive, resolution of market imbalances is not immediate. Distillate fuel oil stocks approached very low levels in January and February, and wholesale buyers, concerned about supply availability, rapidly bid up the price of the new supplies that did arrive, until warmer weather and increased new supply relieved the market imbalance and prices fell.

Distillate fuel oil and natural gas prices are both affected by cold weather. Both fuels are used for heating, and increases in demand for either fuel can cause prices to rise during the winter season. Furthermore, there is some interplay between the use of the two fuels. Some large industrial, commercial, and electric utility customers with dual-fuel burning capability use distillate fuel oil as an alternate or peaking fuel (see Chapter 5). Some customers who normally use natural gas switch to distillate fuel oil either because they have interruptible contracts that require them to stop using natural gas under certain terms or conditions (such as low temperatures) or because they find distillate fuel oil economically more attractive.[12] As a result, distillate fuel oil is an important peak-demand fuel in the Northeast for residential as well as the other end-use sectors.

Distillate Market Factors Leading to the Price Spike

One of the key factors setting the stage for the distillate price spike in January and February 2000 was the very low level of distillate stocks at the beginning of January. With little inventory to absorb sudden demand or supply changes, the chances for a distillate price spike increased with cold weather.

Crude Oil and Product Stocks Declined in 1999

The low distillate stock situation at the beginning of January 2000 began with events in the crude oil market. Crude prices have changed significantly over the past year, rising by more than $20 per barrel[13] (48 cents per gallon) from under $12 per barrel in mid-February 1999 to peak at about $34 per barrel in early March 2000, before falling back to around $25 per barrel in early April 2000. This price increase was the result of a shift in the world balance between production and demand. In 1998, world oil production exceeded demand, petroleum inventories rose to very high levels, and the price of crude oil collapsed (Figure 1). In response to the low price, OPEC and several other crude oil exporting countries began cutting production. At the same time,

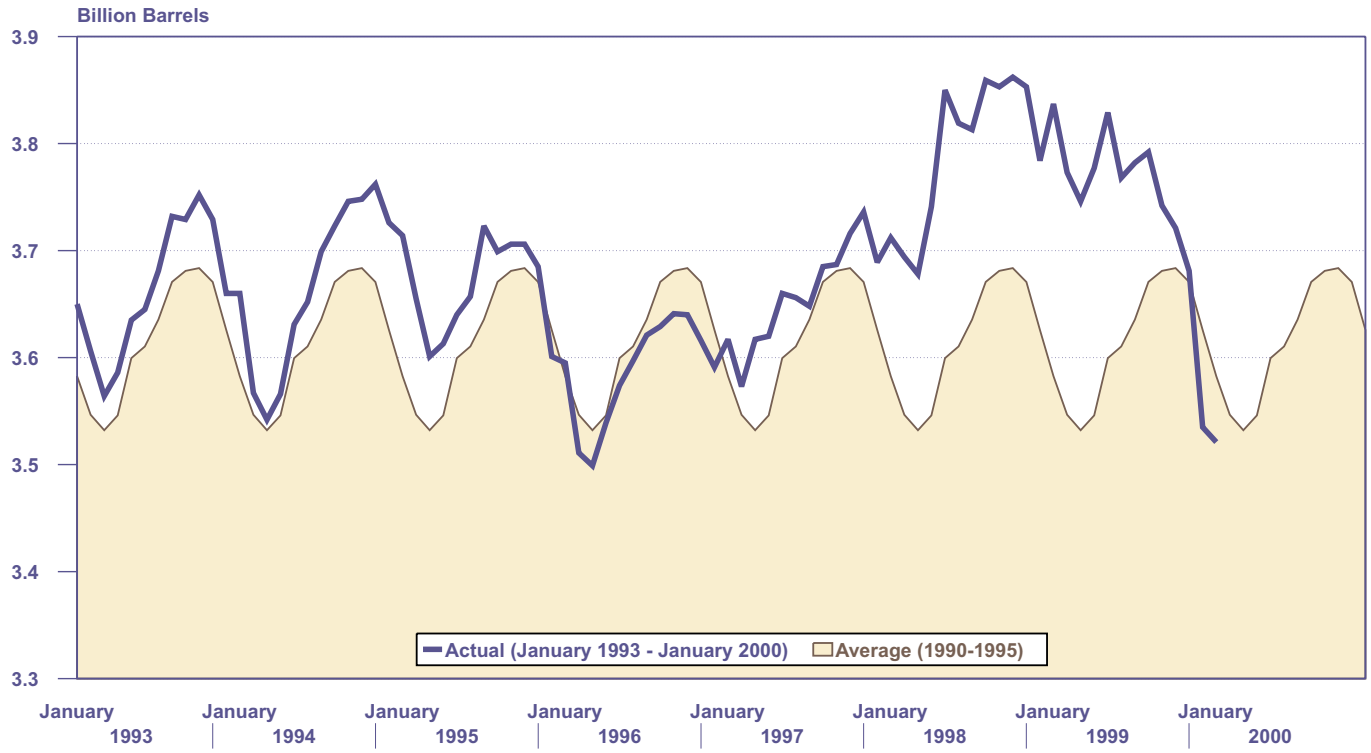
[10]Distillate fuel oil is a general classification for one of the petroleum fractions produced from crude oil. It is used primarily for space heating, on- and off-highway diesel engine fuel, and electricity generation.

[11]Diesel fuel and home heating oil prices usually move together. They are essentially the same product, except for sulfur content. On-highway diesel fuel, by statutory mandate, has a lower sulfur content than heating oil. In some regions, it is more economical for refiners to distribute one product, and so low-sulfur diesel fuel is used for both on-highway uses, where it is required, and off-highway uses, where it is not. High-sulfur distillate (heating oil) cannot be used on-highway, and it is dyed to distinguish it. Furthermore, on-highway diesel fuel is taxed at both the Federal and State levels.

[12]Not all large customers with fuel-switching capability leave natural gas fuel to use distillate. Some power plants, especially in New England, that use natural gas as baseload or intermediate load fuel will switch to residual fuel oil when the economics are favorable.

[13]West Texas Intermediate (WTI) spot price.

Figure 1. OECD Petroleum Inventories, 1993-2000



Note: OECD = Organization for Economic Cooperation and Development.
Source: Energy Information Administration, *International Petroleum Monthly*, DOE/EIA-0520 (Washington, DC, various issues), Table 1.5.

Asian economies continued to recover from the recession of 1997-1998, and world demand grew fairly rapidly. The result was that world oil demand exceeded production and, consequently, crude oil and product inventories were used to meet the demand growth.

During 1999, crude oil prices rose faster than petroleum product prices, reducing refining margins. Higher crude oil prices and the squeeze on product margins encouraged refiners to constrain crude oil purchases, restrict refined product output, and draw down crude oil and product inventories. World crude oil and product inventory levels, which had been particularly high since 1998, sank to very low levels by December 1999. U.S. distillate stocks were no exception to this pattern of decline.

