

EIA

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Note: The Henry Hub spot price is from the GAS DAILY and is the midpoint of their high and low price for a day. The West Texas Intermediate crude oil price, in dollars per barrel, is the "sell price" from the GAS DAILY, and is converted to \$MM Bitu using a conversion factor of 5.80 MM Bitu per barrel. The dates marked by vertical lines are the NYMEX near-month contract settlement dates.

Average Temperature for Four Major Gas Consuming Areas								
	Actual	Normal	Diff					
02/24	38	33	5					
02/25	44	33	11					
02/26	38	32	6					
02/27	32	33	-1					
02/28	26	34	-8					
03/01	31	35	-4					
03/02	36	36	0					

Average Temperature for Four Major Gas Consuming Metro Areas (Chicago, Kansas City, New York, and Pittsburgh)





Working Gas Volume as of 02/23/01						
BCF	% Full					
456	25					
161	32					
242	25					
859	26					
	ng Gas V s of 02/2 BCF 456 161 242 859					

After a relatively mild final weekend in February in many parts of the nation, an extensive, frigid airmass that had been developing in west-central Canada began pushing south and eastward on Monday, bringing colder temperatures to much of the nation's northern tier and Northeast regions right through the weekend. Spot prices in most markets showed modest increases, with spot gas at the Henry Hub up \$0.04 per MMBtu from the previous Friday's trading, ending the week at \$5.09. In the futures market, Monday's price drop of the NYMEX futures contract for March delivery on its final day of trading to a sub-\$5 finish (\$4.998 per MMBtu) was an interesting contrast to the Tuesday debut of April delivery as the near-month contract, which surged 18 cents from its final Monday price to settle at \$5.279. The April contract ended the week at \$5.270 per MMBtu. The spot price for West Texas Intermediate crude oil lost a dollar per barrel from Friday to Friday, but managed a cumulative gain of 45 cents per barrel in the last two days of trading, and ended the week at \$27.85 per barrel, or \$4.80 per MMBtu. The strong earthquake in Washington State on Wednesday had little effect on gas industry infrastructure in that area.

Storage: The 101 Bcf withdrawal estimated by the American Gas Association (AGA) for the week ended Friday, February 23, is the largest for this week of the year over the 8 years that AGA has published its estimates, and is one-third greater than the average for the preceding 5 years (75 Bcf). This drawdown put remaining inventories as estimated by EIA at 970 Bcf as of February 23–the first time storage has been below 1 trillion cubic feet (Tcf) since the end of March 1997. The East region's withdrawals of 81 Bcf were also the largest for this week over the 8-year history of the AGA data collection, and exceeded the preceding-5-year average by almost 41 percent. Despite dropping an additional 3.4 percentage points below the EIA-estimated 5-year (1995-99) average for this point in the year, the East region continues with the lowest relative difference below the 5-year average. Withdrawals in the West occurred at the second lowest rate yet this heating season, but that region's remaining stocks continue to be less than half of EIA's estimated 5-year average.

Spot Prices: Increased weather-driven demand and the general upward pressure of end-of-month balancing sent cash prices at most locations on a solid three-day upswing with cumulative gains through Wednesday ranging from 10 to 35 cents per MMBtu in most markets. Prices at many locations in southeast Texas were further supported by maintenance-related outages at at least two electricity generating units in the area-one nuclear-powered and one coal-fired. California, as usual, was a different story. PG&E citygate prices trended down through Wednesday as warming temperatures improved supply availability. On Thursday, prices spiked to as high as \$34 per MMBtu on SOCAL soon after El Paso announced it would shut down its Keystone processing plant in the Permian Basin for maintenance as shippers, still operating under the 90 percent daily-balancing requirement and scrambling to avoid the associated heavy price penalties, bid prices skyward. The spike rippled throughout the region, with prices jumping almost \$3 on PG&E to over \$11 per MMBtu and rising over \$3 at Malin to about \$10.28, with minor increases in both southwestern production basins. El Paso's subsequent announcement postponing the maintenance until the weekend kept prices high in southern CA on Friday, with prices on SOCAL and at Kern River rising another \$3.84 and \$4.57, respectively, to \$27.79 and \$17.57 per MMBtu. Elsewhere, prices sagged on Thursday and Friday, leaving most locations with modest gains of under a dime for the week. A sample of end-of-week prices includes: high-\$4s to around \$5 per MMBtu at many Texas locations, \$5.32 at Chicago citygates, and \$5.59 at New York citygates.

