

# Outlook for Natural Gas Demand for 2008-2009 Winter

## Energy Ventures Analysis, Inc. (EVA)

### Overview

Natural gas demand this winter is projected to increase 1.8 percent, or 212 BCF, as noted in Exhibit 1. The primary reason for this increase is the combination of continued strong growth within the electric sector and a recovery in gas demand within the industrial sector. Concerning the former gas-fired generation represents the marginal source of power and as a result continues to capture the majority of any increase in total electricity demand. In most instances, weather is a large factor in the changes in winter gas demand from one year to the next, however, if current weather projections for the forthcoming winter prove to be correct, the weather this winter will be very close to that for last winter (i.e., within 1.0 percent on a heating degree day (HDD) basis).

### Exhibit 1. Outlook For Winter Gas Demand

Sector	Coming Winter (2008/2009)		Last Winter (2007/2008)		Change	
	BCF	Average BCFD	BCF	Average BCFD	BCF	Average BCFD
Residential	3,515	23.3	3,476	22.9	39	0.4
Commercial	1,968	12.9	1,950	12.8	18	0.1
Industrial	3,116	20.6	3,071	20.2	45	0.4
Electric	2,434	16.1	2,339	15.4	95	0.7
Lease, Plant and Pipeline Fuel	840	5.6	825	5.4	15	0.2
<b>Total</b>	<b>11,873</b>	<b>78.5</b>	<b>11,661</b>	<b>76.7</b>	<b>212</b>	<b>1.8</b>

There are two significant areas of uncertainty associated with this forecast, namely the winter weather and the potential for fuel switching within the electric sector. With respect to the projected weather for this winter the current outlook is for a fairly normal winter season (i.e., 1.5 percent warmer than normal). However, in the event the weather is significantly colder than normal, as was the case in the winter of 2000/2001, gas demand would increase significantly, particularly in the residential and commercial sectors. The opposite would be true if the weather turns out to be much warmer than normal, which was the case in the winter of 2006/2007.

With respect to fuel switching in the electric sector, there is the possibility of gas-fired generation displacing some marginal coal-fired generation as a result of the combination of very high coal prices and modest gas prices. While this type of fuel switching previously has never occurred in the winter season, it has occurred during the fall and possibly could occur during at least part of this winter season, which would cause an increase in gas demand. Lastly, while a relatively small factor, there will be about a 0.7 percent decline in gas demand this winter over last winter since last winter included an additional day because 2008 was a leap year.

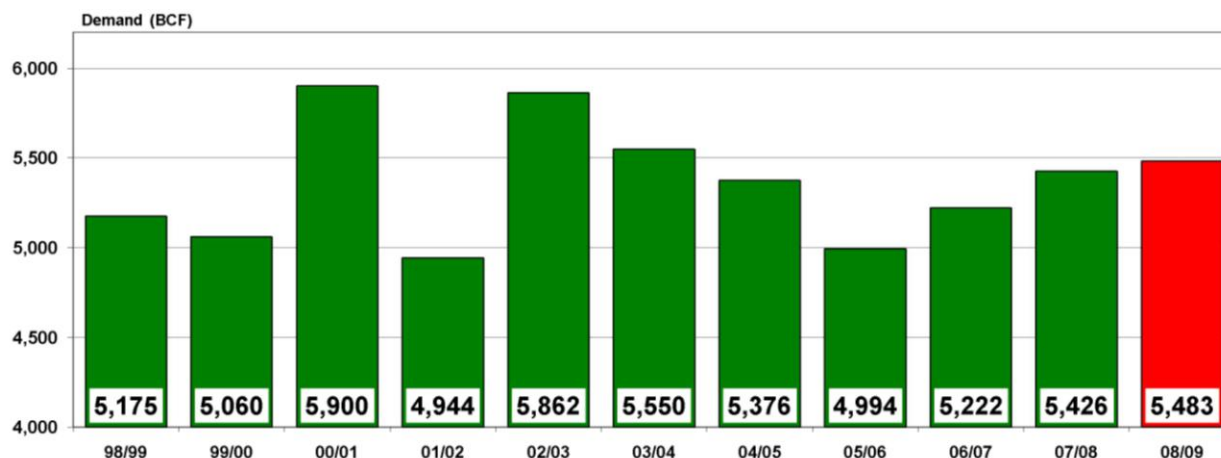
## Outlook For Demand

### ***Residential And Commercial Sectors***

While the residential and commercial sectors are the sectors mostly heavily impacted by a change in the winter weather, this likely will not be a significant factor for the forthcoming winter because the current outlook is for the winter weather to be very similar to that for the past winter.<sup>1</sup> Nevertheless, historically changes in the winter weather have been a major factor in determining the demand for those two sectors, as illustrated in Exhibit 2.

As noted in Exhibit 2, gas demand for the two sectors is expected to increase only 57 BCF, or 1.1 percent, this winter. For the residential sector the underlying growth due to the annual increases in the number of residential customers is being offset partially by continuing conservation (i.e. primarily price-induced conservation) within the sectors. For the most part, this conservation has occurred as a result of consumer responses to high gas prices (i.e., behavioral), although there are indications of some structural conservation, as a result of the installation of additional insulation and remodeling of homes that includes installing double and triple pane windows. While this structural conservation is permanent, it is more difficult to judge the degree of permanence for behavioral conservation (e.g., wearing a sweater and adjusting the heating thermostat to a lower level). However, there is some indication that this behavioral conservation still may be growing and some of it could be permanent. Empirical evidence of the combination of this behavioral and structural conservation was evident last winter, as illustrated in Exhibit 3, which indicates

**Exhibit 2. Comparison Of Winter Gas Demand For Residential And Commercial Sectors**



Change in HDD from Normal	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09
	-7%	-11%	10%	-12%	2.8%	-2.7%	-3.1%	-6.6%	-6.6%	-1.1%	-1.5%

Note: The winter period is November through March. Winter 07/08 data is estimated.  
Source: EIA.

<sup>1</sup> The HDD for last winter were 3,572, while the current projections for the forthcoming winter are 3,534. This is a 1.0 percent difference.

that even though the weather was colder than the previous winter, demand actually declined. Similar results exist for (1) February 2006 versus February 2005 and (2) November and December 2004 versus the same period for 2003.

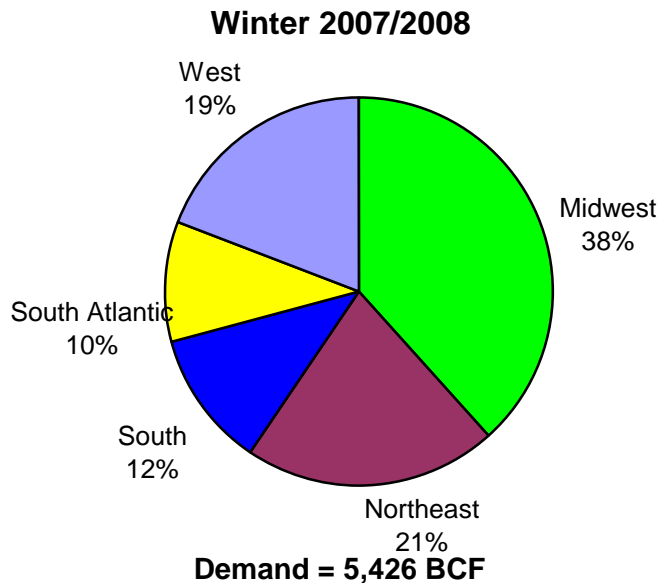
**Exhibit 3. Recent Conservation Within The Residential Sectors**

	November		Percent Change
	2007	2006	
Heating Degree Days Consumption (BCF)	521	467	11.6%
Residential	404	413	(2.2)%
Commercial	255	256	(0.4)%
<b>Total</b>	<b>659</b>	<b>669</b>	<b>(1.5)%</b>

Source: NOAA and EIA.

The net result is that empirical evidence to date suggests that consumers in the residential and commercial sectors are responding to higher natural gas prices. This forecast assumes that this recent level of conservation within these two sectors will continue and increase, albeit very moderately. With respect to the regional nature of gas demand for these two sectors, Exhibit 4 highlights the gas demand for the residential and commercial sectors by census region for the winter season.