U.S. Distillate Stocks Fell Below Normal in December 1999

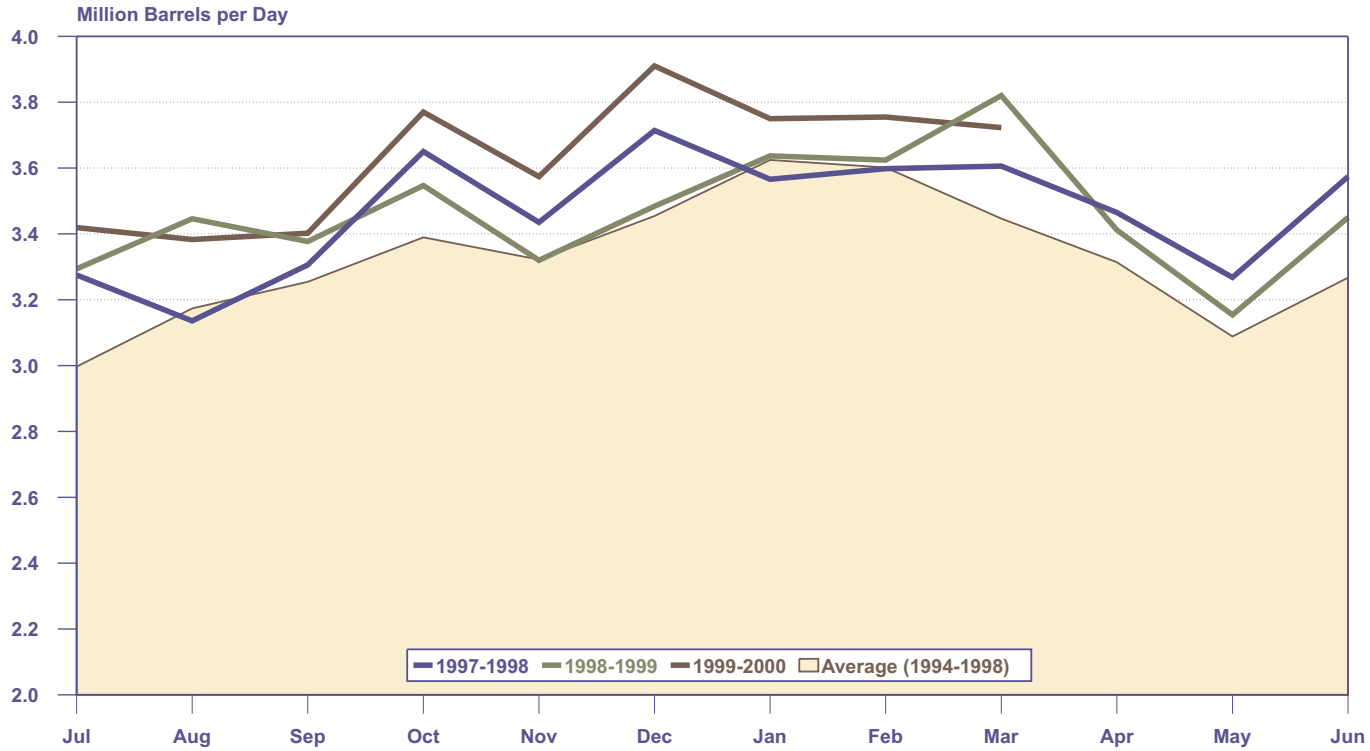
U.S. distillate fuel oil stocks began the heating season above the midpoint of the normal range, but they were not built as usual and ended November below the midpoint of the normal range. Demand for distillate fuel oil in December 1999 was high, despite warmer weather than normal: 10 percent warmer than normal nationally and 11 percent warmer in the Northeast (Figure 2). Distillate stocks fell rapidly in December, in part because low refinery margins constrained refinery production to approximately the previous year's level (Figure 3), and imports were at an average level.

Stocks of high-sulfur distillate fuel (home heating oil) in the Northeast drove the U.S. distillate stock pattern. Northeast heating oil stocks[14] were high throughout 1998 and most of 1999, the remnant of the warm 1998-1999 winter. Although the seasonal stock build did not follow the historical path, inventories were well above the recent historical levels in New England even into November, and in the Central Atlantic region[15] they were still solidly in the normal range (Figures 4 and 5). However, heating oil stocks in New England fell by more than 35 percent, from 11.6 million barrels in early December to less than 7.5 million barrels in early January. Similarly, in the Central Atlantic region, heating oil stocks declined by 24 percent, from 24.4 million barrels in early December to 18.6 million barrels in early January. The pace of the drawdown through the rapid price increases merits highlighting, particularly in New England, where stocks fell from more than 11 million barrels in early December to less than 3 million barrels by early February. In the Central Atlantic the level of stocks was much higher and the pace of decline was not as

[14]The terms "stocks" and "inventories" are used interchangeably in this report.

[15]The Central Atlantic region is a petroleum supply region designation that includes New York, New Jersey, Pennsylvania, Delaware, Maryland, and Washington, DC. It is also known as Petroleum Administration for Defense District 1b (PADD 1b).

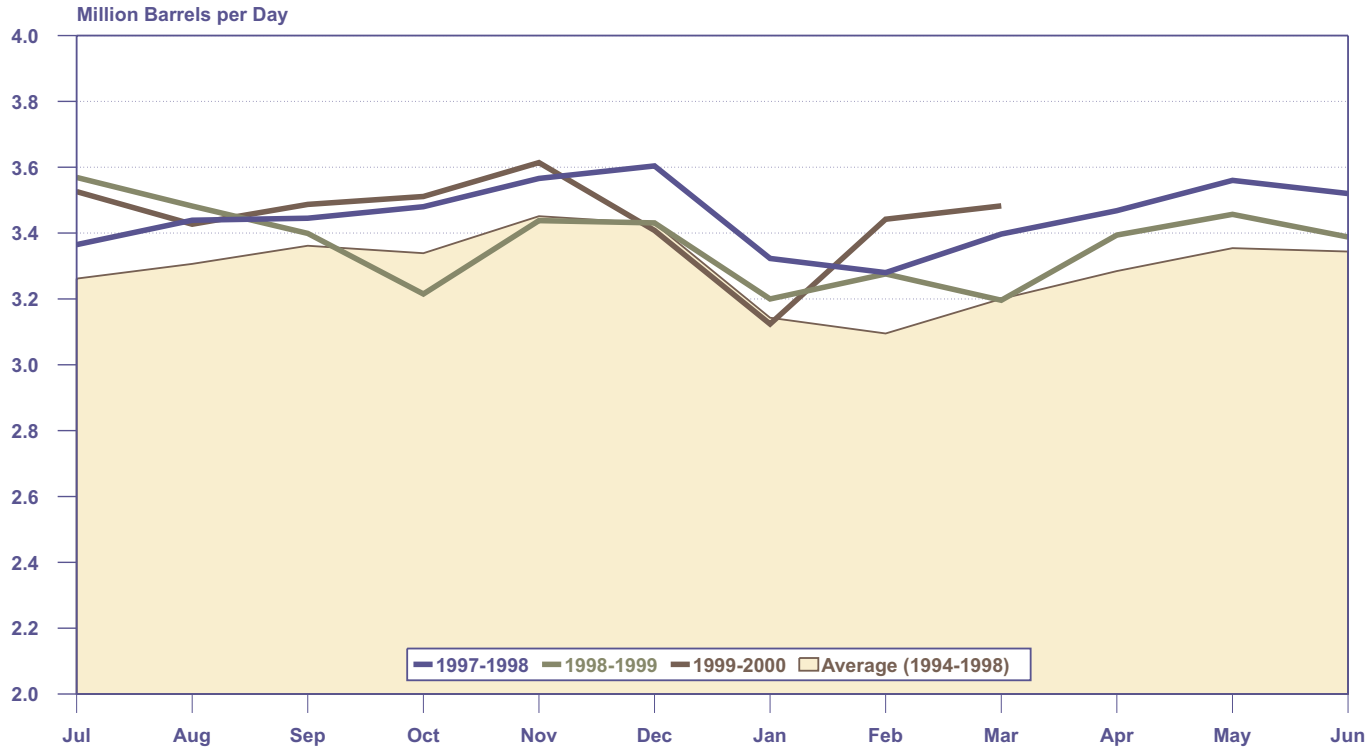
Figure 2. U.S. Distillate Product Supplied by Month, 1994-2000



