Revisions to Monthly Natural Gas Data

by Ann M. Ducca

Introduction

The Energy Information Administration (EIA) publishes monthly data for the supply and disposition of natural gas in the United States in the *Natural Gas Monthly*. These data are preliminary when initially published. This article discusses the differences that occurred between the initial (first) monthly supply and disposition data for the United States published for 1994, 1995, and 1996 and the final monthly data published for those years. These data and the associated differences are shown in Tables SR1, SR2, and SR3.

National monthly data initially published come from one of three sources: (1) data reported on surveys of the natural gas industry, (2) analytical estimates, or (3) Short-Term Integrated Forecasting System (STIFS) model estimates. Beginning with the June 1996 issue of the *Natural Gas Monthly*, the EIA began publishing estimates of natural gas volumes from its STIFS model computations to provide more timely information about the gas industry. For production, total supply and disposition, and storage, STIFS estimates are published for the most current two months (the same month as the publication issue month and one month previous to the issue month). For example, in this, the July issue of the *Natural Gas Monthly*, the June and July estimates are STIFS estimates. For consumption by sector, STIFS estimates are published for the most current three months (the same month as the issue month and the two months previous to the issue month).

Analytical estimates are developed by EIA staff based on historical trends and data available from sources other than EIA surveys. (See the Appendix to this article for estimation methodologies.) Analytical estimates are provided when data reported from surveys cannot be obtained in a timely manner. Reported data are taken from EIA surveys of the natural gas industry except for import and export data which are taken from reports to the Office of Fossil Energy, U.S. Department of Energy.

As stated above, EIA began publishing STIFS estimates in June 1996. This article does not address the differences between the STIFS estimates and final monthly data (for the period from June 1996 through December 1996). EIA examines the utility of the STIFS estimates as part of its ongoing program of data quality. The STIFS model is updated as needed to improve methods of estimation.

All data discussed in this report are reported survey data or analytical estimates. Although the usefulness of initially reported survey data and analytical estimates cannot be judged solely on the basis of the quality of past estimates, the EIA is providing information about these differences to assist users in evaluating the usefulness of preliminary National data for 1997 and subsequent years.

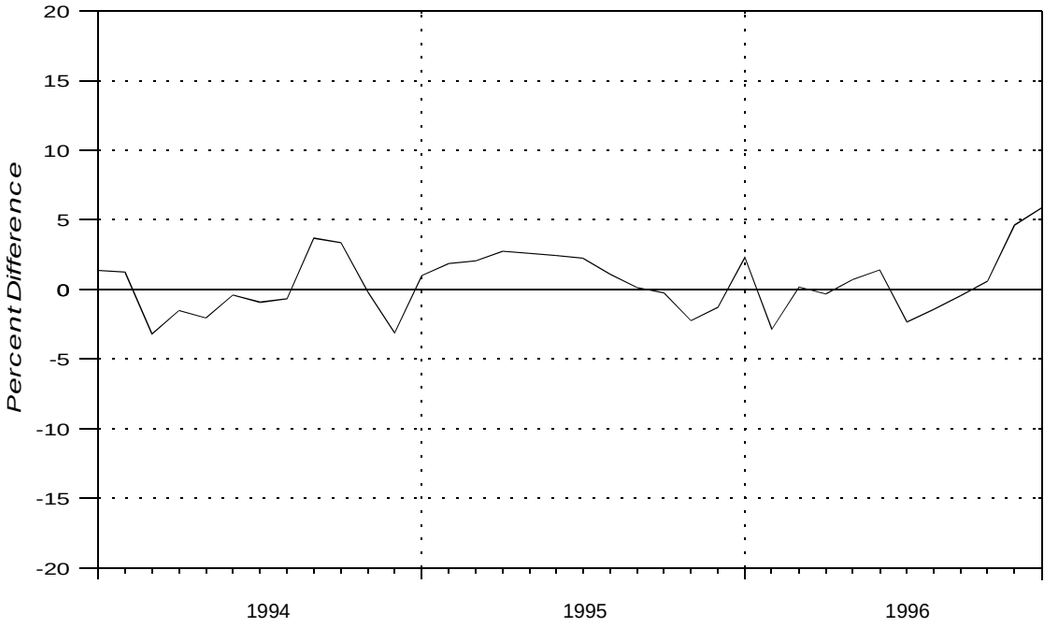
The monthly numbers discussed in this article are published in Tables 1, 2, 3, and 4 in each issue of the *Natural Gas Monthly*. If reporting or estimation errors are discovered, revisions to previous months of the current year are made only if they are significant. Data for months in prior years become final after publication of the *Natural Gas Annual.*

A detailed discussion of the reporting methodologies for all of the monthly data is given in the Appendix to this article which also includes Table SR4, a summary of the methodologies used to make analytical estimates and to report data from EIA surveys. This Appendix may also be helpful to users in evaluating the utility of the data. To maintain the quality of the monthly data, the EIA conducts programs of quality assurance for data reporting. EIA staff also continuously evaluate the estimation methodologies and recommend changes as needed to improve the estimates.

Results

Table SR1 shows the initial and final values for natural gas supply and disposition and the percentage difference between the values. Percentage differences are calculated by taking the difference between the initial value and the final value, dividing it by the final value, and multiplying by 100. Positive percentage differences indicate that the initial value is larger than the final value; negative ones mean the initial value is smaller than the final value. Figure SR1 is a graph of the percentage differences between final and initial marketed production values, and Figure SR2 is a graph for total consumption percentage differences. The percentage differences

Figure SR1. Percent Difference Between Initial and Final Monthly Values for Marketed Production, 1994-1996



Source: Energy Information Administration, *Natural Gas Monthly,* 1994 through 1996.

between the final and initial monthly estimates for consumption of natural gas by consumer sector are shown in Table SR2 and Figures SR3 through SR6. Differences between initial and final average prices are shown in Table SR3.

The major findings in comparing the differences between initial and final national monthly natural gas data are:

- Most differences between initial and final dry production volumes were 3 percent or smaller.
- Initial estimates for volumes of deliveries to residential consumers and consumption by electric utilities showed very little difference from final values for these end-use sectors. The differences were 2 percent or smaller for residential deliveries (except for a difference of 4 percent in January 1994) and less than one percent for electric utilities.
- Percentage differences between initial and final prices generally were small for the city gate (3 percent or less), residential (also 3 percent or less), and electric utility (2 percent or less) price series.
- When the data series in question has small volume amounts, the differences between initial and final data often result in large percentage differences.

A discussion of the findings by type of data follows.

Production

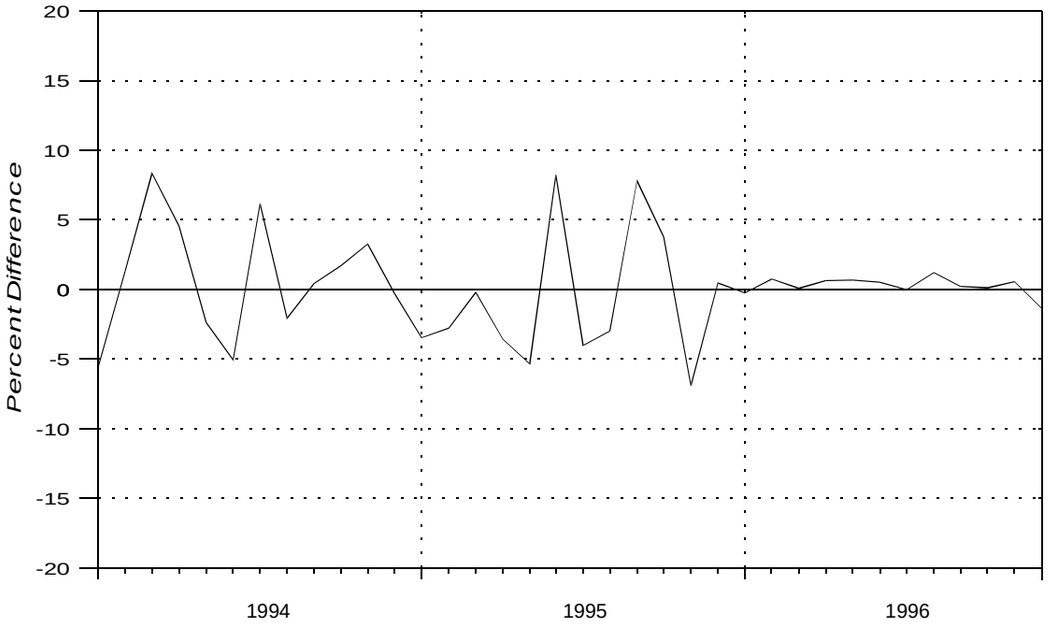
For 1994 through 1996, initial production estimates were analytical estimates.

