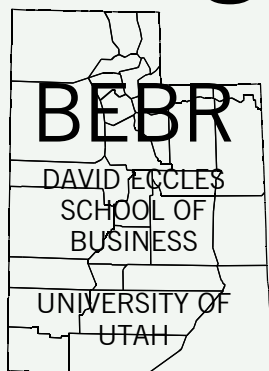


UTAH ECONOMIC AND BUSINESS REVIEW



VOLUME 62, NUMBERS 1 & 2

JANUARY/FEBRUARY 2002

STRUCTURE OF THE UTAH ELECTRIC POWER INDUSTRY

Alan E. Isaacson, Research Analyst

Supplying electricity to Utah residents relies on an interlocking grid of electric generators, transmission and distribution lines. The grid freely crosses state lines and is increasingly governed by economic rather than regulatory forces. In Utah, these facilities are owned and operated by one investor-owned utility (PacifiCorp), municipal power systems, rural electric cooperatives and state and federal governmental entities. While PacifiCorp has 75 percent to 80 percent of the Utah market for electricity, due to the amount of energy traded among utilities to meet varying supply and demand and physical connections between electric systems, no single electric utility can be said to operate independently of the entire system.

There are a total of 52 different electric utilities serving customers in Utah (Table 1). Utilities serving Utah are a collection of one investor owned utility, 41 public power systems, nine electric distribution cooperatives and the federal government. These utilities vary greatly in size, number of customers, generating capacity, revenues and rates charged (Table 2). The number of retail customers ranges from five for the Western Area Power Administration to 646,728 for PacifiCorp. The average rate for electricity in Utah in 2000 was 4.84 cents per kilowatthour (kWh). Average rates charged for electricity by the individual utilities ranged from 1.38 cents per kWh by the Western Area Power Administration to 9.41 cents per kWh by the Bridger Valley Electric Association.

PacifiCorp, the sole investor-owned utility operating in Utah, is headquartered in Portland, Oregon and does business in several states. There are two agencies organized under the Utah Interlocal Cooperation Act to coordinate power supply and demand among municipal utility systems. There are also three large generation and transmission cooperatives that sell power to the distribution cooperatives doing business in Utah, but do not serve final consumers. The Western Area Power Administration, an agency of the U.S. Department of Energy, markets electricity produced at federal dams throughout the western United States.

The 52 utilities doing business in Utah had a total of

Table 1
Distribution of Electric Utilities in Utah by Type of Ownership
2000

	Number	Consumers	Revenue (\$1,000)	Sales (MWh)	Average Revenue (cents/kWh)
Total	52	857,977	1,123,003	23,185,277	4.84
Cooperative	9	30,255	41,367	704,146	5.87
Federal	1	5	696	50,301	1.38
Investor-owned	1	646,728	865,412	18,858,674	4.59
Publicly Owned	41	180,989	215,528	3,572,156	6.03

Source: *Electric Sales and Revenue 2000*, Energy Information Administration, U.S. Department of Energy.

http://www.eia.doe.gov/cneaf/electricity/esr/esr_sum.html

857,977 customers in 2000, up from 833,806 customers in 1999. Total 2000 revenue was \$1.123 billion (up from \$1.064 billion) and 23.2 million megawatt-hours (MWh) of electricity were sold (up from 21.9 MWh). By far the largest electric utility in Utah is PacifiCorp. In 2000, PacifiCorp was responsible for 75.4 percent of the customers, 77.1 percent of revenue and 81.3 percent of volume sales of electricity in Utah (Table 3). The five largest electric utilities doing business in Utah were responsible for 85.0 percent of the customers, 86.6 percent of revenue and 89.4 percent of volume sales in 2000.

During 2000 and 2001, the western United States experienced a tightening in supplies of electricity and extreme volatility in the wholesale price (Figure 1), culminating in planned blackouts in California. From a base of \$20-\$30 MWh, the price of electricity spiked to nearly \$500 per MWh at the Palo Verde and West Wing, Arizona trading hub and briefly to \$1,000 per MWh at the California/Oregon border before falling back to the

\$20-\$30 per MWh range in the later half of 2001.