**Exhibit 4. Residential and Commercial Gas Demand By Region**

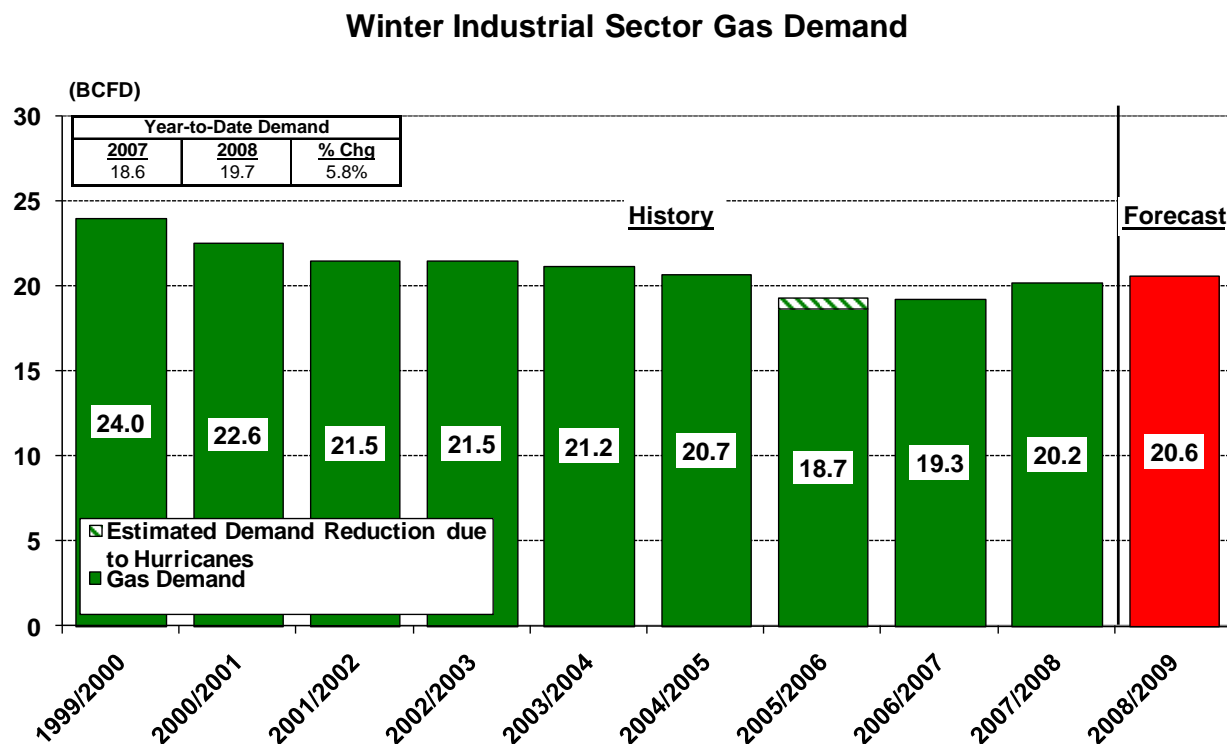


**Note:** Winter=Nov and Dec 2007 and Jan-March 2008.  
Source: U.S. DOE, Energy Information Administration.

## Industrial Sector

While the demand destruction within the industrial sector over the 2000 to 2006 timeframe was significant<sup>2</sup>, more recently gas demand in the sector has been growing. Furthermore, it appears that there are a series of factors driving this growth, which, while individually are relatively small, are significant on a cumulative basis. Included in this series of factors is (1) growing ethanol production, (2) increased domestic fertilizer production, and (3) increased domestic production of basic chemicals. While demand in the industrial sector is still well below historical results, the turnaround in industrial sector demand represents a significant change from the previous period of declining demand and is the key factor behind the 45 BCF, or 1.5 percent, increase in winter gas demand within the industrial sector, as illustrated in Exhibit 5.

**Exhibit 5. Winter Industrial Sector Gas Demand**



Source: EIA and EVA, Inc.

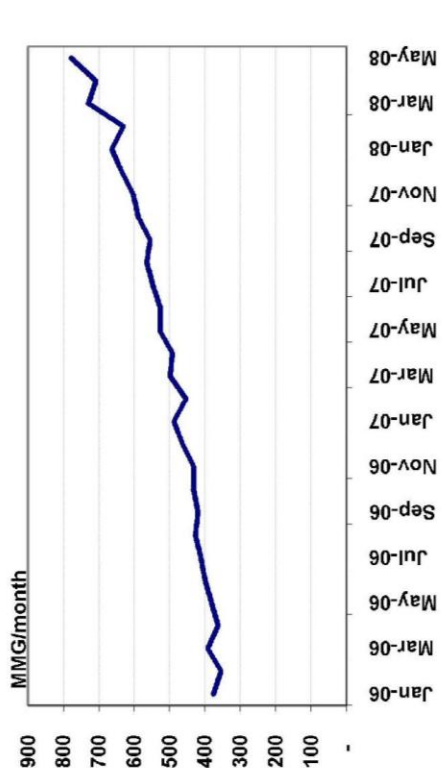
Natural gas is the primary energy source for producing ethanol and domestic ethanol production has been increasing.<sup>3</sup> While some industry observers opine that domestic ethanol production will flatten out in the future, this has not happened yet, as illustrated in Exhibit 6. While ethanol production has been growing at approximately 22 percent per annum since 2000, lately industry

<sup>2</sup> Between 2000 and 2006 industrial sector gas demand declined about 4.5 BCFD, or 20 percent.

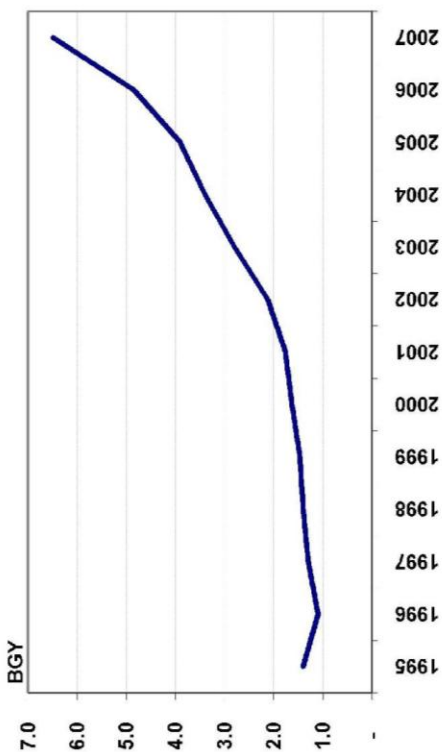
<sup>3</sup> One gallon of ethanol requires approximately 0.035 MCF, assuming steam and power is generated by a gas-fired unit, which is not true for all plants. Current gas consumption by the ethanol industry is about 0.8 BCFD, or about 4.5 percent of total industrial gas demand.

# Exhibit 6. Domestic Ethanol Production Data

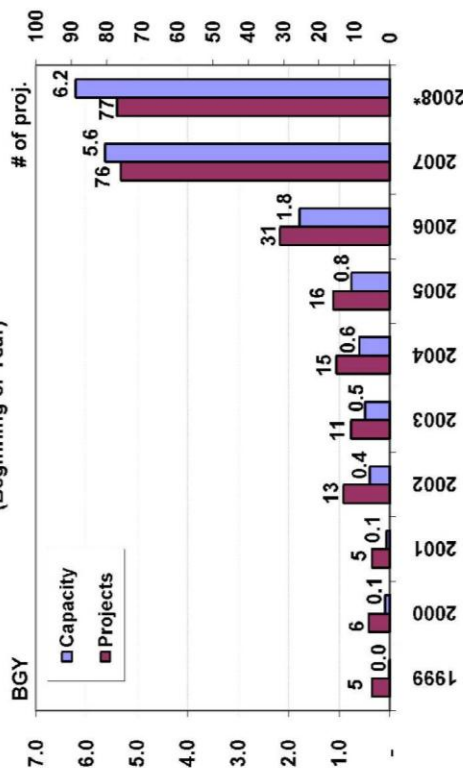
Monthly U.S. Ethanol Production



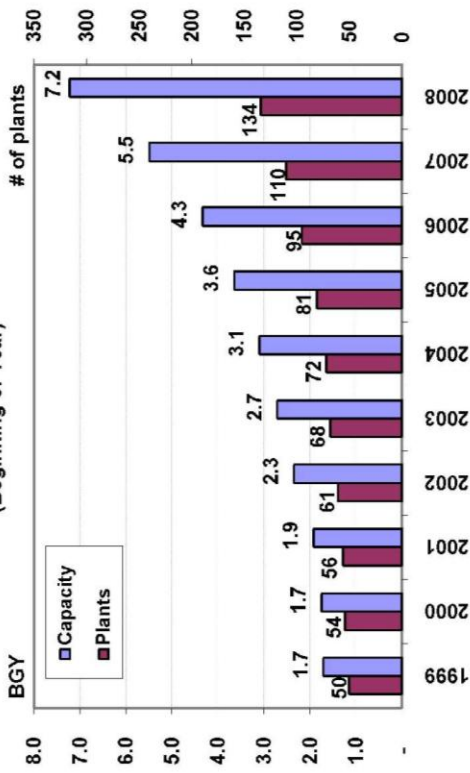
Annual U.S. Ethanol Production



Capacity Under Construction or Expanding (Beginning of Year)



Industry Capacity (Beginning of Year)



\* As of May 2008

Source: Renewable Fuels Association.

margins have become razor thin and in some cases do not cover fixed costs.<sup>4</sup> This has caused some plants to be shut down and others to be mothballed prior to finishing plant construction.<sup>5</sup> Exactly how many of the 77 plants (i.e., 6.2 MM gallons in capacity) that are currently under construction or are expanding will be completed on a timely basis is debatable in light of the current depressed margins for the industry. However, even with this uncertainty it is likely that it will not be until 2009 or 2010 before the growth rate for ethanol production begins to flatten.

Another part of the industrial sector experiencing growth in gas demand is the ammonia fertilizer industry. The growth within this segment of the industrial sector represents somewhat of a rebound from prior years, when high gas prices forced many ammonia fertilizer plants to either shut down or curtail production. A key driver behind this resurgence in demand has been the overall increase in corn and other grain prices, which has made higher fertilizer prices affordable to the farmer.<sup>6,7</sup> In addition, there have been some supply constraints in both Algeria and Australia ammonia production, which when combined with the overall growth in global ammonia demand (i.e., about four percent per annum for the last four years), has resulted in a tight global market. The combination of growing fertilizer demand and improving industry margins, despite high gas prices, has caused both overall industry capacity factors to increase and a few fertilizer plants to either reopen or expand capacity.<sup>8,9</sup> The net result is that gas demand within the fertilizer industry is increasing and not decreasing as was the case in the past.