Marketed Production. Marketed production is a broad indicator of market activity in the natural gas industry. As shown in Table SR1 and Figure SR1, the differences between initial estimates and final marketed production volumes in 1994, 1995, and 1996 were generally small. For all but three months the differences were plus or minus 3 percent or less.

Dry Gas Production. Monthly estimates for dry gas production show a pattern similar to that for marketed production since dry production estimates are primarily driven by the marketed production estimates. As

for marketed production, most of the differences were plus or minus 3 percent or less. Dry gas production is derived as marketed production minus extraction loss.

Figure SR2. Percent Difference Between Initial and Final Monthly Values for Total Consumption, 1994-1996



Source: Energy Information Administration, *Natural Gas Monthly,* 1994 through 1996.

Extraction Loss. The extraction loss estimates are derived by using the annual ratio of extraction loss to marketed production. Because the extraction loss volumes are small, the differences between initial and final volumes can result in large percentage differences.

Supplemental Gaseous Fuels. Supplemental gaseous fuels are the smallest component of the supply of natural gas, less than 1 percent of the total. Revisions to these data are usually very small volume amounts that often represent large percentage differences. The final volumes in 1994, 1995, and 1996 required either no adjustment or an adjustment of 1 to 2 billion cubic feet from the volumes initially reported.

Storage Withdrawals and Additions

For 1994 through 1996, storage data were taken from responses to the EIA survey, Form EIA-191, "Underground Gas Storage Report."

Storage withdrawals and additions illustrate the seasonal requirements that characterize the natural gas industry. During the heating season, November through March, the monthly withdrawals are large and can climb to 600 or more billion cubic feet. In the off-season, they usually drop to less than 100 billion cubic feet. Correspondingly, monthly additions are highest during the refill season, April through October. Revisions to off-season withdrawals (summer months) and off-season additions (winter months) generally tend to be small volume amounts that result in large percentage differences.

Over the 3-year period, the largest percentage differences between initial and final storage withdrawals occurred in the summer months. The percentage differences between initial and final additions to storage showed less variation, with a few large percentage differences in winter months.

Imports and Exports

For 1994 through 1996, import and export estimates were analytical estimates. For natural gas imports and

Table SR1. Initial Estimates and Revisions for Monthly Natural Gas Supply and Disposition in the United States, 1994-1996

(Volumes in Billion Cubic Feet)

Month	1994			1995			1996		
	Initial Value	Final Value	Percent Change[a]	Initial Value	Final Value	Percent Change[a]	Initial Value	Final Value	Percent Change[a]
Marketed Production									
January	1,714	1,691	1.4	1,694	1,677	1.0	1,712	1,673	2.3
February	1,534	1,515	1.3	1,523	1,495	1.9	1,535	1,580	-2.8
March	1,642	1,696	-3.2	1,694	1,660	2.0	1,677	1,674	0.2
April	1,588	1,612	-1.5	1,648	1,604	2.7	1,645	1,650	-0.3
May	1,635	1,669	-2.0	1,692	1,649	2.6	1,691	1,679	0.7
June	1,586	1,592	-0.4	1,626	1,587	2.5	1,657	1,634	1.4
July	1,635	1,650	-0.9	1,676	1,639	2.3	1,633	1,672	-2.3
August	1,646	1,657	-0.7	1,646	1,628	1.1	1,647	1,671	-1.4
September	1,631	1,573	3.7	1,583	1,581	0.1	1,602	1,609	-0.4
October	1,689	1,634	3.4	1,606	1,610	-0.2	1,648	1,638	0.6
November	1,677	1,680	-0.2	1,620	1,657	-2.2	1,690	1,615	4.6
December	1,689	1,743	-3.1	1,697	1,719	-1.3	1,753	1,656	5.9
Extraction Loss									
January	80	76	5.3	79	78	1.3	80	81	-1.2
February	71	68	4.4	71	70	1.4	72	77	-6.5
March	77	76	1.3	79	77	2.6	78	81	-3.7
April	74	73	1.4	77	75	2.7	77	80	-3.8
May	76	75	1.3	79	77	2.6	79	81	-2.5
June	74	72	2.8	76	74	2.7	77	79	-2.5
July	76	74	2.7	78	76	2.6	76	81	-6.2
August	77	75	2.7	77	76	1.3	77	81	-4.9
September	76	71	7.0	74	74	0.0	75	78	-3.8
October	79	74	6.8	75	75	0.0	77	79	-2.5
November	78	76	2.6	75	77	-2.6	79	78	1.3
December	79	79	0.0	79	80	-1.3	82	80	2.5
Dry Production									
January	1,634	1,615	1.2	1,615	1,599	1.0	1,632	1,591	2.6
February	1,463	1,447	1.1	1,452	1,426	1.8	1,463	1,504	-2.7
March	1,565	1,620	-3.4	1,615	1,582	2.1	1,599	1,592	0.4
April	1,514	1,539	-1.6	1,571	1,530	2.7	1,568	1,570	-0.1
May	1,559	1,593	-2.1	1,613	1,572	2.6	1,612	1,598	0.9
June	1,512	1,520	-0.5	1,550	1,513	2.4	1,580	1,555	1.6
July	1,559	1,575	-1.0	1,598	1,563	2.2	1,557	1,591	-2.1
August	1,569	1,582	-0.8	1,569	1,552	1.1	1,570	1,590	-1.3
September	1,555	1,502	3.5	1,509	1,507	0.1	1,527	1,531	-0.3
October	1,610	1,560	3.2	1,531	1,535	-0.3	1,571	1,558	0.8
November	1,599	1,604	-0.3	1,545	1,580	-2.2	1,611	1,537	4.8
December	1,610	1,664	-3.2	1,618	1,639	-1.3	1,671	1,576	6.0
Withdrawals from Storage									
January	755	821	-8.0	614	658	-6.7	713	772	-7.6
February	544	586	-7.2	541	575	-5.9	530	558	-5.0
March	239	245	-2.4	315	332	-5.1	399	414	-3.6
April	68	68	0.0	122	127	-3.9	110	112	-1.8
May	23	25	-8.0	30	34	-11.8	38	45	-15.6
June	32	37	-13.5	37	40	-7.5	29	35	-17.1
July	22	26	-15.4	50	54	-7.4	45	49	-8.2
August	28	30	-6.7	80	86	-7.0	51	54	-5.6
September	22	21	4.8	27	29	-6.9	29	32	-9.4
October	51	54	-5.6	65	68	-4.4	68	73	-6.8
November	193	208	-7.2	346	374	-7.5	351	362	-3.0
December	423	458	-7.6	613	648	-5.4	461	473	-2.5
Supplemental Fuels									
January	14	13	7.7	13	12	8.3	14	12	16.7
February	12	10	20.0	12	10	20.0	12	11	9.1
March	11	10	10.0	10	10	0.0	12	11	9.1
April	10	9	11.1	9	7	28.6	11	9	22.2
May	10	8	25.0	10	8	25.0	8	6	33.3
June	9	8	12.5	10	8	25.0	10	8	25.0
July	10	8	25.0	10	8	25.0	10	8	25.0
August	9	8	12.5	10	8	25.0	9	8	12.5
September	10	8	25.0	9	7	28.6	9	8	12.5
October	10	9	11.1	10	9	11.1	10	9	11.1
November	11	10	10.0	12	10	20.0	12	10	20.0
December	13	12	8.3	13	12	8.3	12	10	20.0

See footnotes at end of table.

