

## Energy Overview

Economic recession, combined with mild winter weather and increasing prices have slowed the rise in Utah's demand for energy. Motor fuel prices have declined from record peaks early in 2003, but remain higher than 2002. Utah's coal industry supplies most of Utah's electricity needs, with natural gas adding new base load and peaking capacity. Residential and industrial natural gas prices have risen substantially since 1980. Renewable energy contributes a small but increasing portion of the state's energy supply. Utah's energy industry is meeting rising consumer demand with fewer employees as technology gradually automates production, processing and delivery.

## 2002 Summary and Review

### Petroleum

**Production.** Utah crude oil production declined in 2003 by 5.8% as in-state reserves were depleted. Utah's crude oil production is now less than one-third of peak year production in 1985. Replacement supplies from Wyoming were bolstered by imports from Canada to meet Utah demand for motor fuel, jet fuel and other petroleum products. Refinery receipts dropped by 3.6% during 2003, and overall crude oil supplied to the state declined by 5.7%.

**Prices.** Utah consumes increasing amounts of crude oil from Canada, and local prices are generally tied to OPEC decisions and international events. Military conflict in Iraq and supply problems in Nigeria and Venezuela caused an early year international price spike that has since moderated. The price of Utah crude oil rose commensurately, reaching more than \$29 per barrel, or 22.2% higher than in 2002. As a result, Utah consumers have been paying 10 to 50 cents more per gallon for motor fuel.

**Consumption.** Jet fuel consumption rose at twice the rate of other fuel demands in Utah over the past two decades, and by 7.8% in the past year alone. Motor gasoline demand rose by 1.6% in 2003, suggesting that the combination of rising prices and lingering economic recession were not enough to dampen enthusiasm for driving. In contrast, distillate fuel consumption grew by less than 1.0%, suggesting the effect of economic conditions.

**Industry Trends.** Utah refinery capacity has not changed in recent years, and average plant utilization is running above 90%. Utah's relative independence from foreign crude oil will probably assure steady supplies, but at prices that are ever more dependent upon world conditions. Current crude refinery stocks in Utah grew slightly during 2003, but are still about 24.1% lower than the long-term average.

### Natural Gas

**Production.** Conventional natural gas production in Utah continues to decline as fields are depleted. Meanwhile, the rise in natural gas production from coal bed methane fields in Emery and Carbon counties will help make up that loss for about the next 10 years. In fact, Utah consumes only 56.1% of in-state production, making Utah a net exporter of natural gas to other states. The number of producing wells is up sharply, to more than 4,500, from just 1,475 wells as recently as 1997.

**Prices.** Natural gas prices in the United States rose sharply in early 2003 due to national concerns about adequacy of supplies. Meanwhile, the expansion of Kern River gas pipeline capacity from 900 million to 1.7 billion cubic feet per day signaled the end of comparatively low natural gas prices in Utah. Natural gas that was once captive to the

intermountain west due to lack of pipeline capacity is now able to flow more freely to California consumers. As a result, the wholesale price of natural gas in Utah has risen \$1.80 per thousand cubic feet, to \$4.10. Utah natural gas prices are now only about 50 cents lower than the national benchmark Henry Hub price. There is no prospect for easing this situation. In fact, the newly-opened Kern River line is apparently already full, so further increases in capacity from Wyoming to California may eventually occur. Although a Questar rate hike request was approved in summer 2003, it was moderated by a rate decrease request.

**Consumption.** Utah relies more heavily on natural gas than do other states. Relatively mild winter weather in Utah moderated the effect of a natural gas price spike in early 2003. In any case, an eventual steep rise in consumer-level natural gas prices may encourage energy conservation efforts or even fuel-switching by some consumers.

Overall natural gas consumption in Utah declined by more than 4.5% during 2003, a decline similar to petroleum products. This comparison was likely the result of the economic recession and relatively mild winter weather conditions over the past season.

Industrial use of natural gas declined by 42.0% over the past decade, illustrating the loss of industrial base in Utah. Natural gas for power generation more than doubled over the last 10 years, as concerns over air quality prompted construction of gas-fired power plants to provide quick-start peaking capacity in Utah.

**Industry Trends.** The rise of coal bed methane production helped to make up for long-term decline in conventional natural gas fields in Utah. This fortunate condition will last about 10 years, after which coal bed methane production will most likely join conventional gas fields in permanent decline. Employment in oil and gas production has been declining at about 3% per year for the past decade. Loss of these high-paying jobs may be due, in part, to increasing use of labor-saving technology, but also mirrors the rate of oil reserve depletion in Utah.

The clean-burning quality of natural gas has resulted in its substitution for coal in new power plants being built in the United States. However, concerns about the reliability of long-term gas supplies suggest that coal will continue to account for a substantial portion of power generation.