Futures Prices: Since becoming the near-month contract on January 30, the March contract lost \$1.099 per MMBtu, and is the first near-month contract to end a trading session below \$5 since the beginning of the heating season. The April contract opened as the near-month with surprising strength, buoyed in part by rising cash prices, and traded as high as \$5.385 during the day on Wednesday after release of AGA's relatively large withdrawal estimate before settling for the day at \$5.236 per MMBtu. By week's end, the April contract had managed to hold its ground, settling at \$5.270, influenced in part by the National Weather Service 6-10 day outlook for colder-than-normal temperatures for much of the nation.

Summary: A frigid Canadian airmass dropped temperatures and increased demand in many gas-consuming areas for most of the week, sending spot prices upward. The sub-\$5 closing price of the March contract is in contrast with the April contract's early staying power above \$5

Table 1. Underground Natural Gas Storage Estimates for 2000-2001 End-of-Season Inventories

Region	Working Gas in	Storage as of:	Projected Working Gas on 3/31/2001 Based on Site-by-Site Withdrawals During 1995-1999			Actual End-of-Heating Season Working Gas Inventories (1995-1999)	
	<u>11/01/2000</u>	<u>2/23/2001</u>	Average	Lowest	Highest	Average	Lowest ¹
East	1,826	603	351	251	411	576	341
West	312	99	76	63	89	202	151
Producing	636	234	197	148	282	361	195
Total	2,774	937	624	461	781	1,139	758

¹ The regional remaining inventories do not sum to the U.S. level because the year in which the lowest inventory occurs varies per region. Note: Regions are those established by the American Gas Association. Totals may not sum because of independent rounding.

Source: Energy Information Administration, Form EIA-191, "Underground Gas Storage Report"; and American Gas Association Weekly Storage Survey. The regional remaining inventories do not sum to the U.S. level because the year in which the lowest inventory occurs varies per region.

Since the start of the 2000-2001 heating season, the drawdown of underground storage inventories has been significantly greater than in any season since 1995-1996 when large withdrawals led to an end-of-season record-low working gas inventory of 758 billion cubic feet (Bcf).¹ On February 23, 2001, storage inventories were estimated to be about 937 Bcf. If monthly withdrawals continue at the average rate of the past 5 heating seasons, storage stocks would drop to 624 Bcf by March 31, 2001 (Table 1). If instead, withdrawals match the highest regional draws in February and March of the past 5 years, storage stocks could drop to 461 Bcf.

Even with higher-than-average withdrawal rates through the rest of the heating season, storage stocks are expected to be adequate to meet demand. Furthermore, demand for storage supplies from February 23 through the end of March may not be as high as during the previous 3 months. Weather forecasts for the remaining weeks of the heating season call for more moderate temperatures which would reduce seasonal demand and lessen withdrawal activities. According to American Gas Association (AGA) weekly estimates, cumulative withdrawals in 2001 have slowed somewhat as milder weather patterns have developed in many areas of the United States.²

Regionally, if withdrawals continue at the 5-year average rate through the rest of the heating season, working gas inventories in the 280 underground storage sites located in the East Consuming Region would fall to about 351 Bcf. This is 225 Bcf less than the region's 5-year average stock levels on March 31. The West Consuming Region (37 sites) would end the season with about 76 Bcf remaining, 126 Bcf below the 5-year average. The 98 underground storage facilities located in the Producing Region would end the season with 197 Bcf remaining, 164 Bcf below its 5-year average. It is estimated that remaining inventories will be near the record low levels reached at the end of the 1995-96 heating season in the East and Producing Region (Table 1). Levels in the West are already below the record low of 151 Bcf.

While end-of-season storage inventories this year likely will be lower than average, there is little likelihood that working gas levels for the regions will be completely drawn down. Nevertheless, working gas inventories at some sites could drop so far that operators would need to dip into base gas inventories to maintain operations.³ It is more likely, however, that operators would minimize operations at these sites and/or increase operations at other facilities where possible. Natural gas requirements to refill storage for the next heating season will probably near 10 Bcf per day (for 214 days) compared with an average injection level during April-through-October 2000 of 7.6 Bcf per day. This increase in demand, especially when natural gas prices are high, will likely have an impact upon the market over the next several months.

¹The information in this special feature is based on historical data and projections excerpted from the Energy Information Administration report, *Natural Gas Storage in the United States in 2001: A Current Assessment and Near-Term Outlook*, available on the EIA web site at http://www.eia.doe.gov/new.html.

²National Oceanic and Atmospheric Administration (NOAA) forecasts.

³At most underground storage sites, base gas inventories can be, within operational tolerances (specific to each site), tapped if needed. However, this is not true for aquifer-based storage sites, where dipping into base gas at any level can ruin the water drives associated with such sites.