Note: The "Product Supplied" line in the graph provides a proxy measure of consumption.

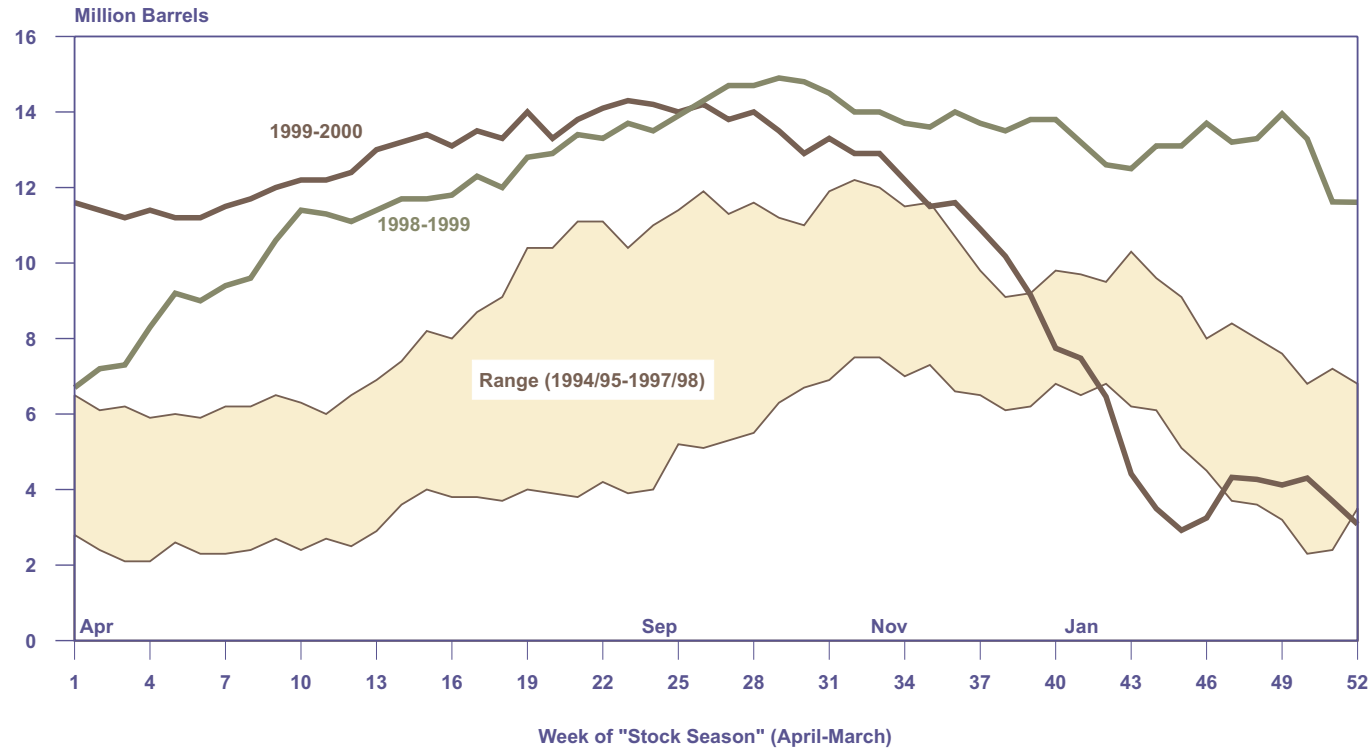
Source: Energy Information Administration, *Petroleum Supply Monthly*, DOE/EIA-0109 (Washington, DC, various issues), Table 2; and *Weekly Petroleum Status Report*, DOE/EIA-0208(2000-12) (Washington, DC, March 24, 2000), Table 10.

Figure 3. U.S. Distillate Production by Month, 1994-2000



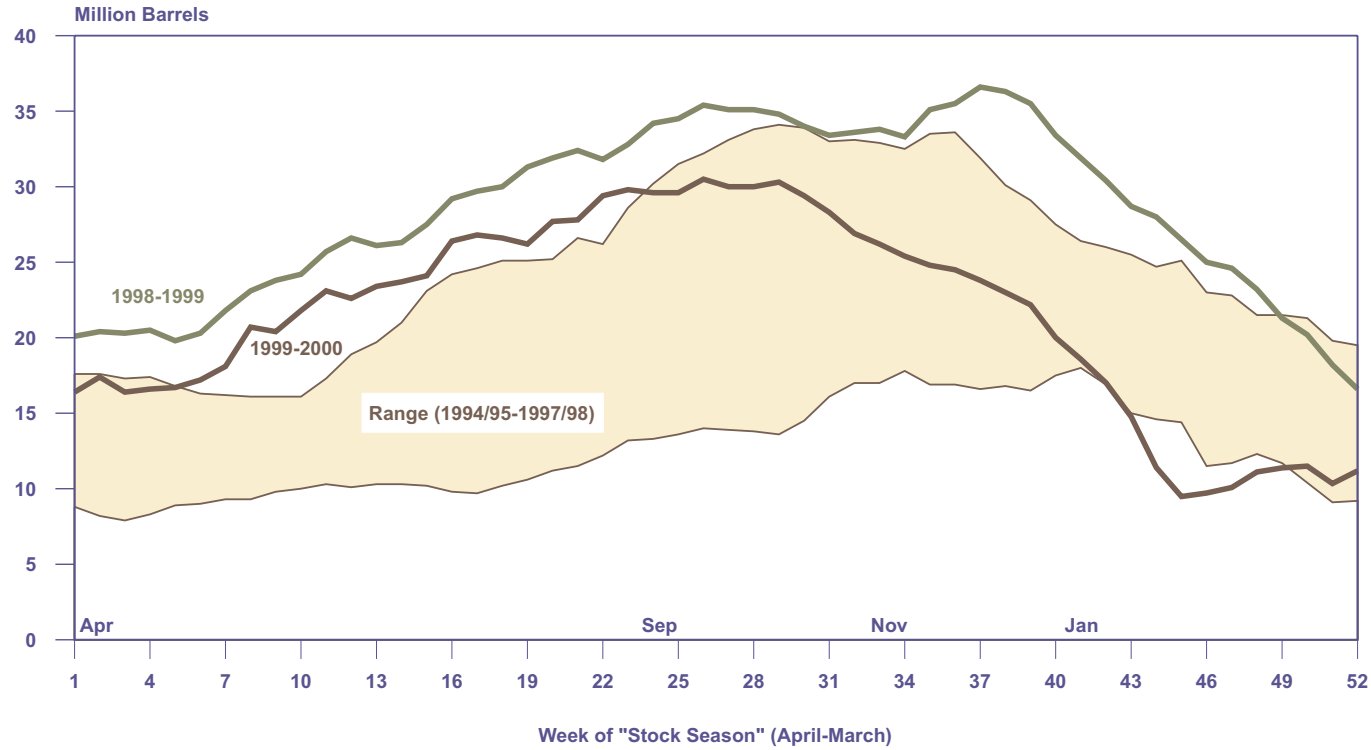
Source: Energy Information Administration, *Petroleum Supply Monthly*, DOE/EIA-0109 (Washington, DC, various issues), Table 2; and *Weekly Petroleum Status Report*, DOE/EIA-0208(2000-12) (Washington, DC, March 24, 2000), Table 10.