Meanwhile, natural gas-fired power plants are now supplying base load as well as peaking capacity in Utah, and additional gas-fired power plants are in the planning or construction stages. Use of natural gas in motor vehicles has more than doubled over the past five years, but still remains a tiny part of Utah's overall demand.

### Electricity

**Production.** At 93.9% of the market, coal reigns supreme as the fuel of choice for power generation in Utah. Natural gas has increased its share of Utah power generation to about 3.6%, more than doubling its generation capacity since the late-1990s.

Electricity generation in Utah remained consistent from 1998 to 2002. Generation in 2003 rose by 0.5% over 2002.

**Prices.** Utah's current average rate of 5.3 cents per kilowatt-hour (kWh) for all sectors of the economy is lower than the national average of 7.2 cents, and lower than all mountain states except Wyoming. For

perspective, California's composite rate of 11.5 cents per kWh is also more volatile than Utah, where average rates between any consecutive years have not varied more than half a penny.

**Consumption.** Residential power consumption in Utah has more than doubled since 1980 and commercial power demand nearly tripled. Industrial power demand has grown more slowly, increasing by only 60% over the same period.

**Industry Trends.** Electric utility deregulation efforts have slowed, halted, or even reversed in many states, including Utah. Lingering effects of the "California energy crisis" include reduced consumer confidence, lowered prices, and greater market volatility in the west.

## Coal

**Production.** Utah coal production declined from 25.3 to 23.6 million tons from 2002 to 2003. Two Utah coal mines closed during 2003, consistent with a long-term trend toward fewer, larger mines.

About 2 million tons of Colorado coal contribute to Utah's power supply; however, more than 5 million tons of Utah coal are likewise burned to provide electricity wheeled to California. Several million additional tons of coal are shipped out-of-state each year for industrial and utility purposes, thus making Utah a net coal exporter.

**Prices.** After years of declining prices, the field price of Utah coal began increasing in 2001 and rose 39 cents per ton in 2003. However, overall coal mine income in Utah is lower than in recent years due to production declines. Meanwhile, mine operating costs continue to rise as some of the best quality and most accessible coal seams in Utah are depleted, and regulatory requirements gradually become more complex.

**Consumption.** Sales of Utah coal for power generation remain strong, primarily due to urban growth. Coal demand for industry, commercial and residential uses is declining in Utah, but remains steady for out-of-state customers, primarily in Nevada and California. Planned expansion of Utah's Intermountain Power Project and PacifiCorp forecasts for its own electricity generation suggest an annual need for at least 3 million more tons of coal for power generation within the next decade. This new demand will probably be met by Utah coal. Meanwhile, Utah's once important foreign export markets have ended completely, and are not expected to return. Coal sales for business, industry and home use have declined drastically as consumers opt for the convenience of natural gas.

**Industry Trends.** Utah mines are among the most productive in the world, and depend increasingly upon labor automation and high technology. As a result, employment at Utah mines is steadily declining. The existence of vast, low-cost coal reserves in Wyoming promises to keep overall coal prices low both in Utah and across the United States.

## Conclusion and Outlook for Utah Energy

The abundance of low-cost Utah coal will assure affordable, reliable electric power in Utah for the foreseeable future. Utah also produces more natural gas than it consumes; however, the days of inexpensive natural gas prices are probably gone forever due to long-term market changes. Utah will become increasingly dependent on other states and foreign countries for petroleum products as Utah crude oil production only meets one-third of in-state demand. Utah's renewable energy capacity will continue to grow slowly as technology improves.

## Minerals Overview

The estimated value of mineral production in Utah was \$1.88 billion in 2003, approximately \$63 million higher than the value for 2002, due to improving metal prices; increasing production of several base metals, salines, and cement; and expanding national and international economies. In decreasing order of value, contributions from the major industry segments were: base metals (\$715 million), industrial minerals (\$586 million), coal (\$445 million), and precious metals (\$133 million). The Utah Geological Survey estimates that 82 Large Mines (including coal) and 113 Small Mines will report production in 2003, compared to 81 Large Mines and 94 Small Mines in 2002. Through mid-November 2003, the Utah Division of Oil, Gas, and Mining received five new Large Mine permit applications (five acres and larger disturbance) and 19 new Small Mine permit applications (less than five acres disturbance). All of the Large Mine applications were made by changing from Small Mine to Large Mine permit status. Nationally, Utah ranked 10th in the value of nonfuel mineral production and 12th in coal production in 2002. These rankings will likely change after the release of final 2003 estimates; the nonfuel mineral ranking will rise while the coal ranking will fall. Utah contributed about 3% of the U.S. total value of nonfuel minerals production in 2002.

Operator surveys indicate that, with the exception of copper, both precious-metal and base-metal production for 2004 will increase modestly. Industrial-mineral production is at an all-time high and is projected to increase slightly, if at all. Industrial-mineral production is closely linked to regional and local construction and population growth and will be affected primarily by the level of construction activity in the Salt Lake valley and adjacent states. Coal production was modestly lower in 2003 and will decrease further in 2004, and coal prices are expected to decrease slightly. Higher metal prices led to the announcement of plans to open several small base and precious-metal mines. From all indications, metal prices will continue to improve in 2004.