Table SR1. Initial Estimates and Revisions for Monthly Natural Gas Supply and Disposition in the United States, 1994-1996

(Volumes in Billion Cubic Feet) -- Continued

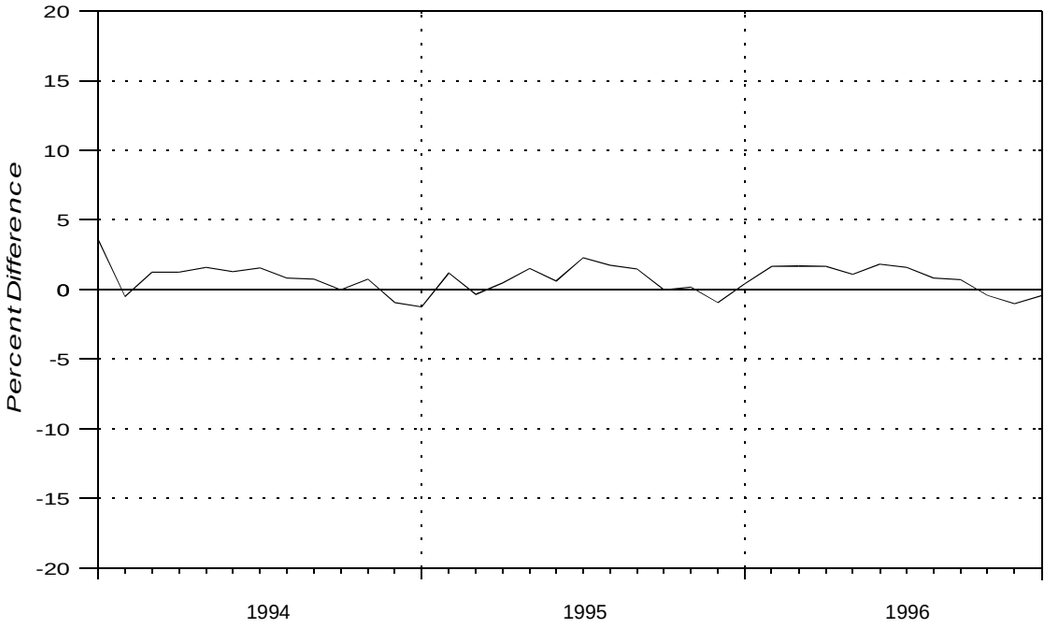
Month	1994			1995			1996		
	Initial Value	Final Value	Percent Change[a]	Initial Value	Final Value	Percent Change[a]	Initial Value	Final Value	Percent Change[a]
Imports									
January	214	241	-11.2	224	253	-11.5	225	264	-14.8
February	162	199	-18.6	209	236	-11.4	236	234	0.9
March	221	223	-0.9	232	250	-7.2	248	242	2.5
April	219	212	3.3	225	232	-3.0	236	237	-0.4
May	206	206	0.0	248	228	8.8	223	252	-11.5
June	210	201	4.5	214	217	-1.4	221	227	-2.6
July	214	221	-3.2	234	223	4.9	230	237	-3.0
August	194	219	-11.4	235	237	-0.8	227	238	-4.6
September	185	210	-11.9	211	228	-7.5	224	238	-5.9
October	211	222	-5.0	220	236	-6.8	238	248	-4.0
November	207	226	-8.4	198	236	-16.1	233	252	-7.5
December	218	245	-11.0	233	264	-11.7	245	271	-9.6
Additions to Storage									
January	46	35	31.4	40	45	-11.1	45	49	-8.2
February	47	50	-6.0	43	44	-2.3	90	97	-7.2
March	105	106	-0.9	100	104	-3.8	75	80	-6.3
April	277	293	-5.5	165	178	-7.3	219	231	-5.2
May	414	440	-5.9	348	378	-7.9	367	385	-4.7
June	374	392	-4.6	390	419	-6.9	385	423	-9.0
July	398	422	-5.7	342	367	-6.8	401	431	-7.0
August	361	383	-5.7	276	298	-7.4	395	412	-4.1
September	335	356	-5.9	323	350	-7.7	393	411	-4.4
October	212	230	-7.8	257	279	-7.9	272	283	-3.9
November	95	105	-9.5	85	96	-11.5	88	90	-2.2
December	55	54	1.9	49	53	-7.5	85	86	-1.2
Exports									
January	9	11	-18.2	12	14	-14.3	10	14	-28.6
February	9	13	-30.8	13	13	0.0	9	13	-30.8
March	9	19	-52.6	13	15	-13.3	10	15	-33.3
April	8	9	-11.1	14	12	16.7	10	10	0.0
May	9	8	12.5	11	12	-8.3	9	8	12.5
June	11	13	-15.4	13	16	-18.8	12	12	0.0
July	11	11	0.0	13	15	-13.3	14	14	0.0
August	11	14	-21.4	16	14	14.3	17	17	0.0
September	14	14	0.0	14	11	27.3	13	11	18.2
October	14	13	7.7	12	12	0.0	11	12	-8.3
November	12	19	-36.8	14	13	7.7	11	14	-21.4
December	13	18	-27.8	10	8	25.0	12	13	-7.7
Total Consumption									
January	2,396	2,537	-5.6	2,320	2,403	-3.5	2,568	2,574	-0.2
February	2,344	2,314	1.3	2,146	2,207	-2.8	2,353	2,335	0.8
March	2,217	2,046	8.4	2,094	2,098	-0.2	2,211	2,209	0.1
April	1,713	1,638	4.6	1,717	1,780	-3.5	1,838	1,826	0.7
May	1,365	1,398	-2.4	1,483	1,567	-5.4	1,587	1,576	0.7
June	1,312	1,382	-5.1	1,510	1,395	8.2	1,462	1,454	0.6
July	1,462	1,377	6.2	1,437	1,497	-4.0	1,436	1,436	0.0
August	1,375	1,404	-2.1	1,502	1,548	-3.0	1,483	1,465	1.2
September	1,356	1,350	0.4	1,502	1,393	7.8	1,402	1,399	0.2
October	1,490	1,465	1.7	1,542	1,486	3.8	1,533	1,531	0.1
November	1,765	1,709	3.3	1,755	1,886	-6.9	1,907	1,896	0.6
December	2,082	2,088	-0.3	2,332	2,321	0.5	2,236	2,266	-1.3

[a] The percent change is the initial value minus the final value, divided by the final value, multiplied by 100.

Note: The monthly volumes may not sum to total volume because the initial estimates in the early months of the year may have been revised before the annual total is first published.

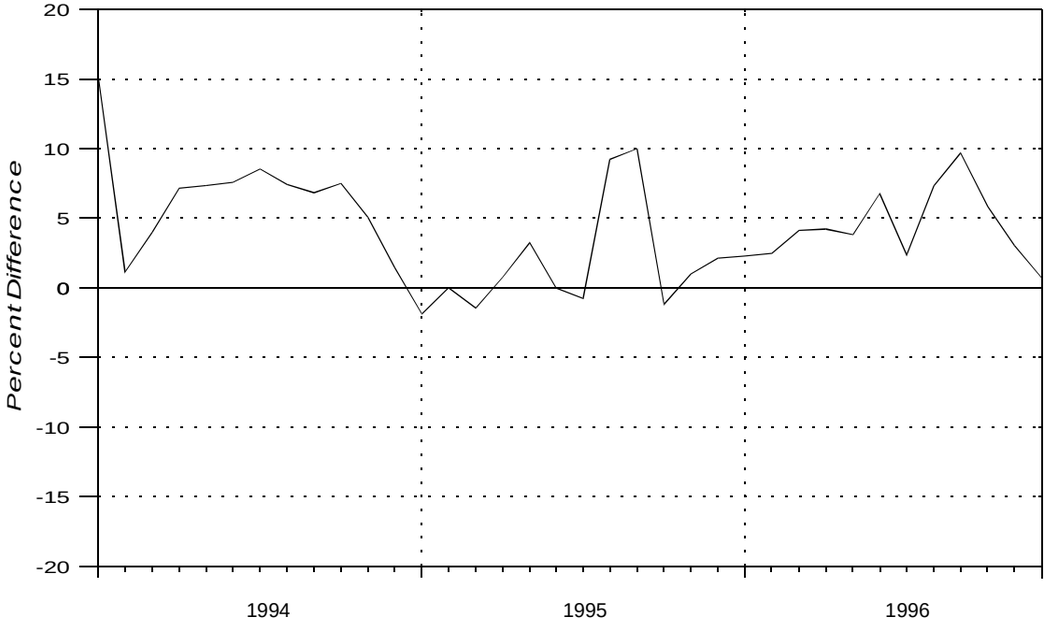
Source: Energy Information Administration, *Natural Gas Monthly,* 1994 through 1996.