Figure 4. Stocks of High-Sulfur Distillate Fuel Oil (Heating Oil) in New England (PADD 1a), 1994-2000



Note: The range represents the minimum and maximum stock levels by week between April 1994 and the end of March 1998.
Source: Energy Information Administration, *Weekly Petroleum Status Report*, DOE/EIA-0208 (Washington, DC, various issues), Table 10.

Figure 5. Stocks of High-Sulfur Distillate Fuel Oil (Heating Oil) in the Central Atlantic (PADD 1b), 1994-2000



Note: The range represents the minimum and maximum stock levels by week between April 1994 and the end of March 1998.
Source: Energy Information Administration, *Weekly Petroleum Status Report*, DOE/EIA-0208 (Washington, DC, various issues), Table 10.

Prices and Stocks in December 1999

At first glance, it is surprising that prices did not respond immediately to the large stock drawdown in December that moved inventories from normal to below normal. Typically, when distillate fuel oil stocks drop to low levels during the winter season, the spread between distillate fuel oil and crude oil prices increases. This was not the case in 1999. Historically, the spread between the New York Harbor spot price for heating oil and the price for West Texas Intermediate crude oil has averaged about 8 cents per gallon during December. In December 1999, even with low stock levels, the spread averaged only about 5 cents per gallon—about the same as it was in November.

Several factors may have contributed to the weak price response. First, after the December stock draw, stock levels did not hit the very low levels seen after similar historical periods when cold weather resulted in large stock draws and high prices. For example, at the end of December 1989 when there was a large price spike, stocks ended the month at 105.7 million barrels, well below the 124.1 million barrels at the end of December 1999. Second, year 2000 (Y2K) issues may have moderated the price response. The market may have believed the trade press articles that attributed much of the unusual drawdown to stocks being shifted from the primary level (e.g., bulk terminals and refineries) to the secondary level (distributor and retail storage). Third, the warm weather may also have lulled consumers into not worrying about supply. Finally, and related to the third point, there was no incentive for producers to buy expensive crude oil in order to build up distillate product stocks, given that consumption and prices were expected to decline.

dramatic, as heating oil stocks fell from almost 30 million barrels at the beginning of November to less than 10 million barrels by early February. As at the national level, distillate demand on the East Coast was very high during December 1999—19 percent higher than in December 1998 and 36 percent higher than in the previous month.

The reasons for the large increase in demand in December 1999 are not clear. Cooler weather than in December 1998—8.4 percent more heating degree days in New England and 10.6 percent more in the Mid-Atlantic—contributed to but did not entirely explain the large increases in distillate fuel oil consumption in December 1999. In December, some energy analysts attributed the large demand to year 2000 (Y2K) actions (i.e., stockpiling for unexpected contingencies).[16] EIA measures demand by the volume of product that leaves the primary distribution system. This product is either stored at small bulk plants (secondary storage), stored by retailers (secondary storage) or end users (tertiary storage), or consumed. One Y2K hypothesis was that much of the surprisingly high December volume was being shifted from primary to secondary or tertiary stocks, which were not being consumed. According to this hypothesis, the higher-than-expected demand in December would be countered by lower-than-expected demand in January when the shifted stocks were consumed. This theory proved to be incorrect, because end users did not appear to stockpile distillate fuel oil substantially. A second Y2K theory attributed some of the unexpected increase to utilities and other large natural gas users switching to oil in order to be off the natural gas pipelines during the Y2K rollover. This theory is consistent with the aggregate data, but EIA does not have detailed data to confirm it. Whatever the cause, the low stocks going into January left the Northeast vulnerable to the price spike that occurred when colder than normal weather brought rising demand and delivery problems.

Natural Gas Market Factors Contributing to Distillate Fuel Oil Price Increases

Going into the winter heating season of 1999-2000, both heating oil and natural gas supplies were relatively plentiful. Overall inventories in underground working gas storage were 3.0 trillion cubic feet, about 1 percent above the average for the past 5 years, although slightly below the record levels of the previous year.[17] The supply outlook for the Northeast was strong with the expected opening of the Maritimes and Northeast Pipeline, which established a link between New England markets and the Sable Offshore Energy Project off the coast of Newfoundland. The pipeline began gas flow in early 2000, but operational difficulties limited the flow to below anticipated levels. Only 36 million cubic feet per day was making its way into U.S. markets before an operational problem forced a temporary shutdown.[18] The pipeline was first forced to shut down on January 7, 2000, due to hydrate formation in a subsea line (essentially, ice sludge blockage). The second shutdown

[16]Cambridge Energy Research Associates, Inc., "Ringing in the New Year with Backwardation and Y2K," *CERA Alert* (December 14, 1999).

[17]The American Gas Association (AGA) considers full gas storage capacity to be roughly 3.4 trillion cubic feet.

[18]By November 2000, the project is expected to deliver up to 400 million cubic feet per day to the Northeast—equivalent to about 70,000 barrels of heating oil or 65,000 barrels of residual fuel oil per day.