Significant regulatory issues that continue to impact the minerals industry in Utah are the decreased availability of public lands open for mineral exploration and development, and state and federal regulations that cause difficulties and delays in obtaining required permits. The negative public perception of the mining industry also dampens industry's willingness to develop new resources.

## 2003 Summary

The value of Utah's mineral production in 2003 is estimated to be \$1.88 billion, an increase of about \$63 million (3.4%) from 2002. Estimated contributions from each of the major industry segments were:

- ▶ Base metals, \$715 million (38% of total)
- ▶ Industrial minerals, \$586 million (31% of total)
- ▶ Coal, \$445 million (24% of total)
- ▶ Precious metals, \$133 million (7% of total)

Compared to 2002, the 2003 values changed as follows: (1) base metals increased \$103 million, (2) industrial minerals increased \$21 million, (3) coal decreased \$22 million, and (4) precious metals decreased \$38 million.

## Base Metals

Base-metal production, valued at approximately \$715 million, was the largest contributor to the value of minerals produced in 2003. The value of base metals increased approximately \$103 million (17%) compared to 2002, due to increased copper production and an upswing in copper prices. In descending order of value, base metals produced were: copper, magnesium, molybdenum, and beryllium. These metals were produced by Kennecott Utah Copper Company (copper and molybdenum) from one mine in Salt Lake County; by Brush Resources, Inc. (beryllium) from two mines in Juab County; and by U.S. Magnesium LLC (magnesium) from its electrolytic facility using brines from the Great Salt Lake.

## Industrial Minerals

Industrial-minerals production (including sand and gravel), valued at approximately \$586 million, was the second-largest contributor to the value of minerals produced in 2003 and accounted for approximately 31% of the total value of minerals produced. In comparison to the relatively few (eight) Large Mines and facilities that produce base and precious metals, there were about 81 active Large Mines and brine-processing facilities that produced a myriad of industrial-mineral commodities and products. The above number of mines does not include the approximately 112 sand and gravel operations that are spread throughout the state. The estimated value of industrial minerals increased approximately \$21 million (3.7%) compared to 2002, due primarily to increased values of Portland cement and phosphate. Overall, most commodity prices were stable, while some prices actually increased during the year.

The five most important commodities or groups of commodities produced, in descending order of value, were: (1) salines, including salt, potash (potassium chloride), sulfate of potash (potassium sulfate), and magnesium chloride; (2) construction sand and gravel, crushed stone, and silica; (3) Portland cement; (4) lime, including quicklime and hydrated lime; and (5) phosphate. Together, these commodities contributed nearly 90% of the total value of industrial minerals produced in 2003.

## Coal

Approximately 23.6 million tons of high-Btu, low-sulfur coal valued at \$445 million was produced from 13 mines operated by nine companies in 2003. The mines are located in Carbon, Emery, and Sevier counties. Coal was the third-largest contributor to the value of minerals produced in 2003, and accounted for 24% of the total value of minerals produced. The value of coal decreased about \$22 million (5%) in 2003, due to a 7% decrease in production, despite slightly higher coal prices.

## Precious Metals

Precious metals, valued at \$133 million, accounted for approximately 7% of the total value of nonfuel minerals produced in 2003. The value of precious-metal production was attributed to gold (89%) and silver (11%). Precious-metal values decreased approximately \$38 million (22%) compared to 2002, due to significant decreases in the production of both gold and silver. The two primary producers of precious metals were Kennecott's Bingham Canyon mine, which recovers both silver and gold as by-products, and Kennecott's Barneys Canyon mine, which is a primary gold producer. Chief Consolidated Mining Company's Trixie mine, which produced a small amount of gold and silver in 2002, was idle in 2003. The Bingham Canyon and Barneys Canyon mines are located in western Salt Lake County, and the Trixie mine is located in

southwestern Utah County near the town of Eureka. The Barneys Canyon mine is in its final stage of heap-leach operation and is expected to end gold production within the next two years.

## Active Mines and New Mine Permits

Eighty-one Large Mines and 94 Small Mines reported production in 2002. The Large Mines, grouped by industry segment, were: industrial minerals (60), coal (13), base metals (4), and precious metals (4). The Small Mines were grouped as follows: precious metals (9); industrial minerals (60); and gemstones, fossils, geodes, and other (25). It is estimated that about 82 Large Mines (excluding sand and gravel) and 113 Small Mines will report production in 2003.