Figure SR3. Percent Difference Between Initial and Final Monthly Values for Natural Gas Delivered to Residential Consumers, 1994-1996



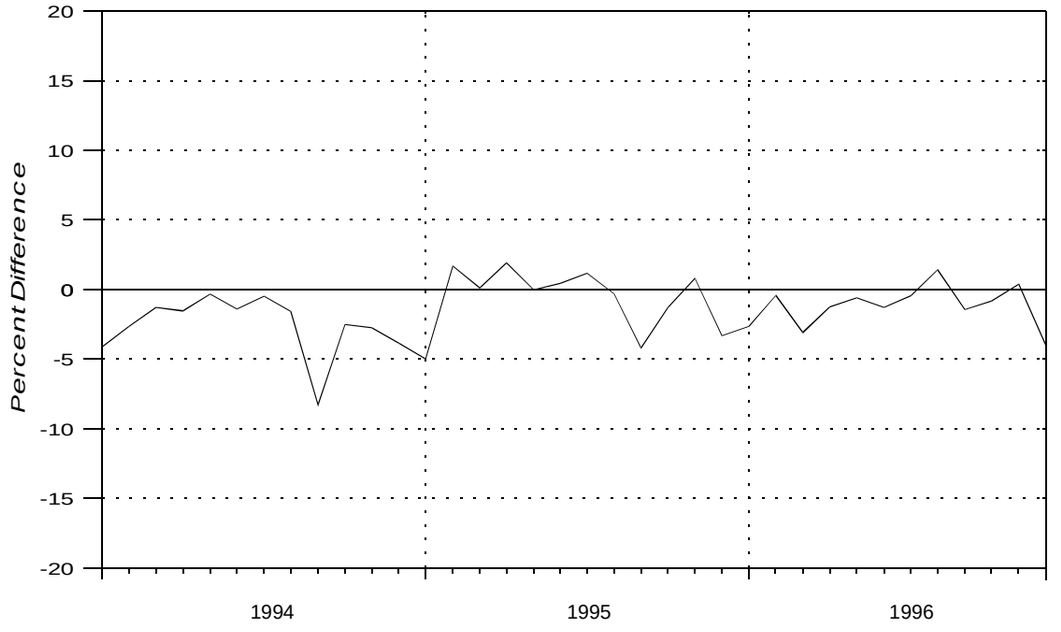
Source: Energy Information Administration, *Natural Gas Monthly,*1994 through 1996.

Figure SR4. Percent Difference Between Initial and Final Monthly Values for Natural Gas Delivered to Commercial Consumers, 1994-1996



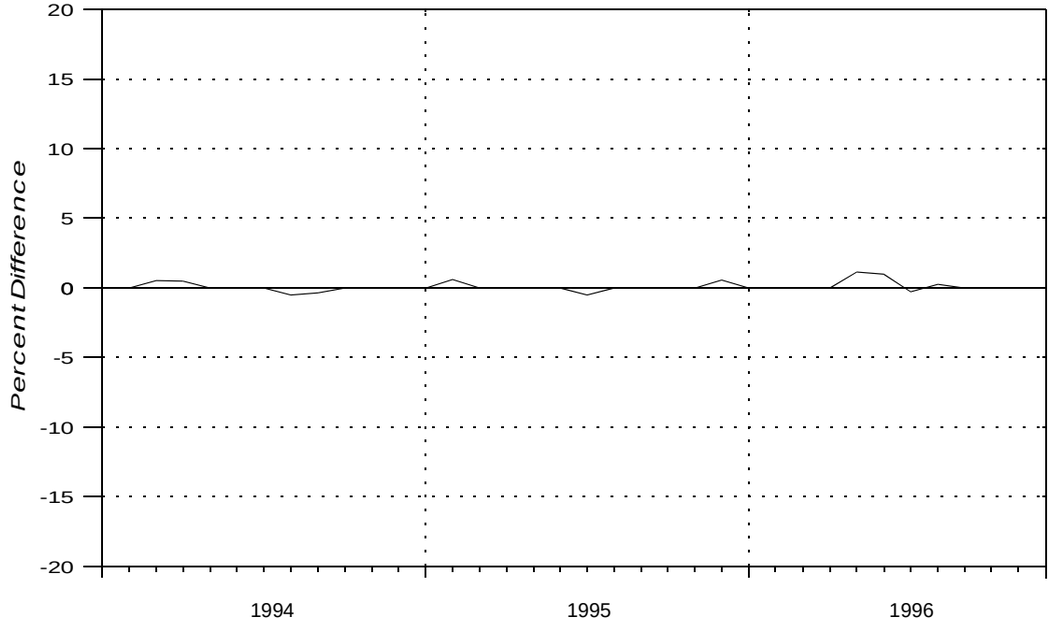
Source: Energy Information Administration, *Natural Gas Monthly,*1994 through 1996.

Figure SR5. Percent Difference Between Initial and Final Monthly Values for Natural Gas Delivered to Industrial Consumers, 1994-1996



Source: Energy Information Administration, *Natural Gas Monthly,* 1994 through 1996.

Figure SR6. Percent Difference Between Initial and Final Monthly Values for Natural Gas Delivered to Electric Utility Consumers, 1994-1996



Source: Energy Information Administration, *Natural Gas Monthly,* 1994 through 1996.

Table SR2. Initial Estimates and Revisions for Monthly Natural Gas Consumption in the United States, 1994-1996

(Volumes in Billion Cubic Feet)