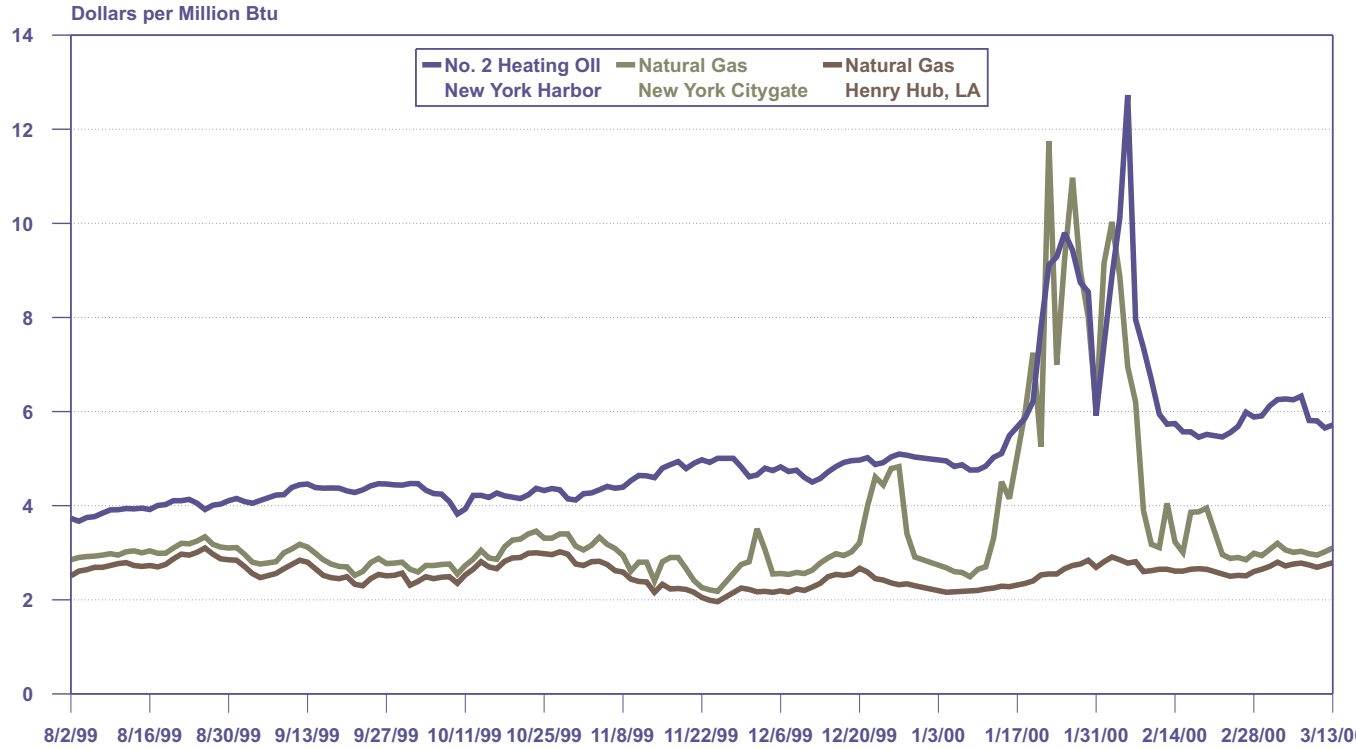
occurred in mid-January, when the gas processing plant developed a gas leak and was again shut down for repair. Early gas flow reached about 110 million cubic feet per day, of which 36 million cubic feet per day entered U.S. markets.[19] By early March, the gas flow was about 300 million cubic feet per day to markets in the United States. The Sable Island project is expected to reach flows of 450 million cubic feet per day by summer 2000, the majority of which is expected to serve U.S. markets.[20]

Although the availability of gas supplies was comparable to that of a year earlier, prices on both the spot and futures markets[21] were significantly higher, in part because the prices of competing fuels were higher and also because higher consumption levels were expected if more normal weather patterns developed. In October 1999, gas wellhead and spot market prices were 35 percent and 60 percent higher, respectively, than in October 1998.

With the first wave of cold weather moving into the Northeast area in late December, spot prices for gas delivery at the New York citygate started to show substantial increases.[22] In early December, delivered prices were generally below $3.00 per million Btu. On December 20 and 21, the price jumped by $0.23 and $0.86, respectively, to $4.11 per million Btu, and ranged between $3.55 and $4.87 through December 29 (Figure 6). By December 30 the price had dropped to $3.07 per million Btu, and trade press accounts noted that demand pressures had been reduced as utilities and other firms (primarily, industrial gas customers) shifted from natural gas consumption to oil for the Y2K rollover. While spot and futures prices generally trended upward during the first two months of year 2000, the most dramatic price swings were again seen at the New York citygate as the most extreme weather conditions of the winter reached the Northeast in mid-January. The New York citygate price rose from $2.65 per million Btu on January 11 to $6.34 on January 18. During the month from January 13 through February 13, citygate gas traded at prices above $6 per million Btu on 21 days.

In late 1999 and early 2000, gas pipeline capacity into the Northeast was being used at heavy levels on segments

Figure 6. Spot Prices for Heating Oil and Natural Gas, August 1999 - March 2000



Sources: Reuters Daily No. 2 Heating Oil, New York Harbor (converted to dollars per million Btu using 5.825 million Btu per barrel), New York City Gate Natural Gas Prices, and Henry Hub Louisiana Natural Gas Prices.

[19] *NGI's Daily Gas Price Index* (January 18, 2000), p. 3.

[20] *NGI's Daily Gas Price Index* (March 9, 2000).

[21] Spot prices, also known as "cash prices," are current market prices for immediate deliveries of the product. Futures prices, also known as "forward prices," are the prices of the commodity for delivery at a specified time and location in the future.

[22] The prices for gas traded at Transco Zone 6 are used as indicators of spot prices for the New York citygate. See *Gas Daily* (Arlington, VA: Financial Times).

serving the Northeast region from New York up through New England. Pipelines carrying Canadian supplies to New England also experienced similar heavy usage. Several pipeline companies indicated that they had reached new peak levels for service. Officials from Transco, a major pipeline into the region, testified on February 24, 2000, that they had no interruptible capacity available on their system from October 20 to the date of the testimony.[23] All requirements under firm service contracts were met, but some customers with interruptible service contracts did have their service interrupted. The new Maritime and Northeast Pipeline had been opened, but operational difficulties kept deliveries low. The limited availability of additional gas supplies above firm service volumes in the Northeast market had a significant impact on citygate spot prices.

The Northeast region, as well as most regions in the country, has seen dramatic increases in natural gas service over the past 10 years. But a very important operational characteristic of this regional market relative to many other major natural-gas-consuming regions is that the bulk of the supply arrives through a single supply corridor, or gateway, from the Southwest through Pennsylvania and New Jersey. Additionally, the Northeast markets are distant from the major supply areas of the U.S. Southwest and western Canada (Figure 7). Storage sites for natural gas are concentrated in western Pennsylvania, New York, and eastern Ohio, again requiring the gas to move an additional substantial distance to the market (Figure 8). Thus, the supply flexibility is more limited than in regions such as the area around Chicago that are both closer to the major producing regions and have multi-directional access to storage and other pipeline supplies. Gas supply difficulties in the Northeast are expected to abate once the Canadian Alliance Pipeline begins to deliver an expected 1.2 billion cubic feet of gas per year in 2001 to the Chicago area, much of which will be transported further into New England and the Middle Atlantic.