Through mid-November 2003, the Utah Division of Oil, Gas, and Mining received five new Large Mine permit applications (five acres and larger disturbance) and 19 new Small Mine permit applications (less than five acres disturbance). All of the Large Mine applications were made to change from Small Mine to Large Mine permit status. These numbers represent a decrease of one Large Mine permit application and one Small Mine permit application compared to 2002. All of the Large Mine permits were for industrial mineral operations. New Small Mine permits were grouped as follows: industrial minerals (15); precious metals (2); and gems, fossils, geodes, and other (2).

## Nonfuel Mineral Production Trends

According to preliminary data from the U.S. Geological Survey (USGS), the value of Utah's nonfuel mineral production in 2002 was \$1.23 billion, a decrease of about 10% from that of 2001. This followed a 5% decrease from 2000 to 2001. Nationally, Utah ranked 10th in 2002 (eighth in 2001) in the value of nonfuel mineral production and accounted for approximately 3% of the U.S. total in 2002. The Utah Geological Survey's estimate for the value of nonfuel mineral production for 2003 is \$1.44 billion, \$85 million (6%) higher than its nonfuel mineral production estimate for 2002. USGS data show that between 1991 and 2002, the value of nonfuel mineral production in Utah ranged from a low of \$1.18 billion in 1991, to a high of \$1.85 billion in 1995.

The number of exploration permits issued is expected to be lower in 2003 than in 2002. Only 10 Notices of Intent (NOI) to explore on public lands were filed with the Utah Division of Oil, Gas, and Mining through mid-November 2003, compared to 11 for all of 2002, and 14 for 2001. The 2003 NOIs were grouped as: industrial minerals (5); precious metals (3); and gems, fossils, geodes, and other (2).

## 2004 Outlook

The value of mineral production in Utah is expected to increase slightly in 2004. Operator surveys indicate that overall base-metal values will be lower while precious-metal values will be modestly higher. An increase in metal prices is forecast for the year, but decreased production of several metals will reduce overall values. The announced opening of one or two small base and precious-metal mines in the next two to three years will add to the state's metal values. Precious-metal production will be slightly higher in 2004 due to increased production from Kennecott's Bingham Canyon mine and anticipated production from several other Small Mine operations. Kennecott's Barneys Canyon mine will continue to produce less gold each year until its leach pads are depleted. Industrial-mineral values are projected to be higher in 2004, as the production of sand and gravel and crushed stone, salines, cement, lime, and phosphate ore is projected to be nearly the same or higher. Industrial mineral prices are expected to maintain their current levels.

Coal production is expected to decrease for the third year in a row in 2004 due to the closure of two mines and the potential idling of another mine. Coal prices are expected to decrease slightly during the year.

The number of NOIs approved for exploration has reached an all-time low, but it is expected that increased base and precious-metal prices will have a positive effect on the exploration for these metals for the next several years.

### **Significant Issues Affecting Utah's Mining Industry**

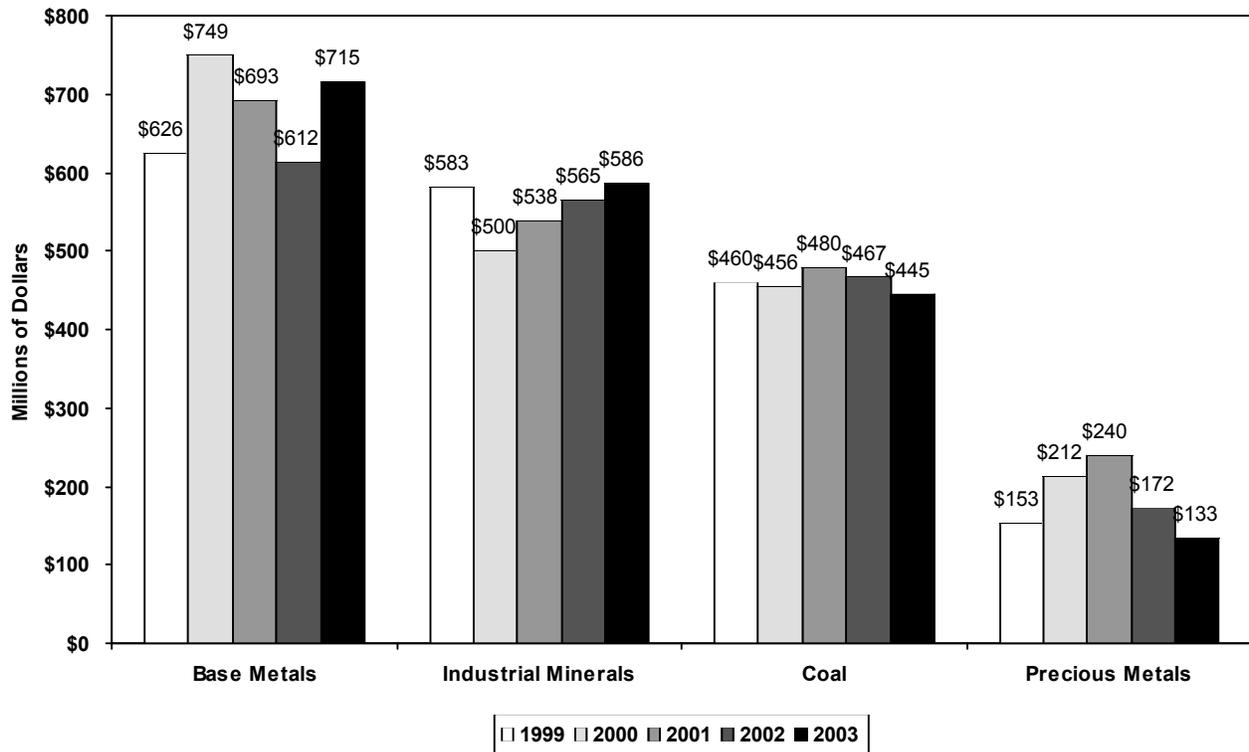
Significant regulatory issues that affect the long-term viability of Utah's mineral industry are the decreased availability of public lands open for mineral exploration and development, and state and federal regulations that cause difficulties and delays in obtaining required permits. The negative public perception of the mining industry also dampens industry's willingness to develop new resources.