While blackouts did not occur in Utah, power supplies did reach low levels during the summer of 2001, with the media airing public service announcements requesting the population take efforts to conserve energy. This shortage of electricity did not suddenly occur, but was a result of increasing demand for electricity over the past several decades. Since 1990, demand for electricity in Utah has increased by 52 percent, to 23,185 million kWh in 2000. Two factors were responsible for this increased electricity demand. First, the population of Utah grew by 29.9 percent from 1990 to 2000. Second, the per capita consumption of electricity in Utah increased by approximately 1.5 percent annually for the past 20 years (Figure 2). From 1990 to 2000, per capita consumption of electricity in Utah rose from 8,805 kWh per person to 10,320 kWh per person. This higher per capita consumption of electricity occurred despite the increased efficiency of many electrical and

electronic devices over the past several decades. As an example, personal computers have become much more powerful over the past 15 years, yet draw the about same amount of electric power. Rather than using the increased efficiencies in electrical and electronic devices to lower energy consumption, the public has used the higher efficiencies to increase its standard of living.

POWER GENERATION

There are 80 utility-owned electric power plants in Utah, operated by 27 different entities (Table 4). The plants are operated by PacifiCorp, 20 municipal power systems, three cooperative power systems, the Strawberry Water Users Association, the Weber Basin Water Conservancy District and the U.S. Bureau of Reclamation.

Electricity generation by utilities in Utah totaled 35,828 gigawatt-hours (GWh) in 2000, down from 36,071 GWh in 1999. The amount of electricity generated in Utah increased by 1.5 percent annually from 1991

Table 2
Electric Utilities Doing Business in Utah
2000

	Ownership	Consumers	Revenue (\$1,000)	Sales (MWh)	Average Revenue (cents/kWh)	Operates Power Plants
Beaver City	Publicly Owned	1,252	1,493	23,714	6.30	Yes
Blanding City	Publicly Owned	1,546	1,390	21,225	6.55	No
Bountiful City	Publicly Owned	15,321	15,337	292,237	5.25	Yes
Bridger Valley Elec. Assn., Inc.	Cooperative	1,709	892	9,475	9.41	No
Brigham City	Publicly Owned	6,465	8,085	136,614	5.92	Yes
Dixie Escalante R E A, Inc.	Cooperative	5,908	7,551	152,994	4.94	No
Empire Electric Assn., Inc.	Cooperative	1,184	1,180	15,138	7.79	No
Enterprise City	Publicly Owned	509	471	6,251	7.53	No
Ephraim City	Publicly Owned	1,386	1,646	25,941	6.35	Yes
Fairview City	Publicly Owned	710	511	6,383	8.01	No
Fillmore City	Publicly Owned	1,289	1,564	24,007	6.51	No
Flowell Electric Assn., Inc.	Cooperative	380	990	20,986	4.72	No
Garkane Energy Coop, Inc.	Cooperative	7,413	8,264	111,210	7.43	Yes
Heber Light & Power Co.	Publicly Owned	6,604	5,399	81,218	6.65	Yes
Helper City	Publicly Owned	2,250	1,609	31,565	5.10	No
Holden Town	Publicly Owned	194	110	1,764	6.24	No
Hurricane Power Committee	Publicly Owned	3,321	4,156	58,454	7.11	No
Hyrum City	Publicly Owned	2,065	2,817	62,504	4.51	Yes
Kanab City	Publicly Owned	1,451	1,842	23,244	7.92	No
Kanosh Town	Publicly Owned	226	126	2,176	5.79	No
Kaysville City	Publicly Owned	6,230	6,235	91,635	6.80	No
Lehi City	Publicly Owned	5,529	4,907	63,861	7.68	No
Levan Town	Publicly Owned	272	196	3,202	6.12	Yes
Logan City	Publicly Owned	15,494	18,380	364,678	5.04	Yes
Manti City	Publicly Owned	1,219	959	13,751	6.97	Yes
Meadow Town	Publicly Owned	165	96	1,458	6.58	No
Monroe City	Publicly Owned	865	577	9,314	6.19	Yes
Moon Lake Electric Assn., Inc.	Cooperative	11,916	19,381	314,804	6.16	Yes
Morgan City	Publicly Owned	1,230	870	16,683	5.21	No
Mt Pleasant City	Publicly Owned	1,568	1,189	16,930	7.02	Yes
Mt. Wheeler Power, Inc.	Cooperative	317	597	8,898	6.71	No
Murray City	Publicly Owned	16,214	21,528	353,009	6.10	Yes
Navajo Tribal Utility Authority	Publicly Owned	375	499	6,695	7.45	No
Nephi City	Publicly Owned	1,864	2,277	34,243	6.65	Yes
Oak City Town	Publicly Owned	245	163	2,812	5.80	No
PacifiCorp	Investor-owned	646,728	865,412	18,858,674	4.59	Yes
Paragonah Town	Publicly Owned	221	121	1,385	8.74	No
Parowan City	Publicly Owned	1,278	946	13,487	7.01	Yes
Payson City	Publicly Owned	4,322	5,514	71,645	7.70	Yes
Price Municipal Corp.	Publicly Owned	4,848	3,963	65,369	6.06	No
Provo City	Publicly Owned	31,126	44,206	707,863	6.24	Yes
Raft River Rural Elec. Coop, Inc.	Cooperative	597	1,407	43,068	3.27	No
Salem City	Publicly Owned	1,279	1,151	18,480	6.23	No
Santa Clara City	Publicly Owned	1,498	1,569	20,008	7.84	No
Spanish Fork City	Publicly Owned	6,877	9,183	150,859	6.09	No
Spring City	Publicly Owned	440	231	3,000	7.70	Yes
Springville City	Publicly Owned	7,564	15,288	207,729	7.36	Yes
St. George City	Publicly Owned	19,618	22,595	450,161	5.02	Yes
Strawberry Electric Serv. Dist.	Publicly Owned	2,936	3,501	42,626	8.21	No
Washington City	Publicly Owned	3,123	2,828	43,976	6.43	No
Wells Rural Electric Co.	Cooperative	831	1,105	27,573	4.01	No
Western Area Power Admin.	Federal	5	696	50,301	1.38	No
State Total		857,977	1,123,003	23,185,277	4.84	