Month	1994			1995			1996		
	Initial Value	Final Value	Percent Change[a]	Initial Value	Final Value	Percent Change[a]	Initial Value	Final Value	Percent Change[a]
Lease and Plant Fuel									
January	107	96	11.5	106	105	1.0	107	106	0.9
February	96	86	11.6	95	94	1.1	96	101	-5.0
March	103	97	6.2	106	104	1.9	105	106	-0.9
April	99	92	7.6	103	100	3.0	104	104	0.0
May	102	95	7.4	106	103	2.9	106	106	0.0
June	99	90	10.0	102	99	3.0	104	102	2.0
July	102	93	9.7	103	101	2.0	102	105	-2.9
August	103	94	9.6	103	101	2.0	103	105	-1.9
September	102	90	13.3	99	99	0.0	100	102	-2.0
October	106	94	12.8	101	102	-1.0	103	104	-1.0
November	103	97	6.2	101	105	-3.8	106	103	2.9
December	106	100	6.0	107	109	-1.8	110	105	4.8
Pipeline Fuel									
January	79	85	-7.1	72	79	-8.9	85	85	0.0
February	69	78	-11.5	68	73	-6.8	78	77	1.3
March	62	68	-8.8	64	69	-7.2	73	72	1.4
April	50	54	-7.4	55	58	-5.2	61	59	3.4
May	43	46	-6.5	49	50	-2.0	52	50	4.0
June	42	45	-6.7	43	45	-4.4	48	46	4.3
July	42	45	-6.7	46	48	-4.2	47	46	2.2
August	43	46	-6.5	52	50	4.0	48	47	2.1
September	39	44	-11.4	46	45	2.2	45	45	0.0
October	45	48	-6.3	49	48	2.1	50	49	2.0
November	52	56	-7.1	63	61	3.3	62	62	0.0
December	63	70	-10.0	76	76	0.0	73	74	-1.4
Delivered to Consumers									
Residential									
January	987	953	3.6	806	816	-1.2	938	934	0.4
February	838	842	-0.5	763	754	1.2	845	831	1.7
March	639	631	1.3	598	600	-0.3	717	705	1.7
April	397	392	1.3	421	419	0.5	482	474	1.7
May	251	247	1.6	264	260	1.5	274	271	1.1
June	156	154	1.3	160	159	0.6	165	162	1.9
July	129	127	1.6	134	131	2.3	126	124	1.6
August	123	122	0.8	116	114	1.8	119	118	0.8
September	131	130	0.8	136	134	1.5	139	138	0.7
October	221	221	0.0	216	216	0.0	242	243	-0.4
November	394	391	0.8	490	489	0.2	498	503	-1.0
December	632	638	-0.9	751	758	-0.9	735	738	-0.4
Commercial									
January	548	476	15.1	419	427	-1.9	491	480	2.3
February	441	436	1.1	411	411	0.0	454	443	2.5
March	363	349	4.0	337	342	-1.5	403	387	4.1
April	254	237	7.2	256	254	0.8	296	284	4.2
May	175	163	7.4	190	184	3.3	190	183	3.8
June	142	132	7.6	133	133	0.0	142	133	6.8
July	140	129	8.5	132	133	-0.8	129	126	2.4
August	130	121	7.4	142	130	9.2	132	123	7.3
September	125	117	6.8	143	130	10.0	136	124	9.7
October	172	160	7.5	169	171	-1.2	181	171	5.8
November	248	236	5.1	300	297	1.0	304	295	3.1
December	345	340	1.5	429	420	2.1	412	409	0.7

See footnotes at end of table.

Table SR2. Initial Estimates and Revisions for Monthly Natural Gas Consumption in the United States, 1994-1996
(Volumes in Billion Cubic Feet) -- Continued

Month	1994			1995			1996		
	Initial Value	Final Value	Percent Change[a]	Initial Value	Final Value	Percent Change[a]	Initial Value	Final Value	Percent Change[a]
Industrial									
January	726	757	-4.1	738	777	-5.0	779	800	-2.6
February	704	723	-2.6	719	707	1.7	744	747	-0.4
March	706	715	-1.3	739	738	0.1	757	781	-3.1
April	649	659	-1.5	734	720	1.9	727	736	-1.2
May	629	631	-0.3	711	711	0.0	697	701	-0.6
June	632	641	-1.4	666	663	0.5	701	710	-1.3
July	618	621	-0.5	685	677	1.2	674	677	-0.4
August	629	639	-1.6	682	684	-0.3	714	704	1.4
September	617	673	-8.3	642	670	-4.2	696	706	-1.4
October	662	679	-2.5	700	709	-1.3	731	737	-0.8
November	678	697	-2.7	742	736	0.8	767	764	0.4
December	704	732	-3.8	760	786	-3.3	775	807	-4.0
Electric Utility									
January	170	170	0.0	199	199	0.0	168	168	0.0
February	149	149	0.0	169	168	0.6	137	137	0.0
March	187	186	0.5	245	245	0.0	156	156	0.0
April	205	204	0.5	229	229	0.0	170	170	0.0
May	216	216	0.0	258	258	0.0	267	264	1.1
June	319	319	0.0	297	297	0.0	302	299	1.0
July	362	362	0.0	405	407	-0.5	357	358	-0.3
August	380	382	-0.5	468	468	0.0	368	367	0.3
September	295	296	-0.3	316	316	0.0	285	285	0.0
October	264	264	0.0	240	240	0.0	226	226	0.0
November	231	231	0.0	198	198	0.0	170	170	0.0
December	208	208	0.0	173	172	0.6	132	132	0.0

[a] The percent change is the initial value minus the final value, divided by the final value, multiplied by 100.
Note: The monthly volumes may not sum to total volume because the initial estimates in the early months of the year may have been revised before the annual total is first published.
Source: Energy Information Administration, *Natural Gas Monthly,* 1994 through 1996.

exports data, where EIA has very limited information to make the estimates and the volume amounts are relatively small, especially the export volume amounts, the resulting percentage differences tend to be large. For imports, the differences ranged from negative 19 percent to positive 9 percent during the 3-year period. Nearly all of the natural gas imports are pipeline imports from Canada. The methodology to estimate imports was based on the most recently available information from the National Energy Board (NEB) of Canada. The NEB provides data which are two months earlier that the month being estimated.

Total Consumption

For January 1994 through May 1996, initial total consumption estimates were analytical estimates. The initial estimates for June 1996 through December 1996 presented here were taken from a combination of reported data (residential, commercial, industrial, and electric utility data) and analytical estimates (lease fuel, plant fuel, and pipeline fuel data). As mentioned earlier, the initial estimates for total consumption were taken from the STIFS model beginning in June 1996, and they are not discussed in this report.

Total consumption is also a broad indicator of market activity in the natural gas industry. The initial volume was estimated on the basis of an average percentage change from the previous month to the current month. (See the Reporting Methodologies Appendix in the Article for a detailed description of the estimation methodology.) The percentage differences for total consumption compare initial analytical estimates to final consumption volumes which are taken from data reported to EIA surveys. Over the 3-year period, these differences ranged from negative 12 percent to positive 10 percent.

Consumption by Sector

The consumption sectors consist of deliveries to residential, commercial, and industrial consumers; consumption by electric utilities; consumption for lease and plant fuel; and consumption by natural gas pipelines as compressor fuel.

Table SR3. Initial Estimates and Revisions for Monthly Natural Gas Average Price in the United States, 1994-1996

(Prices in Dollars per Thousand Cubic Feet)