### **Conclusions**

Utah's mineral production increased in value in 2003, due to the increased production of several base metals and industrial minerals. This increased value was partially offset by the lower production of precious metals and coal. Base-metal prices, excluding magnesium, and most industrial-mineral prices were higher in 2003, as were precious metals and coal. It is anticipated that Utah's mineral valuation will increase slightly in 2004, due to projected increases in the production of copper, gold, silver, and several major industrial-mineral commodities, and projected declines in the production of coal. These declines will be partially offset by price increases in almost all commodities as a result of an expanding regional and national economy. Overall, the value of industrial-mineral production is at an all-time high and any further increases will be small, if at all. Coal production is projected to decrease slightly in 2004.

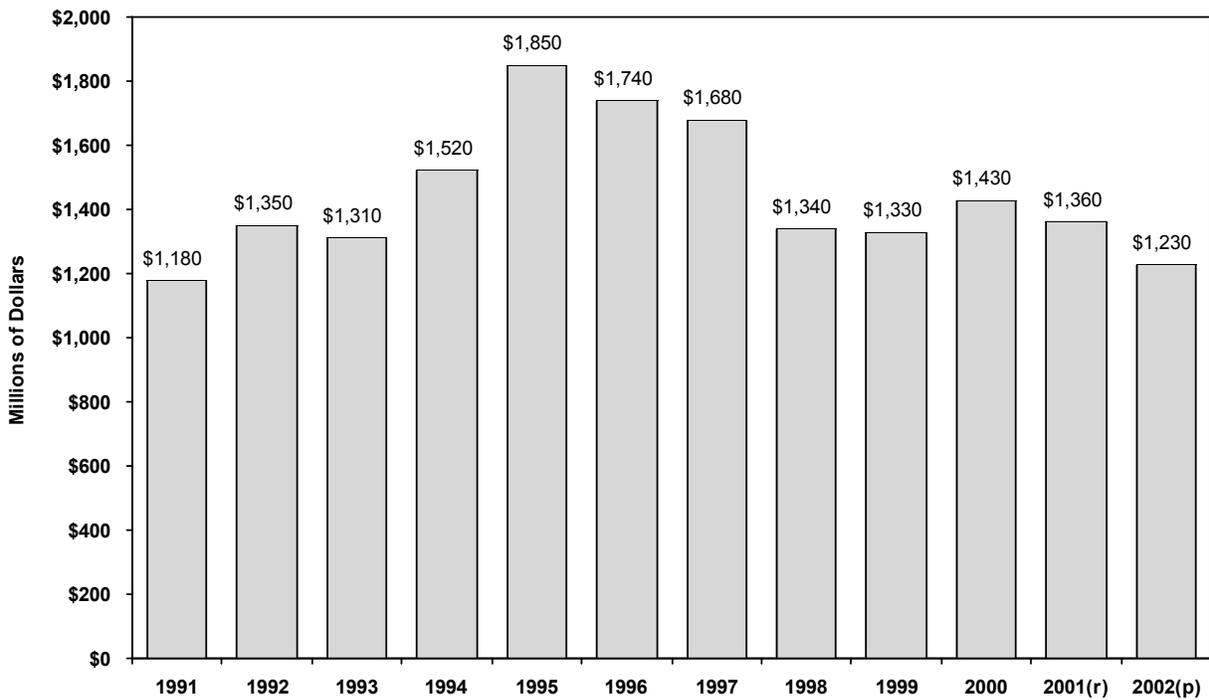
The number of producing Large and Small Mines increased this year, which increased the state's mineral production base; however, the overall level of mineral exploration continued to decline. Utah ranked 10th in the nation in the value of nonfuel mineral production and 12th in coal production in 2002. The nonfuel ranking will improve as metal prices improve; Utah's coal ranking will likely fall, as coal production is at a 10-year low and is projected to be lower in 2004.