In addition, the combination of high oil prices and a decrease in the value of the dollar has opened up the door for basic chemicals.<sup>10</sup> Concerning the former, many of the Asian and European chemical plants are naphtha based and with the sharp increase in oil prices, the cost of naphtha has increased dramatically. This, in turn, has increased the cost of naphtha-based petrochemicals and made gas-based petrochemicals, which is the dominant form of production in the U.S., much more competitive. In addition, the declining value of the dollar for much of the year has resulted in increased levels of chemical exports.<sup>11</sup> An exhibit in the Appendix of this

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<sup>4</sup> Earlier in the year, corn prices reached in excess of \$7.50 per bushel, while ethanol prices were only \$2.50 per gallon. These conditions led to negative margins for some ethanol plants. At present, corn prices are about \$6.00 per bushel, while ethanol prices are just below \$2.40 per gallon, which still produces depressed margins.

<sup>5</sup> During the last several months Cargill has cancelled its plants to build a 100 MM gallon ethanol plant in Topeka, Kansas, while Verasun Energy has delayed the startup of its 110 MM gallon ethanol plant in Welcome, Minnesota. Similarly, Pacific Ethanol has suspended construction of its Imperial Valley ethanol plant in Calipatria, California. Also, a dozen biodiesel and ethanol plants have declared bankruptcy, including the ethanol plant in Canton, Illinois. Lastly, industry estimates that as many as 50 new ethanol plants have been cancelled or delayed.

<sup>6</sup> Corn prices averaged about \$2.30 per bushel between 2002 and 2005, before steadily increasing to \$3.46 per bushel in 2006 and reaching a peak of about \$7.80 per bushel in 2008. Currently, corn prices are about \$5.80 per bushel. With respect to other grain prices over the last 20 months, wheat has risen from \$4.19 per bushel to a peak of \$12.80 per bushel and is now about \$8.29 per bushel, while soy beans has risen from \$7.10 per bushel to a peak of \$16.58 per bushel and is now about \$12.11 per bushel.

<sup>7</sup> As an aside, one of the drivers behind increasing corn prices is the increase in corn-based ethanol production, as acreage for corn production has increased about 20 percent in order to support the increase in ethanol production.

<sup>8</sup> Specific examples include Terra Industries taking the 400,000 ton per year Donaldsonville, Louisiana plant out of mothballs in July 2008 and commencing plans to expand capacity at its Woodward, Oklahoma plant. In addition, the industry has plans for new plants at Faustina, Louisiana and Beaumont, Texas.

<sup>9</sup> U.S. ammonia production has increased up to 25 percent this year according to industry sources (i.e., see "Ethanol, Ammonia Surge Behind DOE's Rising Natural Gas Demand," *Natural Gas Week*, August 18, 2008, p.1).

<sup>10</sup> The price of crude oil increased from about \$55 per barrel in January 2007 to a peak level in mid-2008 of \$147 per barrel before receding to about \$115 per barrel currently.

<sup>11</sup> At one time, U.S. chemical exports were the leading export item for the U.S.

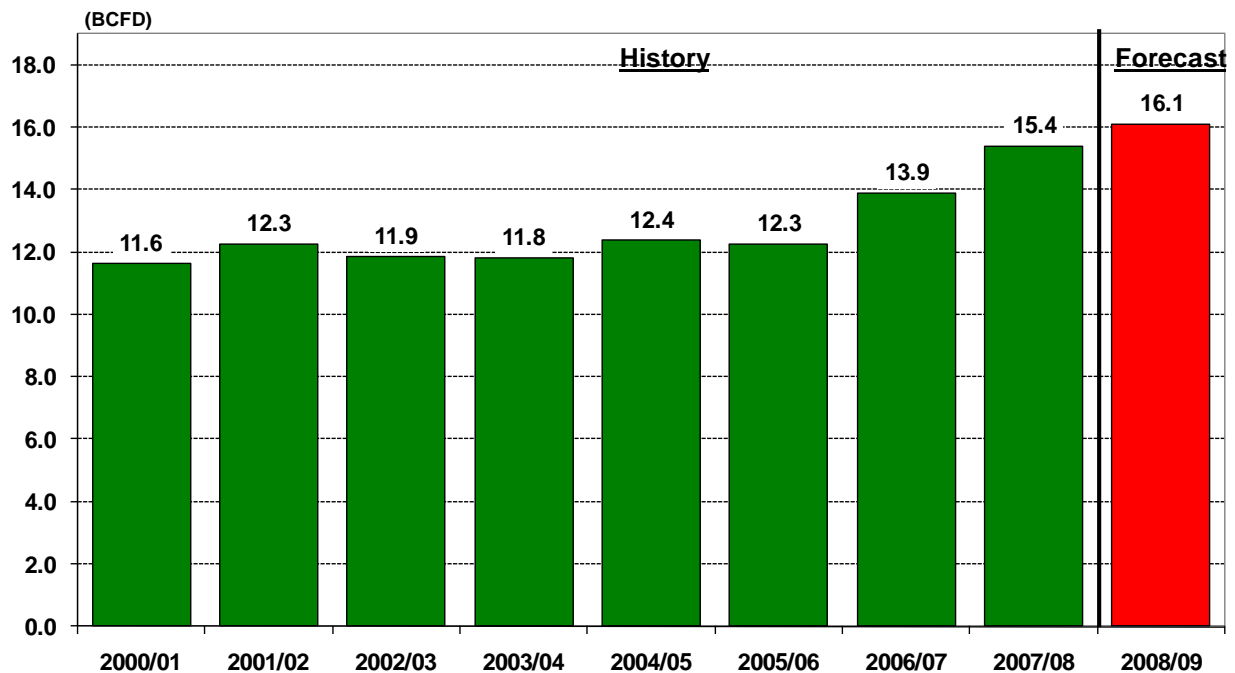
report illustrates the production levels for the six energy intensive industries that account for about 65 to 70 percent of industrial sector demand. Included in this group of six energy-intensive industries is the chemical sector for which production indices have increased over the last two years.

Lastly, weather can impact winter period gas demand for the industrial sector. While the colder winter weather was a factor in elevating industrial sector gas demand last winter, it should not be a factor this winter because of the similarity between last winter’s weather and that predicted for the forthcoming winter.

### **Electric Sector**

While traditionally increases in electric sector gas demand are concentrated in the summer season and are impacted heavily by the summer weather, more recently, electric sector gas demand has been increasing in all seasons, as gas-fired generation is the marginal source of power in the electric sector. Because of its marginal status and the lack of growth in solid fuel plants, gas-fired generation has been capturing the majority of the load growth, as overall electricity demand increases. While this phenomenon always has existed during peak summer electricity demand, more recently it also has existed for the winter season, as illustrated in Exhibit 7.

**Exhibit 7. Winter Electric Sector Gas Demand**



While some of the increase last winter can be attributed to more severe winter weather,<sup>12</sup> that is not the case for the forthcoming winter. During the forthcoming winter gas-fired generation and hence, electric sector gas demand is expected to continue to increase, as a result of gas-fired

<sup>12</sup> During periods of cold winter weather, electricity demand can spike in certain regions of the country that rely heavily on electric heating, such as Florida and parts of Virginia.

generation capturing much of the increase in overall electricity demand. One of the factors behind the growth in gas-fired generation during this period of relatively low electricity demand (i.e., on a national basis, peak summer electricity demand can be 20 percent higher than average winter electricity demand) is the lack of growth in competing solid fuel units. For example, since 2000, total U.S. coal-fired capacity has increased only 0.4 percent, or about 1.1 GW, while the creep in nuclear capacity, as a result of upgrading the capacity of existing units, has been in total 3.7 percent, or about 3.5 GW, over the same period. As a point of reference, gas-fired capacity has increased about 58 percent, or about 11.6 GW. While there still are significant regional variances, most of the excess capacity for solid fuel units has been eroded slowly. A further indication of this steady increase in winter period gas consumption within the electric sector is the increase in the average capacity factor for the industry's fleet of modern combined cycle units during the winter season. This phenomenon is illustrated in Exhibit 8, which shows the average capacity factor has increased from 20 to 25 percent over the last two winter seasons, while in some regions the average capacity is over 40 percent. The net result of this phenomenon is that gas demand in the electric sector should increase another 95 BCF or about, 4.1 percent, in the forthcoming winter, as noted in Exhibit 7.

### Exhibit 8. Winter Capacity Factors for New Combined Cycle Units

Census Region	Weighted Average Capacity Factor						
	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
New England	26%	26%	31%	33%	35%	36%	40%
Middle Atlantic	3%	2%	4%	5%	6%	9%	13%
East North Central	6%	3%	3%	5%	5%	9%	9%
West North Central	6%	5%	6%	10%	9%	16%	13%
South Atlantic w/o Florida	7%	4%	5%	7%	8%	10%	10%
Florida	10%	24%	30%	33%	28%	30%	31%
East South Central	27%	13%	12%	11%	10%	17%	15%
West South Central w/o ERCOT	17%	15%	18%	17%	19%	20%	19%
ERCOT	21%	28%	25%	30%	29%	33%	30%
Mountain	26%	30%	23%	26%	29%	30%	37%
Pacific Contiguous w/o CA	9%	21%	21%	27%	19%	22%	32%
California	9%	16%	27%	29%	30%	37%	46%
Pacific Noncontiguous	1%	6%	5%	5%	4%	2%	0%
TOTAL U.S.	15%	17%	18%	20%	20%	23%	25%

2007/2008 is Nov and Dec only.