Month	1994			1995			1996		
	Initial Value	Final Value	Percent Change[a]	Initial Value	Final Value	Percent Change[a]	Initial Value	Final Value	Percent Change[a]
Wellhead Price									
January	2.27	1.93	17.6	1.64	1.62	1.2	2.20	2.05	7.3
February	2.24	1.88	19.1	1.56	1.48	5.4	2.00	1.89	5.8
March	1.90	1.93	-1.6	1.54	1.47	4.8	2.04	1.95	4.6
April	1.93	1.91	1.0	1.57	1.52	3.3	2.22	2.08	6.7
May	1.83	2.00	-8.5	1.64	1.55	5.8	2.20	2.01	9.5
June	1.81	1.80	0.6	1.58	1.58	0.0	2.05	2.08	-1.4
July	1.76	1.81	-2.8	1.49	1.43	4.2	2.32	2.25	3.1
August	1.70	1.83	-7.1	1.53	1.43	7.0	2.30	2.10	9.5
September	1.56	1.78	-12.4	1.48	1.52	-2.6	1.99	1.85	7.6
October	1.60	1.70	-5.9	1.67	1.54	8.4	2.14	1.94	10.3
November	1.57	1.75	-10.3	1.72	1.61	6.8	2.70	2.50	8.0
December	1.77	1.88	-5.9	2.04	1.84	10.9	3.53	3.26	8.3
City Gate Price									
January	3.11	3.04	2.3	2.79	2.79	0.0	3.13	3.14	-0.3
February	3.25	3.26	-0.3	2.71	2.71	0.0	3.17	3.16	0.3
March	3.29	3.33	-1.2	2.81	2.74	2.6	3.16	3.17	-0.3
April	3.11	3.15	-1.3	2.71	2.72	-0.4	3.25	3.22	0.9
May	3.13	3.17	-1.3	2.75	2.80	-1.8	3.21	3.18	0.9
June	3.20	3.17	0.9	2.90	2.89	0.3	3.32	3.41	-2.6
July	3.17	3.12	1.6	2.88	2.89	-0.3	3.51	3.49	0.6
August	3.18	3.15	1.0	2.89	2.87	0.7	3.50	3.46	1.2
September	2.95	2.92	1.0	2.87	2.89	-0.7	3.07	3.05	0.7
October	2.82	2.80	0.7	2.88	2.83	1.8	2.93	2.94	-0.3
November	2.83	2.84	-0.4	2.68	2.67	0.4	3.47	3.46	0.3
December	2.80	2.86	-2.1	2.80	2.83	-1.1	4.19	4.18	0.2
Delivered to Consumers									
Residential Price									
January	5.75	5.93	-3.0	5.83	5.85	-0.3	5.61	5.64	-0.5
February	6.06	6.04	0.3	5.74	5.76	-0.3	5.80	5.82	-0.3
March	6.18	6.30	-1.9	5.86	5.84	0.3	5.87	5.93	-1.0
April	6.58	6.60	-0.3	6.04	6.06	-0.3	6.24	6.27	-0.5
May	7.01	6.84	2.5	6.51	6.54	-0.5	6.77	6.84	-1.0
June	7.59	7.66	-0.9	7.46	7.49	-0.4	7.72	7.83	-1.4
July	8.01	8.10	-1.1	7.68	7.82	-1.8	8.49	8.64	-1.7
August	8.13	8.22	-1.1	8.05	8.13	-1.0	8.56	8.73	-1.9
September	7.77	7.84	-0.9	7.68	7.73	-0.6	7.87	7.99	-1.5
October	6.86	6.86	0.0	6.62	6.62	0.0	7.07	7.05	0.3
November	6.25	6.27	-0.3	5.61	5.61	0.0	6.34	6.37	-0.5
December	6.02	6.06	-0.7	5.57	5.54	0.5	6.38	6.47	-1.4
Commercial Price									
January	4.94	5.50	-10.2	5.22	5.23	-0.2	5.19	5.29	-1.9
February	5.54	5.58	-0.7	5.11	5.14	-0.6	5.20	5.25	-1.0
March	5.60	5.67	-1.2	5.07	5.12	-1.0	5.24	5.36	-2.2
April	5.29	5.60	-5.5	5.02	5.08	-1.2	5.27	5.34	-1.3
May	5.41	5.47	-1.1	4.99	5.04	-1.0	5.33	5.40	-1.3
June	5.13	5.37	-4.5	5.11	5.16	-1.0	5.43	5.43	0.0
July	4.85	5.25	-7.6	5.04	5.03	0.2	5.52	5.46	1.1
August	5.31	5.31	0.0	4.93	4.99	-1.2	5.47	5.56	-1.6
September	5.12	5.36	-4.5	4.96	4.98	-0.4	5.34	5.46	-2.2
October	4.98	5.11	-2.5	4.77	4.82	-1.0	5.23	5.33	-1.9
November	5.11	5.19	-1.5	4.80	4.77	0.6	5.33	5.40	-1.3
December	5.13	5.24	-2.1	4.89	5.00	-2.2	5.74	5.78	-0.7

See footnotes at end of table.

Table SR3. Initial Estimates and Revisions for Monthly Natural Gas Average Price in the United States, 1994-1996
(Prices in Dollars per Thousand Cubic Feet) -- Continued

Month	1994			1995			1996		
	Initial Value	Final Value	Percent Change[a]	Initial Value	Final Value	Percent Change[a]	Initial Value	Final Value	Percent Change[a]
Industrial Price									
January	3.32	3.47	-4.3	2.89	2.95	-2.0	3.32	3.61	-8.0
February	3.50	3.43	2.0	2.97	2.85	4.2	3.53	3.61	-2.2
March	3.53	3.47	1.7	3.02	2.74	10.2	3.55	3.52	0.9
April	3.10	3.01	3.0	2.59	2.57	0.8	3.32	3.42	-2.9
May	3.03	2.92	3.8	2.52	2.54	-0.8	3.11	3.14	-1.0
June	2.90	2.69	7.8	2.44	2.44	0.0	3.13	3.13	0.0
July	2.82	2.77	1.8	2.37	2.34	1.3	3.21	3.17	1.3
August	2.74	2.67	2.6	2.34	2.26	3.5	3.06	3.05	0.3
September	2.63	2.55	3.1	3.02	2.42	24.8	2.84	2.77	2.5
October	2.53	2.49	1.6	2.53	2.44	3.7	2.86	2.89	-1.0
November	2.82	2.86	-1.4	2.70	2.68	0.7	3.58	3.57	0.3
December	3.08	2.99	3.0	3.06	3.07	-0.3	4.17	4.20	-0.7
Electric Utility Price									
January	2.67	2.67	0.0	2.13	2.13	0.0	2.91	2.87	1.4
February	2.80	2.80	0.0	2.00	2.00	0.0	3.01	3.07	-2.0
March	2.66	2.67	-0.4	1.91	1.92	-0.5	2.70	2.73	-1.1
April	2.44	2.44	0.0	1.96	1.97	-0.5	2.68	2.68	0.0
May	2.46	2.46	0.0	2.05	2.06	-0.5	2.52	2.52	0.0
June	2.25	2.25	0.0	2.05	2.06	-0.5	2.59	2.59	0.0
July	2.28	2.27	0.4	1.90	1.90	0.0	2.69	2.69	0.0
August	2.13	2.16	-1.4	1.84	1.84	0.0	2.58	2.57	0.4
September	2.00	2.00	0.0	1.94	1.95	-0.5	2.26	2.24	0.9
October	1.95	1.95	0.0	2.08	2.09	-0.5	2.37	2.37	0.0
November	2.10	2.10	0.0	2.21	2.22	-0.5	3.03	3.04	-0.3
December	2.17	2.17	0.0	2.58	2.58	0.0	3.98	3.98	0.0

[a] The percent change is the initial value minus the final value, divided by the final value, multiplied by 100.
Source: Energy Information Administration, *Natural Gas Monthly,* 1994 through 1996.

Deliveries to Residential, Commercial, and Industrial Consumers. For 1994 through 1996, residential, commercial, and industrial consumption deliveries to consumers were estimated from reports to the Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers."

Generally, the revisions to residential consumption estimates were very small. From 1994 through 1996, the percentage differences ranged from negative 1 percent to positive 2 percent, except in January 1994 when the difference was positive 4 percent. For commercial deliveries, the percentage differences between initial and final monthly volumes were generally larger in 1994 than they were in the other 2 years. Across the 3-year period, the percentage differences for deliveries to industrial consumers ranged from negative 8 percent to positive 2 percent. These differences were generally smaller in 1995 and 1996 than they were in 1994.

Electric Utilities. Electric utility consumption is taken directly from reports to the Form EIA-759, "Monthly Power Plant Report."

Usually electric utility consumption data are not revised; if revisions are required, they are nearly always very small. Over the 3-year period, these percentage differences were no larger than positive or negative 1 percent.

Lease Fuel, Plant Fuel, and Pipeline Fuel. Lease fuel, plant fuel, and pipeline fuel estimates are analytical estimates.

Lease and plant fuel account for about 6 percent of total consumption. The differences between initial and final monthly estimates for these segments of the industry generally were smaller in 1995 and 1996 than in 1994.

Average Prices

Wellhead price estimates are analytical estimates. All other prices are taken from the Form EIA-857, except electric utility prices which are taken from reports to the Federal Energy Regulatory Commission (FERC) Form 423, " Monthly Report of Cost and Quality of Fuels for Electric Plants."

Wellhead Price. The wellhead price represents the wellhead sales price, including charges for natural gas plant liquids subsequently removed from the gas; gathering and compression charges; and State production, severance, and / or similar charges.

The initial monthly wellhead prices are analytical estimates. The final monthly wellhead values are taken from reported monthly values, if available. In many States only an annual wellhead value is available. Annual values are distributed across the months according to the monthly distribution for similar States. Final monthly wellhead prices are calculated from the combination of the reported values, if available by month, and the values distributed across months. The percentage differences between initial and final wellhead prices were generally larger in 1994 than in subsequent years.