**Figure 61**  
**Mineral Valuation -- Gross Value Estimates**



Source: Utah Geological Survey

**Figure 62**  
**Value of Nonfuel Minerals**



Source: U.S. Geological Survey

(r) = revised  
 (p) = preliminary



**Table 73**  
**Supply and Disposition of Crude Oil in Utah (Thousand Barrels)**

Year	Supply				Disposition			
	Field Production	Colorado Imports	Wyoming Imports	Canadian Imports	Utah Crude Exports	Refinery Receipts	Refinery Inputs	Refinery Stocks
1980	24,979	15,846	12,233	--	8,232	45,516	45,599	665
1981	24,309	14,931	11,724	--	7,866	43,700	42,673	762
1982	23,595	13,911	12,033	--	7,826	41,246	40,368	614
1983	31,045	14,696	7,283	--	8,316	43,615	43,185	632
1984	38,054	13,045	6,195	--	13,616	43,672	43,746	607
1985	41,080	13,107	6,827	--	14,597	45,549	45,021	695
1986	39,243	12,567	7,574	--	15,721	45,132	45,034	559
1987	35,829	13,246	7,454	--	12,137	45,664	44,483	612
1988	33,365	12,783	14,739	--	8,411	48,882	47,618	599
1989	28,504	13,861	18,380	--	6,179	46,775	46,767	609
1990	27,705	14,494	18,844	--	7,725	49,104	48,985	728
1991	25,928	14,423	20,113	--	8,961	48,647	48,852	513
1992	24,074	13,262	21,949	--	6,901	50,079	49,776	645
1993	21,826	11,575	22,279	--	7,758	48,554	48,307	691
1994	20,668	10,480	26,227	--	8,048	48,802	48,506	767
1995	19,976	9,929	24,916	--	7,861	46,695	46,666	767
1996	19,529	9,857	24,905	174	7,713	46,126	45,766	590
1997	19,593	8,565	28,191	536	7,819	48,492	48,486	654
1998	19,218	8,161	28,414	2,153	7,785	49,539	49,023	702
1999	16,362	7,335	28,461	6,371	7,180	51,157	49,508	720
2000	15,609	7,173	26,398	7,870	6,709	48,484	47,107	454
2001	15,267	7,208	25,120	9,500	5,945	49,597	49,509	533
2002	13,771	7,141	25,456	10,966	5,616	47,737	49,012	422
2003 (e)	12,971	7,059	24,228	9,784	5,021	46,023	46,499	475

e = estimate

Source: Utah Energy Office

**Table 74**  
**Supply and Disposition of Petroleum Products in Utah (Thousand Barrels)**

Year	Supply			Consumption by Product					
	Refined in Utah	Imports	Refinery Beginning Stocks	Motor Gasoline	Jet Fuel	Distillate Fuel	All Other	Total	Exports
1980	40,340	7,474	3,202	15,534	2,637	8,401	9,412	35,983	22,136
1981	46,994	8,755	3,376	15,548	2,424	7,098	5,742	30,812	23,630
1982	43,824	10,339	2,979	15,793	2,801	6,438	5,531	30,563	22,119
1983	52,019	8,099	3,153	15,954	3,284	6,387	6,691	32,316	25,298
1984	47,968	10,057	2,842	16,151	3,413	6,107	6,458	32,129	24,121
1985	51,276	9,392	2,989	16,240	3,808	5,715	6,046	31,809	23,365
1986	51,822	8,026	2,803	17,541	4,335	6,978	5,552	34,406	19,983
1987	52,345	8,321	2,661	17,623	4,969	6,507	6,074	35,172	20,719
1988	55,742	8,616	2,303	18,148	4,977	7,060	5,787	35,971	23,327
1989	54,384	9,375	2,585	17,311	5,095	5,917	6,372	34,694	22,326
1990	57,349	11,998	3,000	16,724	5,281	7,162	5,915	35,082	24,969
1991	57,446	11,359	2,758	17,395	5,917	7,038	6,583	36,933	26,544
1992	57,388	10,534	2,746	17,905	5,607	7,286	5,726	36,524	25,642
1993	57,597	10,707	2,840	18,837	5,518	7,422	5,645	37,422	23,691
1994	59,458	11,555	3,173	19,433	5,270	7,653	5,919	38,275	25,265
1995	57,363	12,289	2,687	20,771	5,658	8,469	6,820	41,718	24,205
1996	58,852	12,692	3,253	21,170	6,303	8,746	8,410	44,628	24,561
1997	59,849	12,949	2,640	22,024	6,277	9,976	6,249	44,526	26,248
1998	61,424	12,842	2,908	22,735	6,373	10,398	5,940	45,446	26,527
1999	57,004	14,509	2,638	23,141	7,443	9,793	6,429	46,806	26,756
2000	58,054	14,568	2,315	23,895	7,701	10,629	6,954	49,179	26,861
2001	57,969	15,764	2,217	22,993	6,880	11,236	6,831	47,939	27,666
2002	56,985	16,848	2,622	23,806	7,039	10,900	7,224	48,969	27,375
2003 (e)	54,267	15,917	2,752	24,192	7,591	10,987	7,228	49,998	26,269