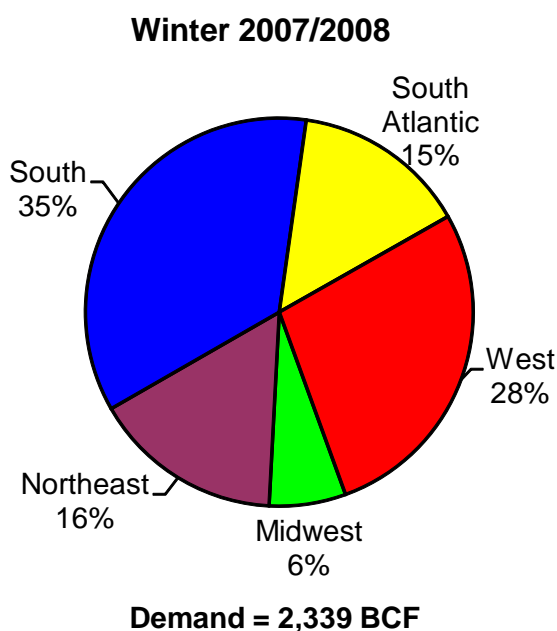
The area of greatest uncertainty with respect to the outlook for electric sector gas demand this winter is the possibility of fuel switching, which could increase gas demand within the sector. While fuel switching usually occurs between oil and gas during periods of high gas prices, it also occurs upon occasion during periods of relatively low gas prices, when gas-fired generation displaces coal-fired generation in some of the more expensive coal-fired plants. This phenomenon of gas and coal fuel switching, which occurs as a result of dispatch rather than within a specific steam generator unit, does not occur very often. Furthermore, as a result of when it does occur, historically it has lasted for only a few weeks, as marginal coal-fired generation under these circumstances, in essence, sets the floor price for natural gas.<sup>13</sup> In addition, this phenomenon has never occurred in the past during the winter season. However,

<sup>13</sup> Switching between gas-fired and coal-fired generation has only occurred four times in the past, namely in February 1992, August and September 2004, September 2006, and in the late summer of 2008. See EPRI *Natural Gas Price Uncertainty: Establishing Price Floors (1012249)*, January 2007 for a more complete discussion.

this type of fuel switching did occur in the late summer of this year, as a result of the combination of declining gas prices and very high coal prices. Based upon the current futures for natural gas prices, it is possible that additional gas-to-coal fuel switching could occur during parts of this winter, in which case gas demand in the electric sector would be higher than projected. Industry observers should monitor carefully the potential for this phenomenon during the forthcoming winter season.

Lastly, Exhibit 9 provides a breakdown of winter electric sector gas consumption by region of the U.S. for the year 2007. For the forthcoming winter the breakdown of electric sector gas consumption is projected to be similar to the prior year.

### Exhibit 9. Electric Power Sector Gas Demand by Region



Note: Winter is Oct 2007 thru Mar 2008.

Source: U.S. DOE, Energy Information Administration.

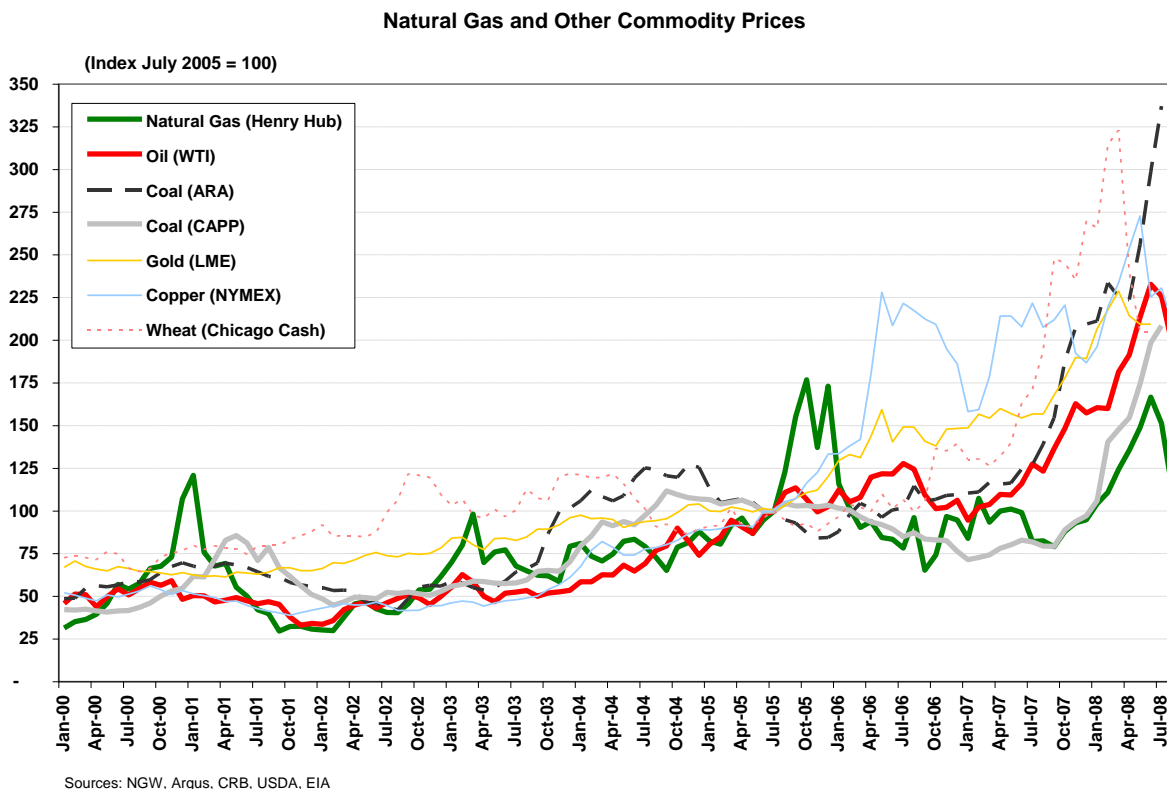
### **Commodity Prices**

During 2008 most major commodities, as well as the energy sector which includes natural gas, experienced significant increase in prices.<sup>14</sup> This phenomenon has had an impact on the natural gas industry in several different ways. For example, increasing corn and other grain prices have been a key factor behind the recent increase in fertilizer demand, which has led to increased gas demand. Similarly, the ability for U.S. petrochemicals to compete in foreign markets has been aided by the increase in oil prices. Lastly, the very strong coal prices (i.e., both international and domestic) have, in essence, set a floor price for natural gas. In order to provide the reader with some perspective of the movement of commodity prices during this commodities bubble, Exhibit

<sup>14</sup> Natural gas prices increased sharply during the first half of the year, with the NYMEX strip increasing from \$7.50 per MMBTU in mid-December 2007 to \$13.33 in mid-June 2008. However, in the second half of the year gas prices began to decline, with the present NYMEX strip being \$8.61 per MMTBU.

10 summarizes the recent changes in the prices for several different commodities, including natural gas. The graph included in Exhibit 10 presents an index for several commodity prices with July 2005 equal to one hundred. The table in Exhibit 9 presents average commodity prices in the commodity specific units for the period January through August for each year back to 2000.<sup>15</sup>

### Exhibit 10. Recent Prices for Selected Commodities



**Natural Gas and Other Commodity Prices in Commodity-Specific Units**

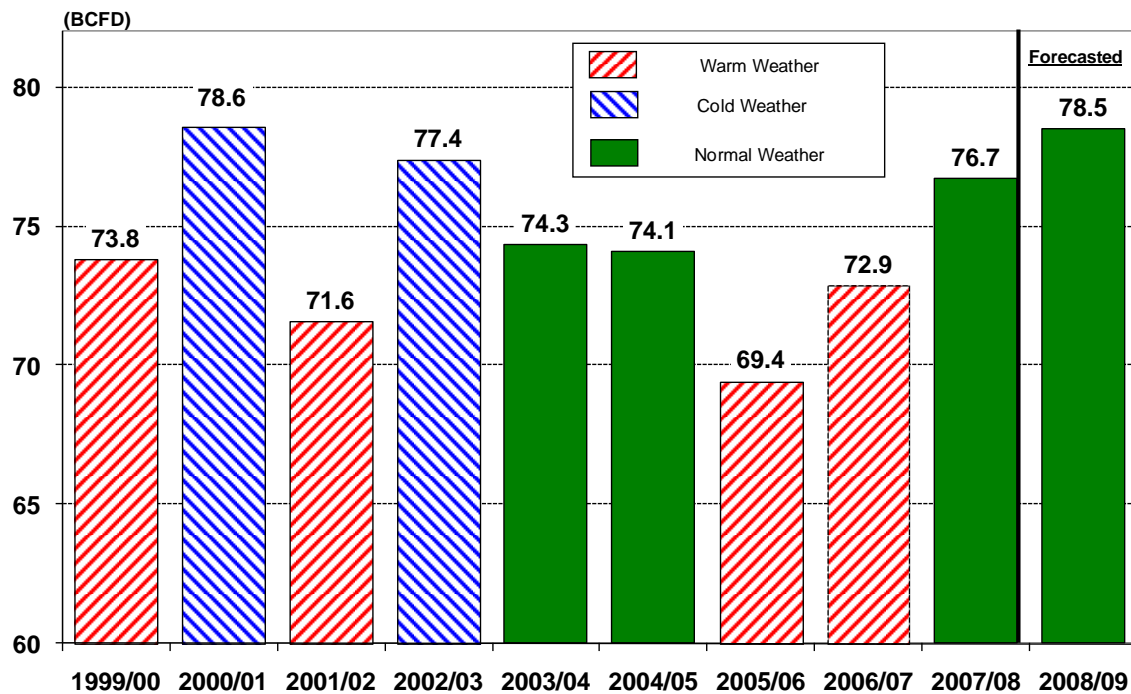
Commodity	Units	Average Prices January through August									% Change 2007-08
		2000	2001	2002	2003	2004	2005	2006	2007	2008	
Henry Hub	\$/mmBtu	\$ 3.37	\$ 4.92	\$ 2.97	\$ 5.70	\$ 5.83	\$ 7.13	\$ 7.02	\$ 7.08	\$ 9.96	40.7%
U.K. NBP	\$/mmBtu	-	-	-	-	-	\$ 5.79	\$ 10.56	\$ 4.63	\$ 11.45	147.0%
U.K. LNG	\$/mmBtu	-	-	-	-	-	\$ 4.75	\$ 8.81	\$ 5.37	\$ 9.16	70.5%
Oil (WTI)	\$/bbl	\$ 29.22	\$ 27.98	\$ 24.84	\$ 31.38	\$ 37.93	\$ 54.28	\$ 68.49	\$ 64.51	\$ 113.76	76.3%
Coal (ARA)	\$/tonne	\$ 33.87	\$ 41.24	\$ 30.44	\$ 36.40	\$ 70.48	\$ 64.35	\$ 62.33	\$ 74.44	\$ 158.06	112.3%
Coal (Central Appalachia)	\$/ton	\$ 23.36	\$ 41.37	\$ 27.25	\$ 32.25	\$ 51.27	\$ 57.80	\$ 51.93	\$ 43.23	\$ 89.91	108.0%
Gold (LME)	\$/ozt.	\$ 283.45	\$ 266.67	\$ 304.14	\$ 350.95	\$ 400.38	\$ 428.20	\$ 602.63	\$ 660.41	\$ 914.24	38.4%
Copper (NYMEX)	cents/lbs.	\$ 82.22	\$ 76.12	\$ 72.46	\$ 76.23	\$ 124.12	\$ 154.06	\$ 299.16	\$ 317.91	\$ 374.93	17.9%
Wheat No. 2 Red(Chicago)	\$/Bushel	\$ 2.31	\$ 2.52	\$ 2.92	\$ 3.28	\$ 3.61	\$ 3.05	\$ 3.30	\$ 4.78	\$ 8.43	76.5%