The January/February 2000 Price Spike

Northeast Heating Oil and Natural Gas Spot Prices Spiked as Low Stocks Fell Further

In mid-January, as a brief cold weather snap descended on the Northeast, New York Harbor spot heating oil prices soared from about 76 cents per gallon on January 14 to a peak of $1.77 on February 4 before falling back. New York citygate natural gas prices rose from about $2.65 per million Btu on January 11 to a peak of $11.75 on January 21 (see Figure 6). Yet, while heating fuel oil and natural gas prices rose rapidly in the Northeast, natural gas prices at Henry Hub on the Gulf Coast and heating oil prices on the Gulf Coast rose very little, indicating the regional nature of the situation.

In response to the rise in spot and wholesale prices, residential heating oil and retail diesel fuel prices (i.e., distillate fuel oil prices) in the New England and Central Atlantic regions[24] turned sharply upward in the third week of January (Figures 9 and 10). In the 3 weeks between January 17 and February 7, New England residential heating oil prices rose by 79 cents per gallon (66 percent), from $1.18 to $1.97. During the same 3-week period, New England retail diesel fuel prices rose by 68 cents per gallon (47 percent), from $1.44 to a peak of $2.12 per gallon.

Outside the Northeast, retail price increases for residential heating oil were relatively mild. In the Midwest, for example, residential prices rose by only 10 cents per gallon during the same 3-week period. The spike in the Northeast occurred as demand increased suddenly well above supply arrivals, driving already low distillate stocks to levels so low that some terminals reported runouts.[25]

Weather Conditions Drove January Demand

During the week ending January 22, temperatures in New England and the Middle Atlantic shifted from 15 percent and 17 percent warmer than normal, respectively, to 24 percent and 22 percent colder than normal. The rapid change in weather patterns increased weekly heating requirements for both distillate fuel oil and natural gas by about 40 percent.

Temperature declines during the winter affect heating oil demand in a number of ways:

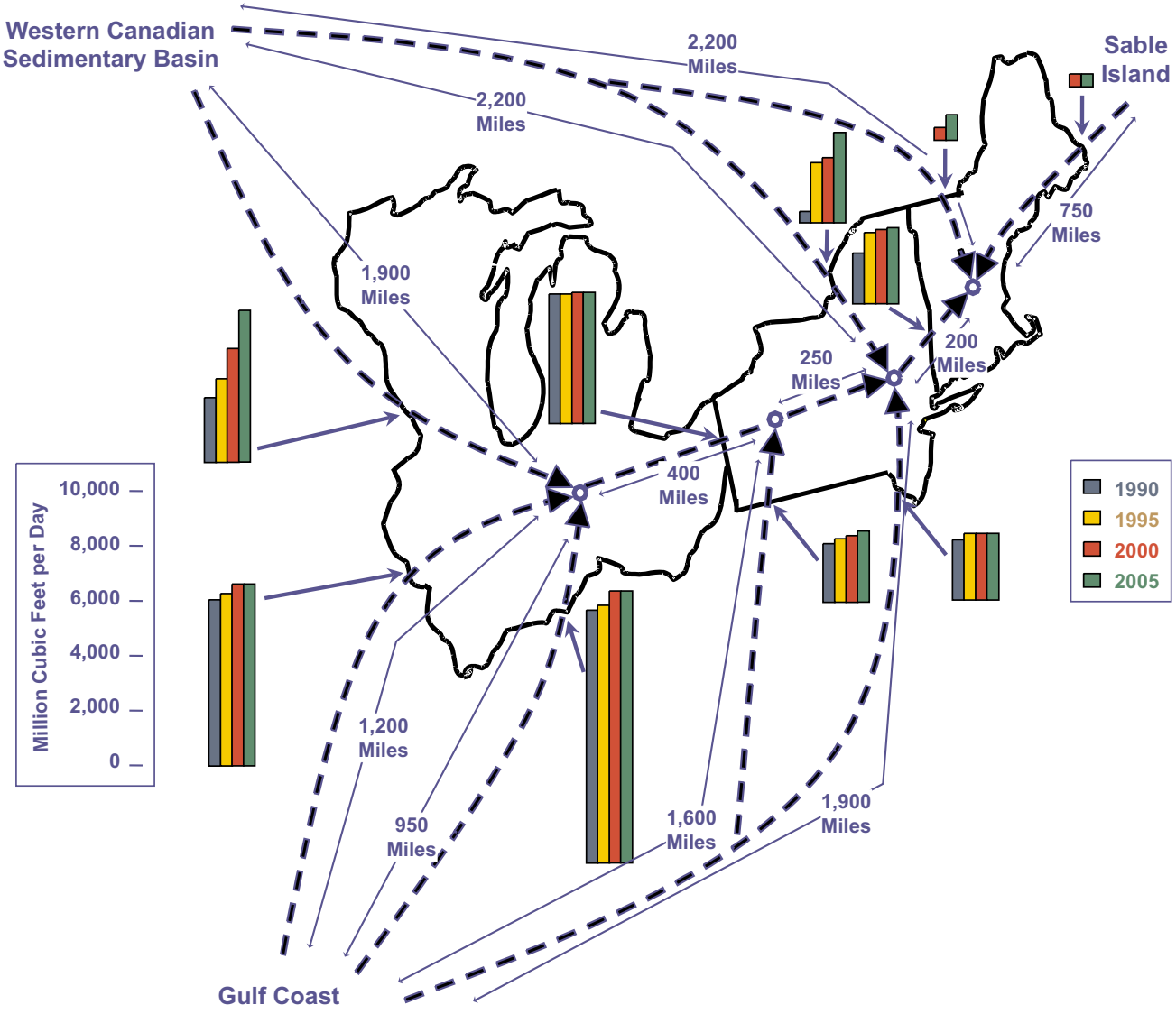
- Space heating demand increases.
- Electricity peaking demand increases, and power generators must often turn to distillate to meet the new peak needs when natural gas is not an alternative.
- Fuel switching from natural gas to distillate occurs among some large customers with dual-fuel

[23]Testimony of Gary D. Lauderdale on behalf of Transcontinental Gas Pipeline Corporation before the Senate Committee on Energy and Natural Resources, February 24, 2000.

[24]New England includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. The Central Atlantic region includes Delaware, the District of Columbia, Maryland, and the Mid-Atlantic Census Division, which is composed of New Jersey, New York, and Pennsylvania (see map and discussion in Chapter 1).

[25]S. McCaffrey, "Heating Oil Companies Run Out in Some Areas," *Albany Times Union* (February 8, 2000).

Figure 7. Natural Gas Pipeline Capacity Feeding into the Northeast, with Mileage from Major Supply Sources to Regional Distribution Centers



Note: The 2005 values reflect additions that were deemed likely to occur based on ongoing and announced projects.
Source: Energy Information Administration, Office of Integrated Analysis and Forecasting and Office of Oil and Gas.