City Gate Price. The city gate price is the price at the point or measuring station at which a gas distribution company receives gas from a pipeline company or transmission system. Across the 3-year period, the differences between initial and final city gate prices were no larger than positive or negative 3 percent.

Residential, Commercial, and Industrial Prices. Prices in the residential, commercial, and industrial sectors represent only onsystem sales. Virtually all residential sales are included. However, the price is measured for only a portion of consumption in the commercial and industrial sectors. Residential prices are the highest of all of the consuming sectors and generally show the smallest variation from year to year. Across the 3-year period, most of the percentage differences between initial and final residential prices were no larger than positive or negative 1 percent. The largest differences were positive or negative 3 percent.

During the 1994-1996 period, onsystem sales of gas to commercial consumers represented from 77 to 79 percent of deliveries to commercial consumers. Generally, the percentage differences between initial and final commercial prices were small, although the differences in 1994 were somewhat larger than those in the other two years.

In 1994 and 1995 onsystem sales of gas to industrials represented 24 to 25 percent of total deliveries to industrials and in 1996 only 19 percent. The percentage differences for industrial prices showed some variation across the period, although they generally were within the range of positive or negative 4 percent. In March and September of 1995, the percentage differences between initial and final prices were substantial. Problems of misreporting of initial prices were identified and the subsequent corrections resulted in the large differences.

Electric Utility Prices. Prices for natural gas consumption by electric utilities are taken from reports filed by the utilities and reflect the price for all gas used by the utilities. None of the percentage differences from 1994 to 1996 were larger than positive or negative 2 percent.

Appendix: Reporting Methodologies

Table SR4 lists the methodologies for deriving the monthly data to be published initially for the components of natural gas supply and disposition. Monthly numbers are revised each year so that their totals for the 12 months will agree with the annual totals published in the *Natural Gas Annual*, and the revised monthly numbers are published in the following issue of the *Natural Gas Monthly*. In some instances, monthly data are reported on an annual survey, and the monthly estimates are revised to reflect the reported data. When monthly data are not reported, the percentage distribution across months for the monthly estimates is applied to the final annual number to derive final monthly estimates. The most current monthly natural gas data, including any revisions, are also published in EIA's *Monthly Energy Review*.

Throughout this discussion, many sources of data and methods of estimation are referenced. Appendices A (Explanatory Notes), B (Data Sources), and C (Statistical Considerations) of the *Natural Gas Monthly* provide further information about data sources, estimation procedures, annual adjustments, and sample design. These sources may also be helpful in evaluating the monthly data.

Marketed Production

Marketed production for the current month is estimated by the EIA by determining a daily production rate for the month. This estimated daily rate of production is then multiplied by the number of days in the

month to produce the production estimate for the month. The effects of weather, storage levels, gas import volumes, and other industry developments are considered in preparing the estimate.

The estimate of a daily production rate is made by applying an average historic daily production ratio to a daily base rate, usually the latest known rate. The average historic daily production ratio equals the ratio of the daily rate during a given month to the daily rate during the previous month. This calculation is performed on eight years of historic data, and the average ratio for a particular month may be any combination of 2 to 8 years of historic ratios. The final determination of the average historic daily production ratio to be used is made by an analyst.

The average historic daily production ratio is applied to the latest known monthly production rate to yield the daily rate estimate for the month in question. This new daily rate estimate is then multiplied by the historic production ratio for the next month to yield that month's daily rate estimate, and the procedure continues for successive months.

The monthly marketed production data are revised on the basis of the data reported on Form EIA-895, "Monthly Quantity of Natural Gas Report." This is a voluntary form, and data from this form become available about 2 months after the initial analytical estimates are published. The respondents—-energy, tax, or conservation agencies in the natural gas-producing States—-provide production data. Beginning with the collection of 1995 monthly production data, the EIA began using the Form EIA-895. Prior to 1995, voluntary reports showing monthly production data were filed with the Interstate Oil and Gas Compact Commission (IOGCC) by most of the gas-producing States, and these reports were used to adjust the analytical estimates 2 months later.

Through 1995, State offices also provided the natural gas production reports filed annually with the EIA on the Form EIA-627, "Annual Quantity and Value of Natural Gas Report." Form EIA-627 respondents provided production numbers by month and a total for the year. Data reported on this Form become the final production information. In some States, these reports were not available at the time that the EIA issues the *Natural Gas Annual*, so production data were taken from the EIA annual publication *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves*, or EIA estimated the data on the basis of historical filings. When the data reported on Form EIA-627 were subsequently received, any necessary revisions are made, and the revised data are published in the *Natural Gas Monthly*. Beginning with the collection of 1996 data, the EIA discontinued the Form EIA-627. Production volumes are now reported each month on the Form EIA-895.

Total Consumption

Through May 1996, analytical estimates of total consumption were based on percentage changes. An average percentage change over the previous 3 years was applied to the previous month's data to estimate a value for the current month's consumption. Consumption of natural gas fluctuates across the months of the year as residential and commercial heating requirements change due to the seasonal variation in the weather. Since the estimate for total consumption was based on an average activity over the past 3 years, it sometimes showed large revisions if the weather for the current year was markedly colder or warmer than the average weather of the previous 3 years.

To make the estimate, an average percentage change was calculated by averaging the percentage changes from the previous to current months for the corresponding time period during the previous 3 years. For example, to estimate consumption for July 1995, the percentage changes in consumption from June 1994 to July 1994, from June 1993 to July 1993, and from June 1992 to July 1992 were calculated. These three figures were then averaged, and this average change was applied to the June 1997 consumption volume to estimate July 1997 consumption.

Beginning in June 1996, initial estimates of total consumption were taken from the Short-Term Integrated Forecasting System (STIFS) model. The STIFS estimates were replaced 3 months later with reported data. This article does not address the differences between the STIFS estimates for total consumption and the final monthly data (for the period from June 1996 through December 1996).

Dry Gas Production and Extraction Loss

The analytical estimate of extraction loss is estimated by applying the annual ratio of extraction loss to marketed production to each month's marketed production volume. The ratio is calculated by using the most recently available annual data. Dry production of natural gas is then derived by subtracting the extraction loss estimate from the marketed production estimate.

Storage

Monthly natural gas storage data are reported on the Form EIA-191, "Monthly Underground Gas Storage Report," by all storage operators, including interstate pipeline storage operators. The form collects storage data by State, county, and storage field. The annual totals of monthly storage additions and withdrawals reported on the Form EIA-191 are compared with the annual storage additions and withdrawals reported on the Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition," and all differences are resolved with the respondents.

Differences between final and initial reported storage volume data are caused primarily by two factors. First, the monthly storage volumes are taken from reports for underground facilities only, whereas the annual storage volume data also include reports for liquefied natural gas (LNG) facilities. Second, monthly respondents frequently estimate the volumes they report and sometimes revise them later. Thus, differences in storage volume data are due primarily to revisions by respondents. These data are validated by the EIA and published without any statistical estimation or adjustment.

Imports and Exports

Initial monthly analytical estimates of exports of natural gas are estimated on the basis of analysis of the industry and shipments of liquefied natural gas. Initial monthly analytical estimates of import data are estimated by the same techniques, in addition to using data from the National Energy Board of Canada. From 1984 to 1992, pipeline imports of gas came only from Canada. Small amounts of gas have been imported from Mexico since late 1993.

Final monthly export and import data were reported on the Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." Although this was an annual form, it required the reporting of data by month. The Form FPC-14 was discontinued after the reporting of 1994 data. In 1995 and subsequent years, final import and export data are taken from reports to the Office of Fossil Energy, U.S. Department of Energy.