<sup>15</sup> There are additional commodities incorporated in the table than are presented in the graph, because of the difficulty of presenting a readable graph with a large number of commodities.

## Conclusions

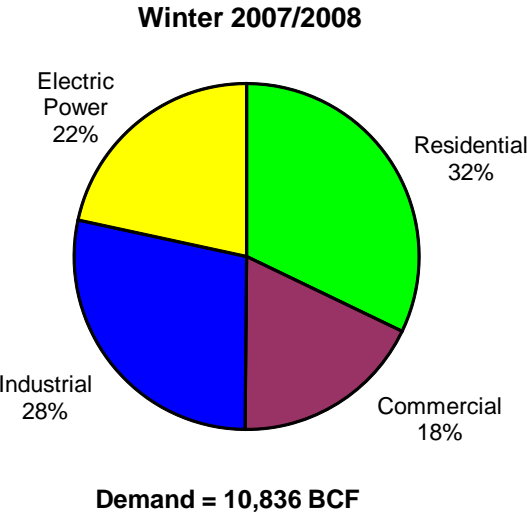
Overall natural gas demand this winter is expected to increase about 212 BCF, or about 1.8 percent. Furthermore, little or none of this growth in demand will be due to weather factors, as the current weather forecast for the forthcoming winter season is very similar to that for the past winter. Exhibit 11 compares and contrasts natural gas demand for the last nine winters, with the significantly colder and warmer than normal winters identified.

**Exhibit 11. Average Winter Demand**



As has been the case historically, the biggest uncertainty in this outlook is the severity of winter weather. A very cold winter like the winters of 2002/2003 and 2000/2001 will cause projected gas demand to increase significantly, particularly in the residential and commercial sectors. Conversely, a milder winter like the winters of 2005/2006 and 2006/2007 will cause gas consumption to be reduced. The other area of uncertainty is the potential for increased electric sector gas demand, as a result of fuel switching. Finally, Exhibit 12 summarizes the likely breakdown of winter gas demand by region.

**Exhibit 12. Total Primary Gas Demand by Sector**



Note: Winter=Nov and Dec 2007 and Jan-March 2008.  
Source: U.S. DOE, Energy Information Administration.

# **APPENDIX**

## Exhibit A-1. Natural Gas Consumption (BCF)

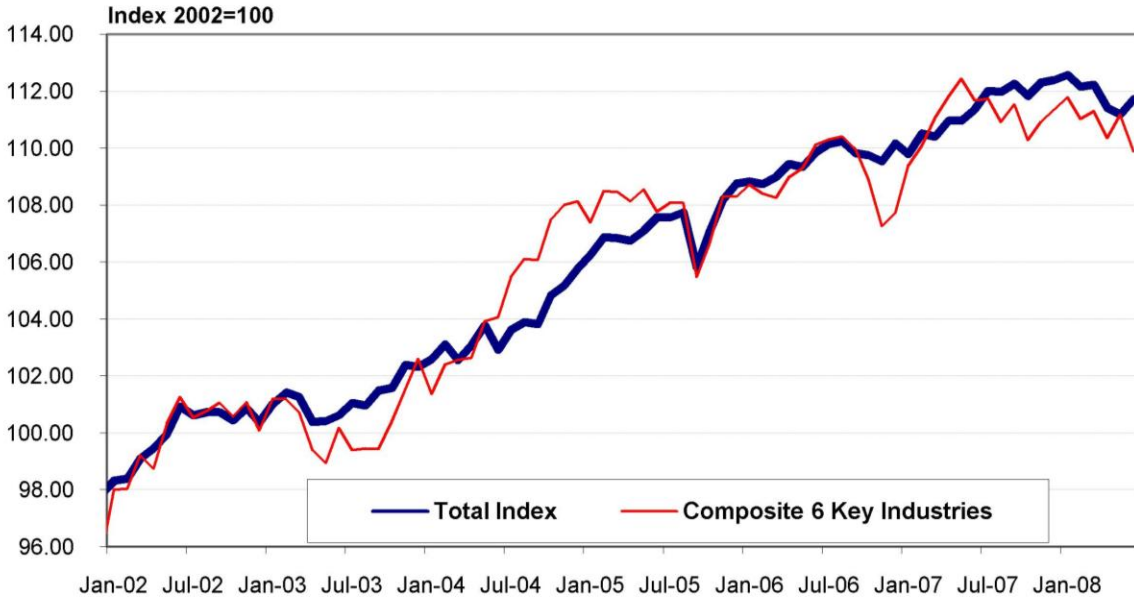
	Annual										Winter (Nov-Mar)					
	2002	2003	2004	2005	2006	2007	2008	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09		
Residential	4,889	5,079	4,869	4,827	4,368	4,724	4,863	3,760	3,564	3,462	3,200	3,357	3,476	3,515		
Commercial	3,144	3,179	3,129	2,999	2,835	3,007	3,099	2,103	1,985	1,914	1,795	1,864	1,950	1,968		
Industrial	7,507	7,150	7,243	6,597	6,495	6,636	6,904	3,235	3,193	3,110	2,818	2,904	3,059	3,104		
Electric	5,672	5,135	5,464	5,869	6,222	6,874	6,949	1,790	1,794	1,864	1,851	2,097	2,339	2,434		
Other	1,780	1,714	1,664	1,696	1,708	1,791	1,862	790	756	758	741	767	825	840		
Transport	15	18	21	23	25	26	27	7	8	9	10	11	12	12		
Total	23,007	22,276	22,389	22,011	21,652	23,058	23,704	11,685	11,301	11,118	10,414	11,000	11,661	11,873		

Note: 2007 has preliminary data, 2008 & 2009 data are estimated/forecasted.

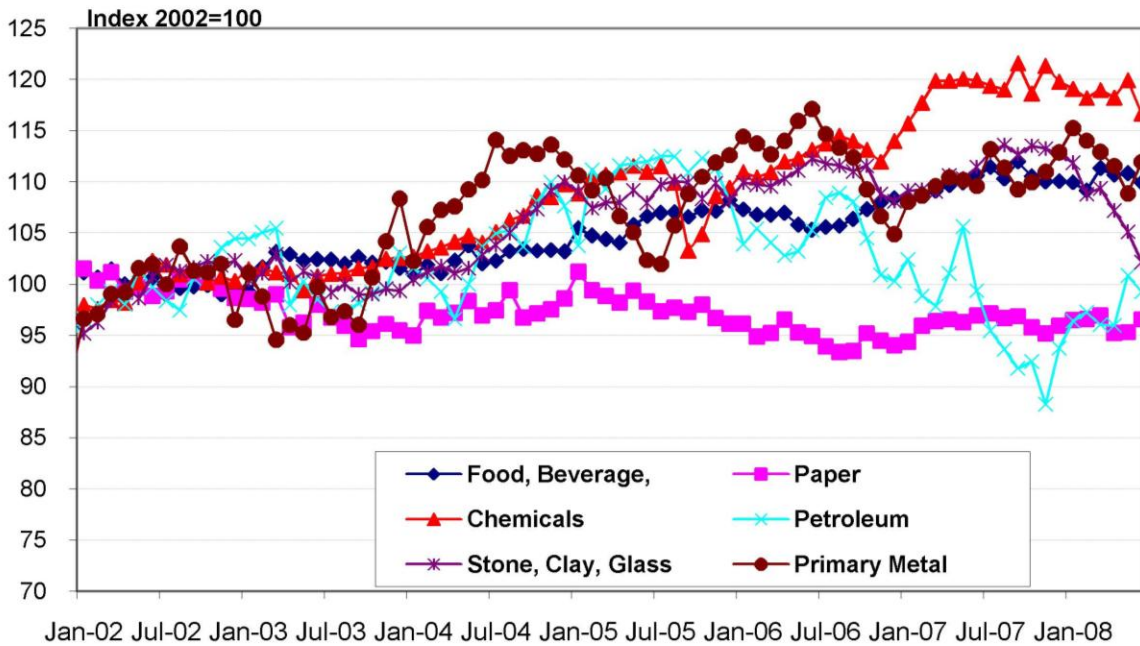
Source: EIA and EVA.