e = estimate

Source: Utah Energy Office

**Table 75**  
**Supply and Disposition of Natural Gas in Utah (Million Cubic Feet)**

Year	Supply				Consumption by End Use						
	Gross Production	Marketed Production	Actual Sales	na	Residential	Commercial	Industrial	Electric Utilities	Lease & Plant	Pipeline	Total
1980	87,766	47,857	na		57,639	330	43,545	5,133	7,594	851	115,092
1981	91,191	58,865	na		54,789	343	42,779	3,097	511	721	102,240
1982	94,255	56,368	na		45,957	21,831	39,804	3,023	5,965	1,126	117,706
1983	63,158	54,700	na		54,938	7,986	40,246	1,259	4,538	1,218	110,185
1984	184,606	74,698	na		54,639	8,569	42,709	271	8,375	1,015	115,578
1985	213,302	83,405	na		58,727	8,505	37,448	235	9,001	1,201	115,117
1986	238,388	90,013	na		57,654	4,636	28,264	230	13,289	1,102	105,175
1987	261,911	87,158	na		41,536	14,811	23,884	263	17,671	822	98,987
1988	277,910	101,372	na		42,241	17,911	30,354	196	16,889	1,362	108,953
1989	278,081	120,089	na		45,168	16,522	33,963	636	16,211	1,037	113,537
1990	319,632	145,875	63,336		43,424	16,221	35,502	907	19,719	875	116,648
1991	323,660	144,817	65,288		50,572	19,282	43,120	5,190	13,738	864	132,766
1992	314,275	171,293	94,725		44,701	16,600	40,878	6,576	12,611	1,284	122,650
1993	336,183	225,401	137,864		51,779	22,620	42,301	6,305	12,526	2,513	138,044
1994	347,019	270,858	160,967		48,922	26,553	36,618	8,900	13,273	2,807	137,073
1995	303,233	241,290	164,059		48,975	26,926	42,373	8,707	27,012	2,831	156,824
1996	281,208	250,767	179,943		54,344	29,666	42,213	3,428	27,119	3,601	160,371
1997	274,920	257,139	183,427		58,108	31,351	44,162	4,078	24,619	2,935	165,253
1998	297,265	277,340	201,416		56,843	31,233	45,501	5,945	27,466	2,788	169,776
1999	276,967	262,614	205,036		55,474	30,707	40,859	6,481	23,810	2,561	159,892
2000	281,117	269,285	225,958		55,626	31,665	39,378	10,544	24,670	2,674	164,557
2001	301,422	283,913	247,056		55,008	31,349	33,585	15,141	20,014	4,161	159,258
2002	293,064	274,740	247,511		58,895	33,894	26,888	12,861	22,337	4,065	158,940
2003 (e)	281,398	270,319	245,213		55,932	30,389	24,527	13,783	22,787	4,302	151,720

e = estimate  
na = not available

Source: Utah Energy Office

**Table 76**  
**Supply and Disposition of Electricity in Utah (Gigawatthours)**

Year	Net Generation by Fuel Type						Consumption by End Use			
	Coal	Petroleum	Natural Gas	Hydro	Other	Total	Residential	Commercial	Industrial	Total
1980	10,870	63	358	823	--	12,112	3,116	3,141	4,448	10,705
1981	10,869	40	230	623	--	11,762	3,436	2,999	5,451	11,886
1982	10,635	29	203	1,024	--	11,891	3,785	3,207	5,399	12,391
1983	10,921	40	69	1,394	--	12,424	3,804	3,350	6,040	13,194
1984	12,321	30	8	1,391	38	13,788	3,856	4,269	4,592	12,717
1985	14,229	40	14	1,019	109	15,411	3,985	4,596	4,458	13,039
1986	15,155	74	6	1,413	171	16,819	3,989	4,682	4,318	12,989
1987	25,221	92	13	893	127	26,346	3,980	4,863	4,555	13,398
1988	28,806	59	5	593	174	29,637	4,151	5,035	5,321	14,507
1989	29,676	48	37	562	173	30,496	4,163	5,173	5,629	14,965
1990	31,523	52	146	508	334	32,564	4,246	5,389	5,766	15,401
1991	28,888	51	550	627	390	30,506	4,460	5,571	5,876	15,907
1992	31,553	34	631	602	463	33,284	4,505	5,850	6,212	16,567
1993	32,125	37	606	860	468	34,097	4,726	5,920	6,221	16,867
1994	33,131	33	807	750	514	35,235	5,009	6,340	6,498	17,847
1995	30,611	36	791	969	429	32,836	5,041	6,462	6,957	18,460
1996	31,101	47	324	1,049	462	32,983	5,481	6,717	7,660	19,858
1997	32,544	47	328	1,344	485	34,748	5,661	7,285	7,430	20,376
1998	33,588	35	528	1,315	480	35,945	5,756	7,433	7,511	20,700
1999	34,534	31	610	1,255	385	36,815	6,236	8,075	7,586	21,879
2000	34,491	58	890	751	454	36,644	6,514	8,754	7,917	23,185
2001	33,607	58	1,280	508	454	35,908	6,693	9,113	7,411	23,217
2002	34,081	47	911	476	474	35,989	6,938	9,310	7,019	23,267
2003 (e)	33,943	46	1,298	413	466	36,165	7,062	9,322	7,117	23,501