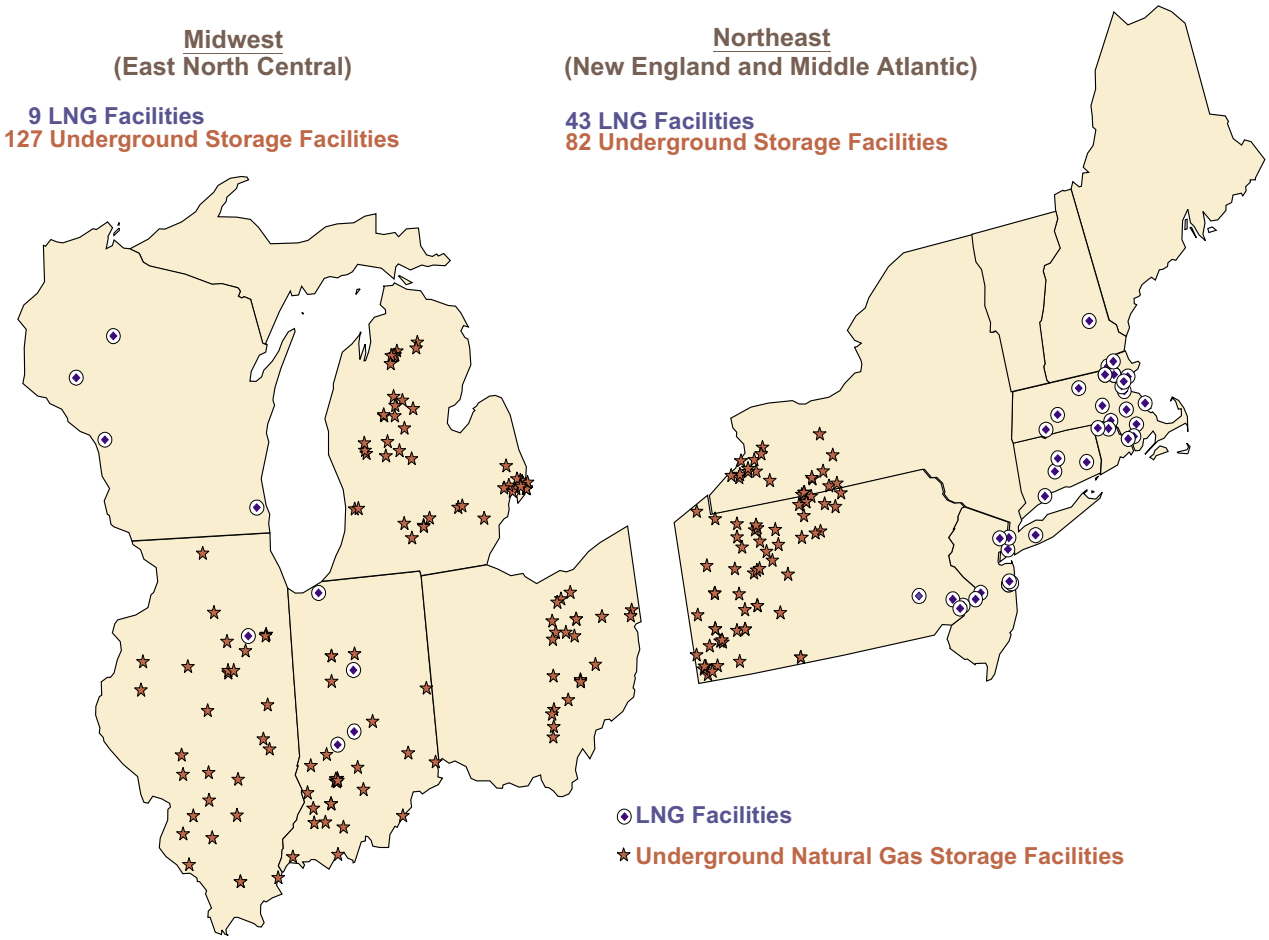
capabilities—some by choice if distillate is cheaper, and some by the terms of their natural gas contracts.

U.S. demand for distillate fuel oil for all sectors increased by 22 percent in the second half of January 2000 relative to the first half of the month. Although regional demand data are not available on a weekly basis, East Coast demand would have been a substantial contributor to the increase, because it represents the majority of the U.S. heating oil market (see Chapter 3). East Coast distillate stock draw during these two weeks accounted for more than three-fourths of the Nation's stock draw. Yet the total January demand for distillate fuel oil was not unusually high, because the first half of the month had been relatively warm. As a result, the imbalance between supply and demand at the end of the month is obscured in the aggregated monthly data.

The extreme cold weather, coupled with rising natural gas spot prices in the Northeast during January and February indicated that natural gas customers with non-firm contracts probably were either switching voluntarily or being switched contractually from gas to oil to assure adequate gas supplies to firm contract customers, such as the residential market. The trade press reported that utilities, along with industrial and commercial users, were buying distillate for both peaking power and to substitute for natural gas supplies, as is frequently the case during high demand periods.[26] Although EIA has not independently confirmed it, two

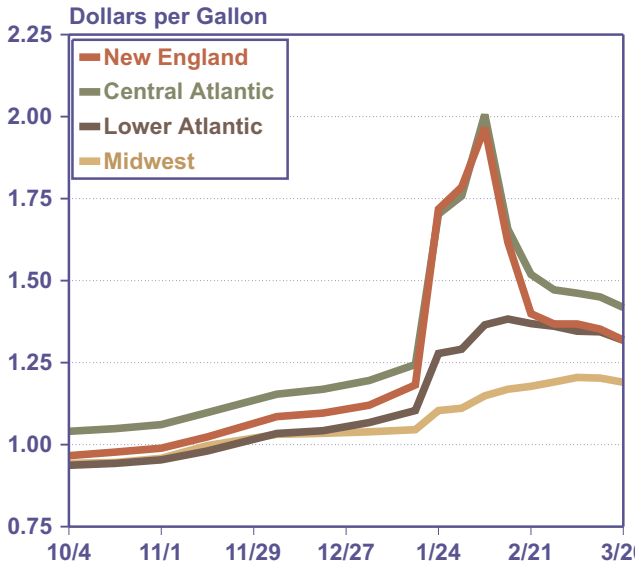
[26]J.P. Hamilton and M. Pittman, "Utility Contracts Exacerbate N.Y. Heating Oil Shortage," *Bloomberg Newsroom* (January 26, 2000).

Figure 8. Natural Gas Storage Sites in the Northeast



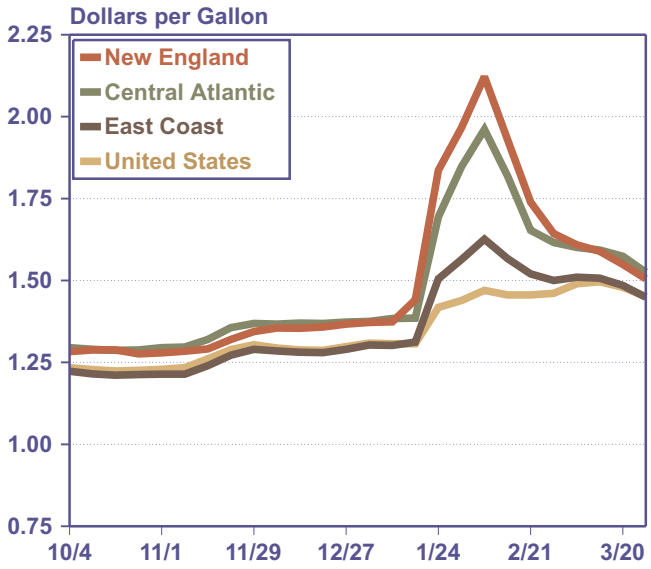
Note: See Chapter 4 of this report for more information on LNG storage.
Source: See Table 8 of this report.