## Exhibit A-2. Industrial Production Growth Rates

### Total and Natural Gas Composite

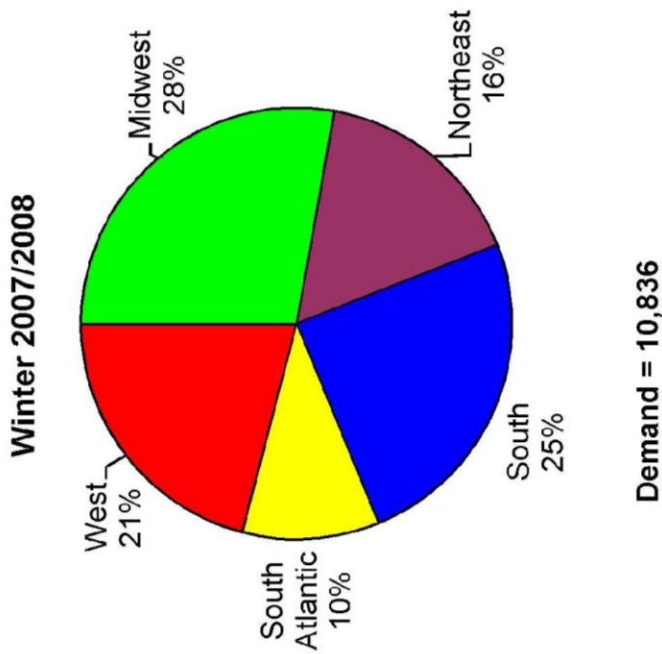
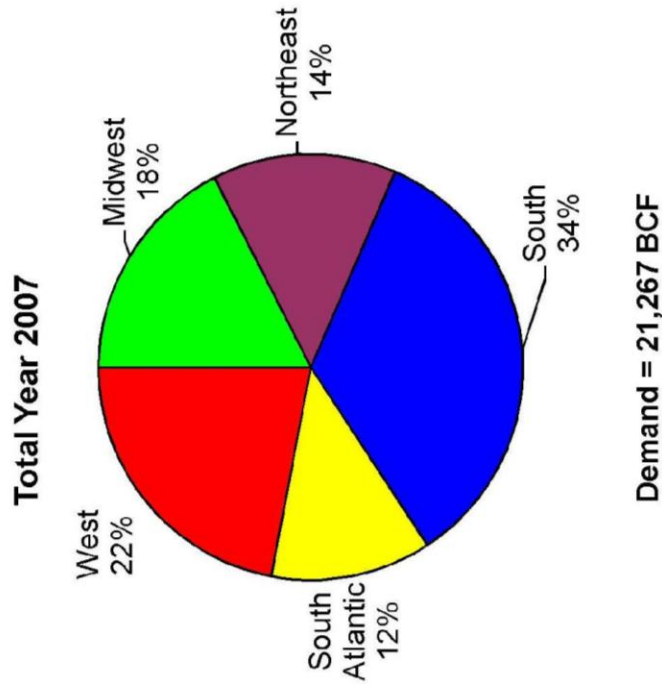


### Six Energy Intensive Industries



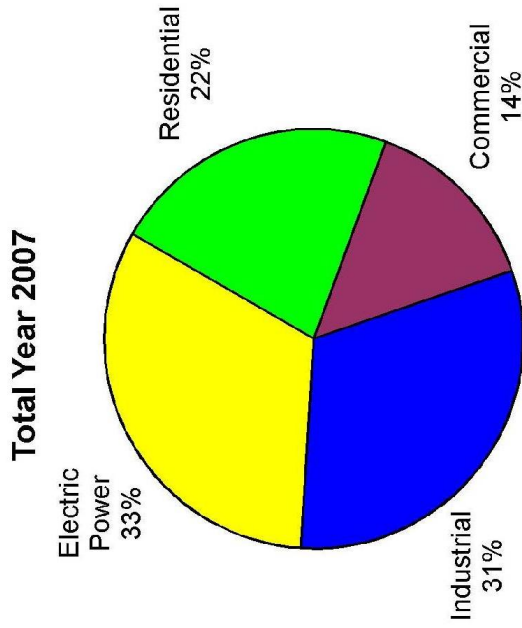
Source: Federal Reserve Statistical Release G.17.

**Exhibit A-3. Total 2007 Primary Gas Demand By Region And Time Of Year**

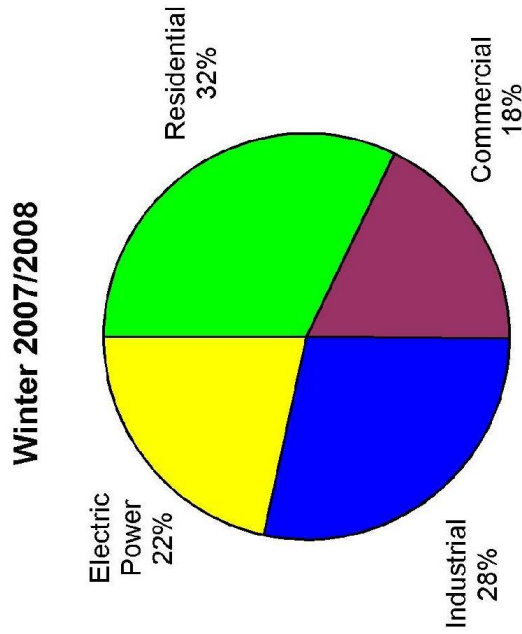


Note: Winter is Nov 2007 thru Mar 2008.  
Source: U.S. DOE, Energy Information Administration.

**Exhibit A-4. Total Primary Gas Demand By Sector And Time Of Year**



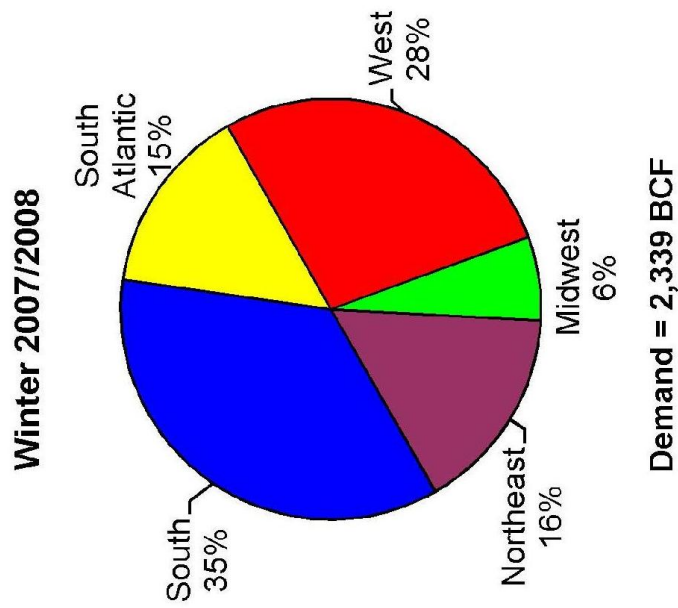
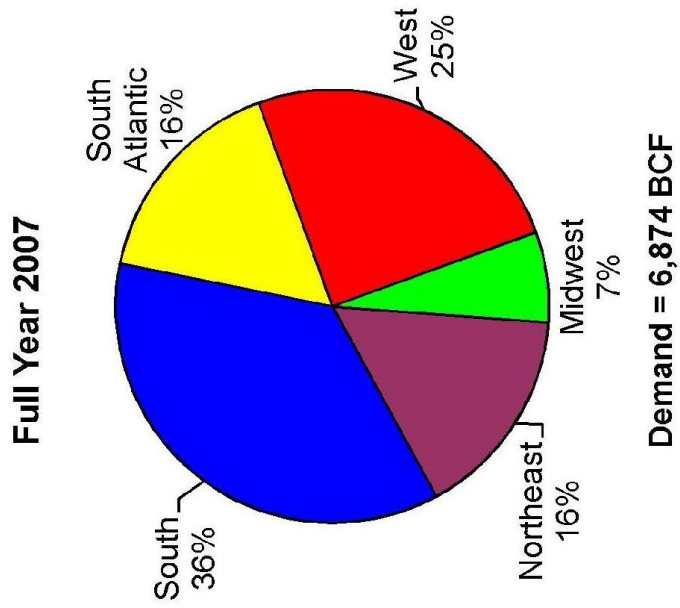
**Demand = 21,267 BCF**