e = estimate

Source: Utah Energy Office



Table 77

## Energy Prices in Utah (Current Dollars)

Year	Field Price			Average End Use Price									
	Coal (\$/ton)	Crude Oil (\$/barrel)	Natural Gas (\$/mcf)	Coal (\$/ton)	No. 2 Distillate (\$/gallons)	Motor Fuel (\$/gallons)	Natural Gas Residential (\$/mcf)	Natural Gas Commercial (\$/mcf)	Natural Gas Industrial (\$/mcf)	Electric Power Residential (c/kWh)	Electric Power Commercial (c/kWh)	Electric Power Industrial (c/kWh)	Electric Power All Sectors (c/kWh)
1980	25.63	19.79	1.12	30.11	0.91	1.23	2.74	5.59	2.26	5.5	4.3	3.3	4.3
1981	26.87	34.14	1.10	33.74	1.04	1.37	3.23	5.35	2.58	6.0	5.0	3.7	4.7
1982	29.42	30.50	3.06	34.89	1.01	1.35	3.41	3.43	2.45	6.3	5.7	4.2	5.2
1983	28.32	28.12	3.40	31.97	0.96	1.13	4.26	4.32	3.15	6.9	6.3	4.4	5.6
1984	29.20	27.21	4.08	33.33	0.96	1.12	5.68	4.96	3.52	7.4	6.5	4.6	6.0
1985	27.69	23.98	3.52	34.06	0.93	1.14	4.86	4.91	3.23	7.8	6.9	5.0	6.4
1986	27.64	13.33	2.90	32.98	0.78	0.85	4.64	4.73	3.00	8.0	7.1	5.2	6.6
1987	25.67	17.22	1.88	28.86	0.84	0.93	4.97	4.98	3.20	8.0	7.1	4.9	6.5
1988	22.85	14.24	2.39	30.56	0.85	0.96	5.11	4.08	3.10	7.8	7.0	4.6	6.2
1989	22.00	18.63	1.58	29.38	0.94	1.03	5.13	4.16	3.30	7.4	6.7	4.1	5.8
1990	21.78	22.61	1.70	28.32	1.11	1.14	5.28	4.30	3.62	7.1	6.3	3.9	5.5
1991	21.56	19.99	1.54	29.05	1.03	1.10	5.43	4.50	3.69	7.1	6.1	4.0	5.4
1992	21.83	19.39	1.63	28.92	1.02	1.12	5.43	4.40	3.91	7.0	6.0	3.7	5.3
1993	21.17	17.48	1.77	28.79	1.01	1.10	5.13	4.06	3.67	6.9	6.0	3.8	5.3
1994	20.07	16.38	1.54	27.70	0.99	1.12	4.96	3.84	2.74	6.9	5.9	3.8	5.4
1995	17.11	17.71	1.15	26.54	1.05	1.16	4.74	3.64	2.34	6.9	5.9	3.7	5.3
1996	18.50	21.10	1.39	26.10	1.19	1.26	4.47	3.38	2.10	7.0	5.9	3.7	5.3
1997	18.34	18.57	1.86	26.32	1.17	1.31	5.13	3.92	2.55	6.9	5.7	3.5	5.2
1998	17.83	12.52	1.73	26.81	1.00	1.13	5.57	4.35	3.00	6.8	5.7	3.5	5.2
1999	17.36	17.69	1.93	25.05	1.10	1.27	5.37	4.13	2.94	6.3	5.3	3.4	4.9
2000	16.93	28.53	3.28	24.80	1.43	1.54	6.20	4.93	3.93	6.3	5.2	3.4	4.8
2001	17.76	24.09	3.52	26.70	1.31	1.49	8.09	6.78	5.29	6.7	5.6	3.5	5.2
2002	18.47	23.87	2.30	23.58	1.24	1.40	6.38	5.21	3.90	6.7	5.5	3.8	5.3
2003 (e)	18.86	29.16	4.10	25.52	1.32	1.61	6.87	5.26	4.51	6.3	5.4	3.7	5.3

e = estimate

Source: Utah Energy Office