Supplemental Gaseous Fuels

Monthly analytical estimates of supplemental gaseous fuels are derived from the sum of marketed production, net imports, and net withdrawals from storage. The ratio of supplemental gaseous fuels to the sum of these three components, as reported annually in the *Natural Gas Annual*, is applied to the monthly sum of these three components to calculate part of the estimate. The total estimate is the sum of this calculation and the volume of gas produced from coal gasification obtained from the Great Plains coal gasification plant in North Dakota. When annual data become final, the monthly supplemental gaseous fuels data are adjusted and become final.

Consumption by Sector

The residential, commercial, industrial, and electric utility sectors represent about 91 percent of total annual consumption. Lease and plant fuel data represent about 6 percent of total annual consumption, and analytical estimates are derived from monthly marketed production data. Pipeline fuel represents the smallest component of annual consumption, approximately 3 percent. Analytical estimates of pipeline fuel are derived as a percent of total consumption.

Residential, Commercial, and Industrial Deliveries

Deliveries to residential, commercial, and industrial consumers are estimated from reports on the Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers," a sample survey of natural gas companies that deliver gas to consumers. The sample is drawn from the respondents to the annual Form EIA-176. The sample design and estimation procedures are described in detail in “Statistical Considerations,” Appendix C of the *Natural Gas Monthly*. Briefly, the sample design is stratified so that, within each State, all companies handling large amounts of gas respond to the survey, and a sample of companies handling lesser amounts of gas also respond. In some States where there is a small number of companies, all companies report, and the reported data are shown without any estimation adjustments.

Electric Utility Consumption

Consumption by electric utilities is reported on the Form EIA-759, "Monthly Power Plant Report," filed by electric power plant operators. No sampling or estimation procedures are needed.

Lease Fuel, Plant Fuel, and Pipeline Fuel

The annual ratio of lease and plant fuel consumption to marketed production, as published in the *Natural Gas Annual*, is applied to the monthly marketed production number to calculate an analytical estimate. The ratio is calculated from the most recently available annual data.

From 1991 through 1995, lease fuel data were reported on the Form EIA-627. The respondents—energy, tax, or conservation agencies in the natural gas-producing States—provided a distribution by month of their annual lease fuel data. If monthly lease fuel data were not available for a State from the Form EIA-627, the ratio of annual lease fuel (as reported on the Form EIA-176) to gross withdrawals was calculated for the State. This ratio was then applied to monthly gross withdrawals for the State to estimate final monthly lease fuel. Plant fuel data are reported annually on the Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production," beginning in 1990. A monthly distribution is not reported for plant fuel. Annual plant fuel consumption is adjusted to the monthly distribution of the estimates.

Pipeline fuel data are the smallest component of consumption. To make the initial analytical estimate of monthly consumption of natural gas by pipelines, the most recent annual ratio of pipeline fuel consumption to total consumption, as published in the *Natural Gas Annual*, is applied to the monthly total consumption. When annual data for pipeline fuel become final, the revised annual ratio is calculated and is applied to each month's revised total consumption number to compute final monthly pipeline fuel consumption estimates.

Average Prices

Wellhead Prices

An initial analytical estimate of the wellhead price is calculated on the basis of the statistical relationships between U.S. monthly wellhead gas prices and the production-weighted monthly State wellhead prices from five States: Kansas, Mississippi, New Mexico, Oklahoma, and Texas, when available. Initial wellhead prices are adjusted, when necessary, in following months on the basis of the change in the production-weighted gas price from each of the five States. See Appendix A, "Explanatory Notes," of the *Natural Gas Monthly* for further discussion of wellhead values.

Final monthly wellhead prices were calculated from reports to the Form EIA-627 through 1995. The wellhead value reported on the form is divided by the corresponding marketed production volume to compute the average price. See Appendix A, "Summary of Data Collection Operations and Report Methodology," of the *Natural Gas Annual* for a more detailed discussion of the reporting of wellhead values and prices. In 1994 and 1995, the annual Form EIA-627 requested that respondents report wellhead values by month. However, many States reported only an annual wellhead value. The annual values were distributed across the months according to the monthly distribution for similar States. Monthly wellhead prices were calculated from the combination of the reported values, if available by month, and the values distributed across months.

The EIA discontinued the Form EIA-627 in 1996 and replaced it with the Form EIA-895 (described above in the section about marketed production). Responding States are requested to report revenues on a monthly basis on this new Form. In most cases they are not able to provide revenue data until they close their reporting for the year, usually a few months after the end of the year. Many States report the annual revenue but do not allocate it by month. In these instances, the annual values are distributed across the months according to the monthly distribution for similar States.

City Gate Price

The city gate price is the price at the point or measuring station at which a gas distribution company receives gas from a pipeline company or transmission system.

These prices are reported monthly on the sample survey Form EIA-857, described above. City gate prices are not reported on an annual survey form. Annual prices are calculated by dividing the sum of the revenues for 12 months by the sum of the volumes for 12 months.

Residential, Commercial, and Industrial Prices

Revenues for sales to residential, commercial, and industrial consumers are also reported on the Form EIA-857 with their associated volume. Average prices are calculated by dividing total revenue by total volume. Monthly prices are revised to agree with data published in the *Natural Gas Annual.* Average prices for deliveries to consumers are calculated for onsystem

sales only. Prices for gas delivered for the account of others are not available.

As the natural gas industry has moved toward open access, there has been an increase in the demand for the service of delivering gas for others. This type of arrangement means that someone other than the respondent to the Form EIA-857 actually owns and sells the gas. For example, a consumer contracts directly with a gas well operator or gas marketer to purchase gas supplies, while a pipeline or local distribution company (the Form EIA-857 respondent) provides only the transmission service. The respondents to the Form EIA-857 do not know the price of the gas that they transport for others.

In 1994, the industrial price data represent information for 25 percent of deliveries to industrials, in 1995 for 24 percent, and in 1996 for 19 percent. In the commercial sector, the 1994 price data represent information for 79 percent of deliveries, in 1994 for 77 percent, and in 1996 for 78 percent.

In the residential, commercial and industrial sectors, when annual data become available, the percentage distribution across months for the reported revenue is applied to the annual revenue amount to estimate monthly revenue. An average price is then calculated by using this revenue and the similarly estimated volume amounts.

Electric Utility Prices

Electric utility prices are taken from reports by the utilities on the Federal Energy Regulatory Commission (FERC) Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants." Revenues are reported in cents per million Btu and converted to dollars per thousand cubic feet of natural gas. See the EIA annual report *Cost and Quality of Fuels for Electric Utility Plants* for more detailed information about prices of natural gas delivered to electric utilities.

Table SR4. Methodology for Reporting Initial Monthly Natural Gas Supply and Disposition Data

Components	Reporting Methodology
Supply and Disposition	
Marketed Production	Estimated from Historical Data using Knowledge of Industry Developments
Extraction Loss	Derived from Marketed Production
Dry Production	Marketed Production minus Extraction Loss
Withdrawals from Storage	Reported on Form EIA-191
Supplemental Gaseous Fuels	Derived from Supply Estimates and Coal Gasification Information
Imports	Estimated from National Energy Board of Canada Information and Liquefied Natural Gas Information
Additions to Storage	Reported on Form EIA-191
Exports	Estimated from Industry Trends and Liquefied Natural Gas Information
Total Consumption	Estimated from Average Historical Month-to-Month Percent Changes for the previous 3 years
Consumption by Sector	
Lease and Plant Fuel	Derived from Marketed Production
Pipeline Fuel	Derived from Total Consumption
Deliveries to Consumers	
Residential	Estimated from Survey Form EIA-857
Commercial	Estimated from Survey Form EIA-857
Industrial	Estimated from Survey Form EIA-857
Electric Utilities	Reported on Form EIA-759
Average Prices	
Wellhead Price	Estimated Monthly State Wellhead Prices from Five States: Kansas, Mississippi, New Mexico, Oklahoma, and Texas (when available)
City Gate Price	Estimated from Survey Form EIA-857
Deliveries to Consumers	
Residential	Estimated from Survey Form EIA-857
Commercial	Estimated from Survey Form EIA-857
Industrial	Estimated from Survey Form EIA-857
Electric Utilities	Reported on FERC Form 423