**Demand = 10,836 BCF**

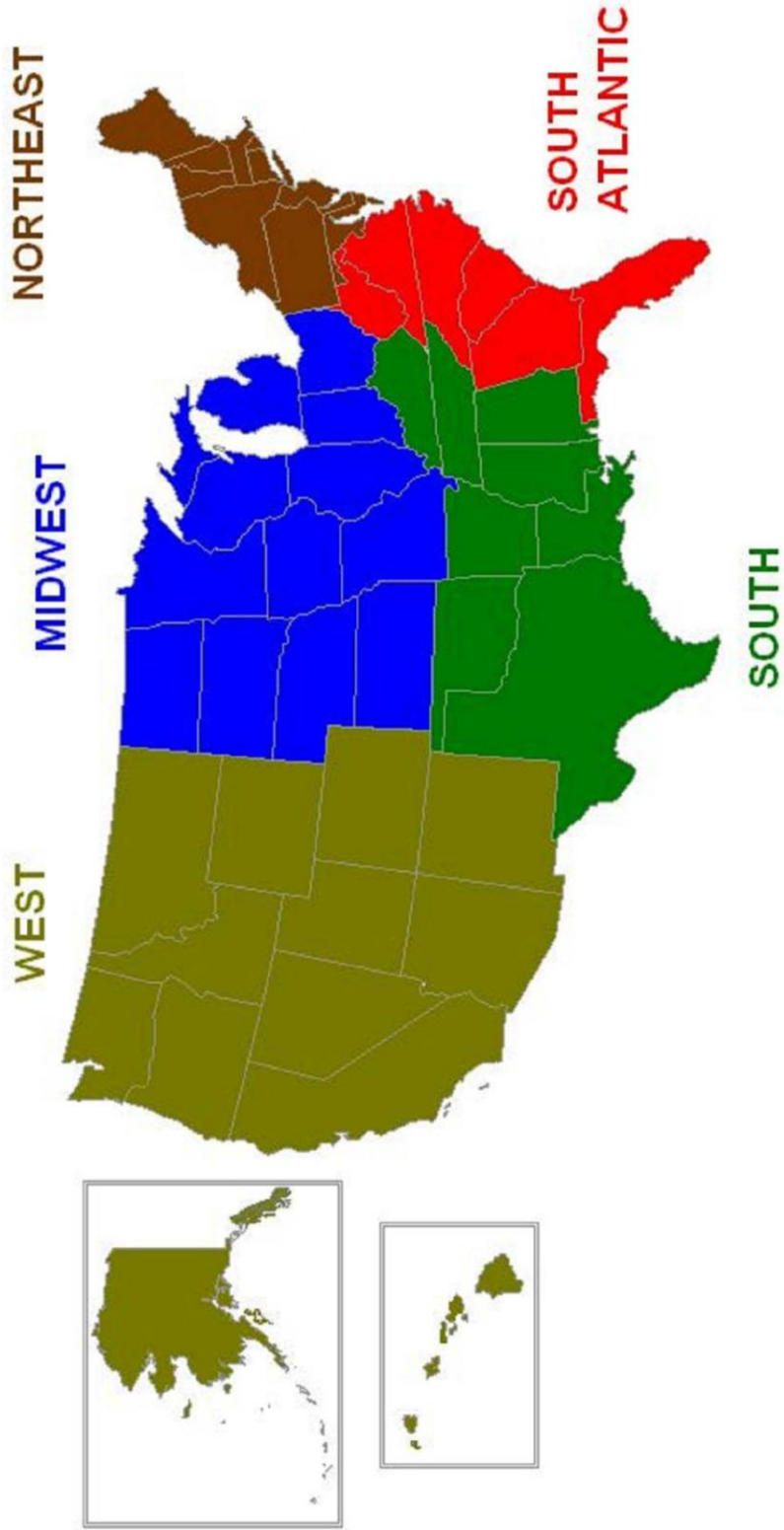
Note: Winter=Nov and Dec 2007 and Jan-March 2008.  
Source: U.S. DOE, Energy Information Administration.

**Exhibit A-5. Electric Power Sector Gas Demand By Region And Time Of Year**

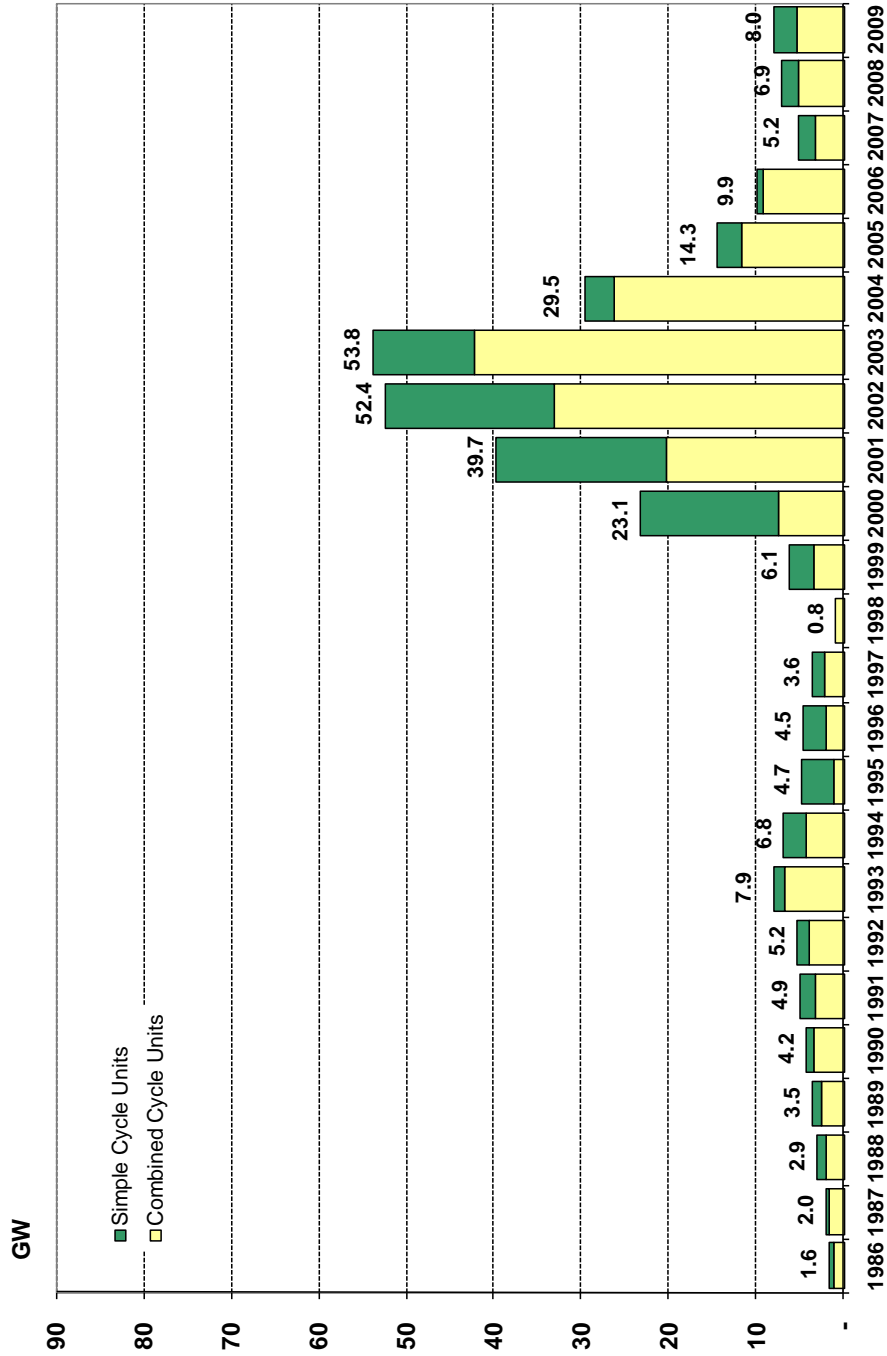


Note: Winter is Oc. 2007 thru Mar 2008.  
Source: U.S. DOE, Energy Information Administration.