Figure 9. Retail Residential Heating Oil Prices, Winter 1999/2000



Source: Energy Information Administration, *Weekly Petroleum Status Report*, DOE/EIA-0208(2000-12) (Washington, DC, March 24, 2000), Table C3, based on data collected by State energy offices.

Figure 10. Retail On-Highway Diesel Prices, Winter 1999/2000



Source: Energy Information Administration, *Weekly Petroleum Status Report*, DOE/EIA-0208(2000-12) (Washington, DC, March 24, 2000), Table 18.

sources in the trade press indicated that perhaps as much as 100,000 barrels per day may have been added to distillate fuel oil demand during the second half of January through early February as a result of fuel switching.[27] This represents about 10 percent of the January 1999 demand for high-sulfur distillate oil on the East Coast (992,000 barrels per day)

The Supply Situation Deteriorated While Demand Grew

During the winter months, the Northeast depends on distillate fuel oil supply from nearby East Coast refineries and from distant sources such as the Gulf Coast and imports from other countries. It also depends on regional inventories (stocks), which are the closest source of supply to the end-use market and the first source of supply used when demand exceeds ongoing supply arrivals (see Chapter 5). If inventories are low and dropping when demand exceeds new supplies, prices usually rise rapidly. The high prices stimulate an increase in new supply, but because of the region's dependence on distant supply sources, increases in new supply can take several weeks or more to arrive, leaving prices elevated in the interim.

As noted above, low stocks of distillate fuel oil set the stage for the January / February 2000 price spike in the Northeast spot market for distillate fuel oil. Weekly data indicate that in the 4-week period ending February 4, 2000, East Coast distillate stocks fell by almost 20 million barrels (41 percent), and outages occurred at some terminals. During the 4-week period, almost 700,000 barrels per day of demand was met with stocks (inventories). At the same time, the cold weather not only increased demand but also caused distillate fuel oil delivery problems, with frozen rivers and high winds along the New York, Connecticut, and Massachusetts coastlines hindering the arrival of new supplies by water into New York and Boston harbors.

Finally, refinery outages at the end of the week of January 21 resulted in a temporary loss of new supply and sent even more buyers into the distillate market, which added upward pressure on market prices. When refiners cannot produce distillate fuel oil to meet their contracts, they enter the spot market to purchase the product from others. EIA data do not indicate the volumes involved, but during such tight market conditions any increase in buying volume would lead to higher prices. With the arrival of new supply falling behind demand, stocks dropping to very low levels, and buyers knowing that any substantial new supply must come from distant sources, prices were bid up quickly.

A Number of Events Eventually Corrected the Imbalance

The imbalance between distillate oil supply and demand was resolved in February 2000 with the arrival of new supply and a return to warmer weather, which moderated demand and lowered the volume of interruptions in gas service. New supply can come from East Coast refineries, Gulf Coast refineries, and imports. Ultimately, the largest increases in new supply came from imports attracted by the high prices.

EIA data on the U.S. heating oil and diesel transportation fuel markets (Table 1) illustrate the dynamics of the recovery. On a regional basis, EIA's weekly distillate data are limited to production and stocks; however, the weekly U.S. data reflect much of what was occurring in the Northeast. Virtually all U.S. imports during the period of interest were delivered to the Northeast, and the changes in U.S. distillate fuel oil stocks mainly reflect changes in East Coast stocks.

During the three weeks ending February 25, distillate fuel oil imports averaged 566,000 barrels per day. During the preceding four weeks, imports averaged only 162,000 barrels per day. Refinery production on the East Coast also increased. For the three weeks ending February 25, East Coast distillate production averaged 478,000 barrels per day, which was an increase of about 91,000 barrels per day (24 percent) over the preceding four weeks (although national distillate production rose by only 7 percent). U.S. distillate stocks, which had fallen from 124.1 million barrels at the end of December 1999 to 106.7 million barrels at the end of January 2000, finally leveled off by February 18 at 99.3 million barrels and increased slightly through the remainder of February as the increased imports and refinery production balanced out the now lower demand. Prices receded both in the spot markets and at the retail level, although high crude oil prices in March 2000 continued to keep home heating oil and diesel fuel prices high relative to the previous year.

What Will the Future Bring?

The distillate price spike that began in January 2000 was the result of both demand and supply factors: cold weather creating a surge in demand, and logistics problems that coincided with low stocks in the regional market. Such tight market situations with accompanying price spikes are not uncommon in commodity markets, but for distillate fuel, such price spikes have not happened often. December 1989 and January / February

[27] Information provided to EIA by several State offices (discussed in more detail in Chapter 4); and Petroleum Industry Research Foundation, *What Happened to Heating Oil* (New York, NY, 2000), p. 6.

Table 1. U.S. Distillate Fuel Oil Balance
(Thousand Barrels Per Day)

Week Ending	Product Supplied (Thousand Barrels per Day)	Production (Thousand Barrels per Day)	Imports (Thousand Barrels per Day)	Exports (Thousand Barrels per Day)	Stock Build (Draw) (Thousand Barrels per Day)	Stock Level (Thousand Barrels)
01/07/2000	3,007	3,341	252	157	429	122,700
01/14/2000	3,766	3,138	231	160	(557)	118,800
01/21/2000	4,364	3,198	152	157	(1,171)	110,600
01/28/2000	3,866	3,267	160	147	(586)	106,500
02/04/2000	4,192	3,259	105	158	(986)	99,600
02/11/2000	3,866	3,471	528	147	(14)	99,500
02/18/2000	3,716	3,392	452	157	(29)	99,300
02/25/2000	3,761	3,445	718	159	243	101,000
03/03/2000	3,386	3,577	200	148	243	102,700

Source: Energy Information Administration, *Weekly Petroleum Status Report*, DOE/EIA-0208 (Washington, DC, various issues), Table 10.

1994 are the only other instances in recent years. Although such spikes are short-lived, some residential users may be faced with financial hardships and even the fear of not being able to pay for fuel. Programs such as the Low Income Home Energy Assistance Program (LIHEAP) help low-income consumers of heating fuels during these infrequent and brief upheavals. If the market is left to function on its own, such spikes will likely occur in the future.

The remainder of this report focuses on the question of whether removing large customers from the distillate market will prevent or diminish the magnitude of price surges in the future. Large industrial, utility, and commercial customers represent incremental demand that can exacerbate price spikes. Two potential options are analyzed here: removing large fuel-switchable customers from the distillate fuel oil market completely during the winter heating season and moving some additional large-volume users of distillate fuel who currently do not have the capability to burn other fuels. To lay the groundwork for the discussion, the following chapters provide some background on how large customers in the Northeast use energy, why they choose one fuel over another, and how the energy infrastructure works to supply energy to large customers.