Exhibit A-6. U.S. Census Regions

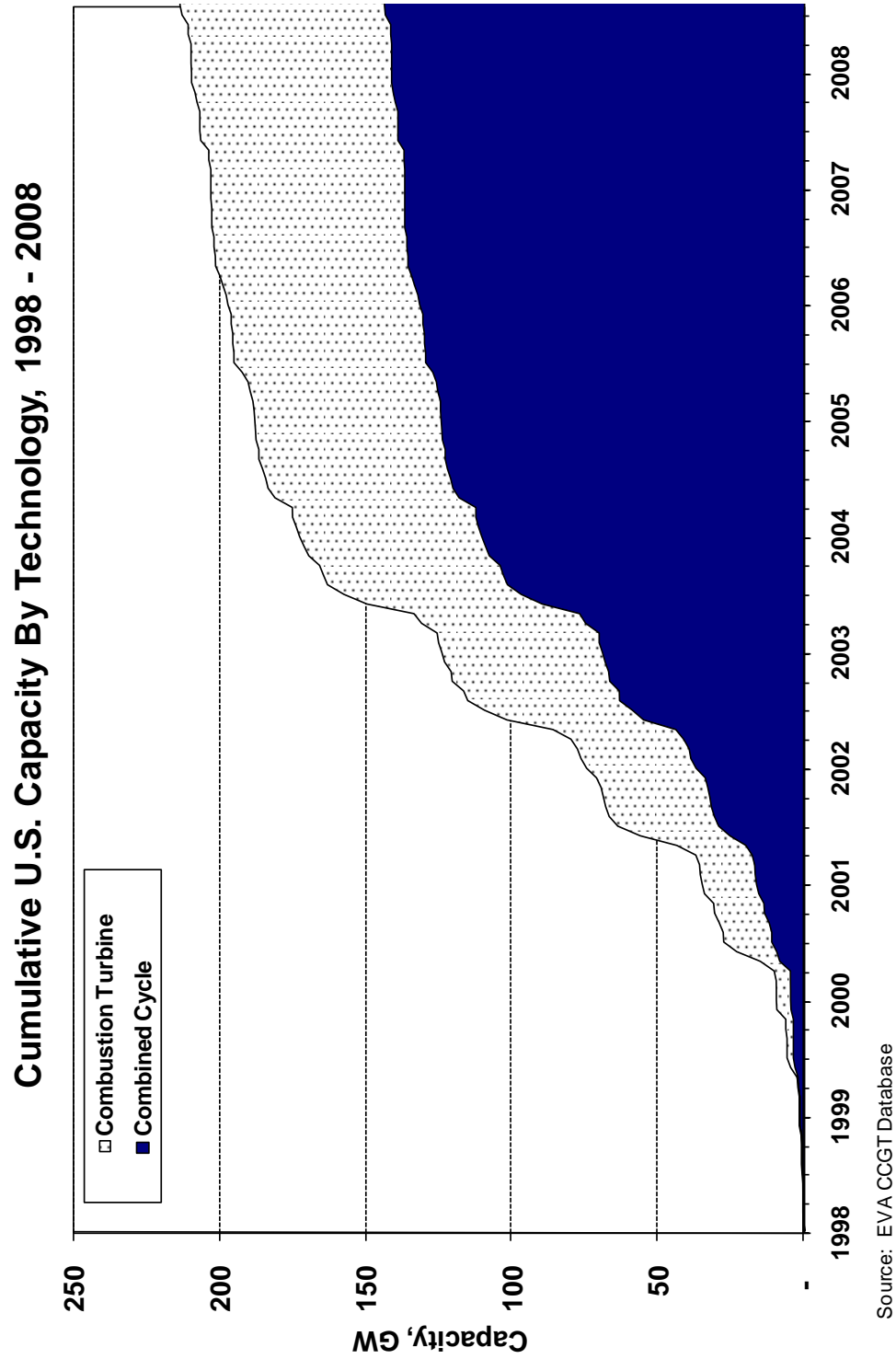


**Exhibit A-7. Annual Additions Of Gas-Fired Capacity 1986-2009**

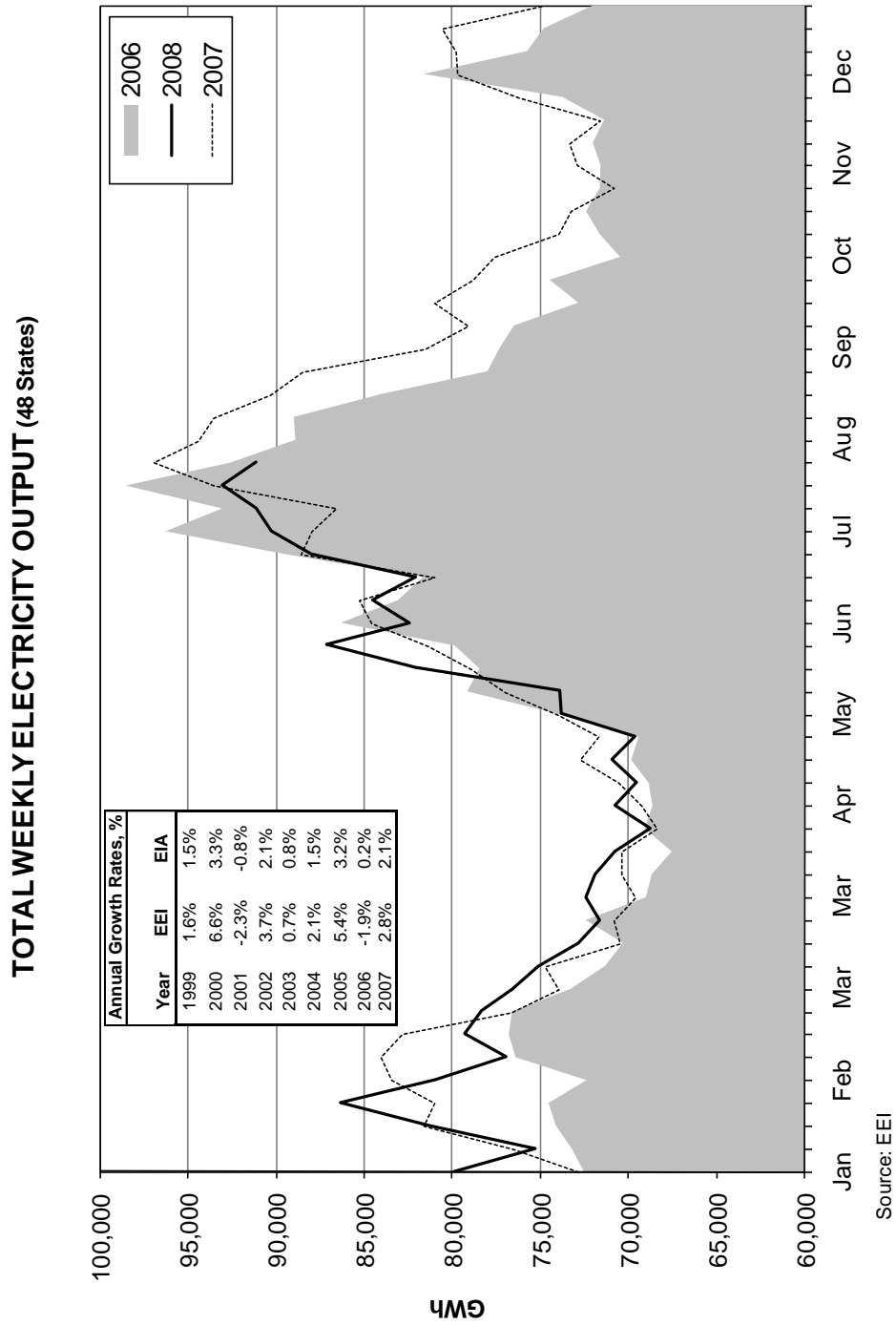


Note: Projected additions only include categories 1 through 4.  
 Source: EIA, EEI, and EVA for 1986 to 1998. EVA for 1999 and later.

Exhibit A-8. Cumulative U.S. Capacity By Technology, 1998-2008



**Exhibit A-9. Total Weekly Electricity Output (48 States)**



## Exhibit A-10. Relevant Data

	Annual							% Diff 09/08
	2003	2004	2005	2006	2007	2008	2009	
Residential Housing Stock (Thousands)	108,949	110,004	111,040	112,280	113,645	113,872	114,100	0.2%
Electric								
Weather								
Heating Degree Days (HDD) (Degrees)	4,460	4,290	4,315	3,995	4,257	4,473	4,455	-0.4%
% Change of Normal	0.1%	-3.7%	-3.1%	-10.3%	-4.4%	0.4%	0.0%	
New Gas-Fired Capacity <sup>1</sup>								
CC (MW)	46,004	15,453	9,807	8,577	4,653	4,640	7,564	63.0%
CT (MW)	8,424	2,456	2,438	937	2,468	1,827	4,234	131.7%
Hydro and Nuclear Generation								
Hydro Generation - Pacific (GWh)	140,201	137,929	143,327	148,936	140,050	151,000	156,334	3.5%
Nuclear Generation (GWh)	763,733	788,528	780,858	787,219	806,487	807,710	811,232	0.4%
Industrial (Index: 2002=100)								
Food	101.0	101.1	104.2	105.4	110.1	112.9	114.4	1.2%
Paper	96.8	97.6	97.5	97.5	95.8	94.1	94.2	0.1%
Chemicals	101.3	105.6	109.3	112.6	114.2	113.7	115.2	1.3%
Petroleum	97.9	106.0	110.1	109.7	108.7	110.4	112.2	1.6%
Stone, Clay and Glass	100.8	104.9	110.7	111.9	111.9	104.1	103.7	-0.4%
Primary Metals	99.1	110.0	108.0	112.4	110.3	112.0	113.4	1.3%
Total Industrial Production	101.2	103.8	107.2	109.6	111.4	111.8	112.9	1.0%
Composite 6-key Ind.	100.0	105.1	107.6	109.9	110.5	110.3	111.6	1.1%
Petro-Chemical Production	103.0	112.7	112.0	114.5	115.9	117.3	--	--
Economy								
Real GDP (Billions 2008 \$)	12,780	13,245	13,651	14,043	14,350	14,349	14,566	1.5%
Employment (Thousands)	129,996	131,419	133,695	136,092	137,618	137,640	138,240	0.4%
CPI (Index: 1982=100)	184.0	188.9	195.3	201.6	207.3	213.6	217.9	2.0%

	Nov-Mar							% Diff 08/09 07/08
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	
Residential Housing Stock (Thousands)	108,968	110,012	111,040	112,537	113,915	115,300	115,216	-0.1%
Electric								
Weather								
Heating Degree Days (HDD) (Degrees)	3,689	3,492	3,472	3,350	3,352	3,572	3,534	-1.1%
% Change of Normal	2.8%	-2.7%	-3.2%	-6.6%	-6.5%	-0.4%	-1.5%	
New Gas-Fired Capacity <sup>1</sup>								
CC (MW)	4,830	9,452	1,804	5,431	0	1,383	1,171	-15.3%
CT (MW)	2,382	1,106	569	0	314	835	555	-33.5%
Hydro and Nuclear Generation								
Hydro Generation - Pacific (GWh)	52,829	56,868	57,609	68,391	60,306	58,000	60,049	3.5%
Nuclear Generation (GWh)	320,511	325,389	319,870	332,897	335,418	339,500	340,980	0.4%
Industrial (Index: 2002=100)								
Food	100.8	100.4	102.6	104.9	107.4	112.0	113.2	1.0%
Paper	100.0	95.6	98.6	97.6	97.0	95.3	93.4	-2.0%
Chemicals	100.9	102.7	109.5	109.2	113.3	114.3	114.1	-0.2%
Petroleum	98.9	101.1	111.2	108.2	109.4	109.5	111.0	1.4%
Stone, Clay and Glass	101.3	101.5	109.1	112.3	109.8	110.2	103.1	-6.5%
Primary Metals	99.0	104.7	111.4	112.6	107.8	112.7	112.3	-0.3%
Total Industrial Production	100.9	102.4	106.0	108.4	110.0	112.2	111.9	-0.3%
Composite 6-key Ind.	100.3	101.8	108.3	108.3	109.5	111.0	110.5	-0.5%
Petro-Chemical Production	0.0	105.6	119.9	111.2	115.0	116.4	--	--
Economy								
Real GDP (Billions 2008 \$)	12,378	12,830	13,262	13,672	13,914	14,242	14,469	1.6%
Employment (Thousands)	130	130	132	135	137	138	138	-0.3%
CPI (Index: 1982=100)	182.2	185.5	191.4	198.2	202.9	204.7	--	--