Source: *Electric Sales and Revenue 2000*, Energy Information Administration, U.S. Department of Energy.

http://www.eia.doe.gov/cneaf/electricity/esr/esr_sum.html

Table 3
Major Electric Utilities in Utah
2000

	Consumers		Revenue (\$1,000)		Sales (MWh)	
	Consumers	Percent	Revenue	Percent	Sales	Percent
PacifiCorp	646,728	75.4	865,412	77.1	18,858,674	81.3
Provo City Corp	31,126	3.6	44,206	3.9	707,863	3.1
St. George (City of)	19,618	2.3	22,595	2.0	450,161	1.9
Murray (City of)	16,214	1.9	21,528	1.9	353,009	1.5
Logan (City of)	15,494	1.8	18,380	1.6	364,678	1.6
Other	128,797	15.0	150,882	13.4	2,450,892	10.6
State Total	857,977	100.0	1,123,003	100.0	23,185,277	100.0

Source: *Electric Sales and Revenue 2000*, Energy Information Administration, U.S. Department of Energy.

http://www.eia.doe.gov/cneaf/electricity/esr/esr_sum.html

to 2000. Total net summer generating capability for utility-owned power plants in Utah is 5,101.1 megawatts (MW). Electric generation capacity in Utah is concentrated. The seven largest power plants are responsible for 95 percent of generating capacity (Table 5). Additionally, Utah is highly dependent upon coal-fired power plants; of net summer generating capability in Utah, 87.0 percent is coal-fired, followed by natural gas (6.1%), hydroelectric (5.2%), fuel oil (0.9%) and geothermal (0.7%). While electric generating capacity in Utah is concentrated in coal-fired plants, utilities have not neglected other energy sources. Power plants constructed in Utah since 1990 include fuel oil (20.9 MW), natural gas (11.6 MW) and hydroelectric (7.6 MW).

Major power plants built in the future will be primarily coal- and gas-fired, with coal supplying the majority of the energy for base loads and long-range needs and gas-fired plants being constructed for more immediate needs. Gas-fired plants require a shorter lead

time for construction and have lower capital costs. Capital costs for gas-fired generating plants are \$400-\$750 per kilowatt (kW) of generating capacity while coal-burning plants cost \$800-\$1,400 per kW of generating capacity. A coal-fired plant typically takes six to eight years from initial planning to final construction. Gas plants require approximately one-third the time to construct. Gas-fired generating plants do not require coal and ash handling facilities as do coal-fired plants. Also, the pollution control equipment required on coal-fired power plants, but usually not on gas-fired plants, are often half of the capital costs. The advantage of coal-fired generating plants is much lower and stable fuel costs.

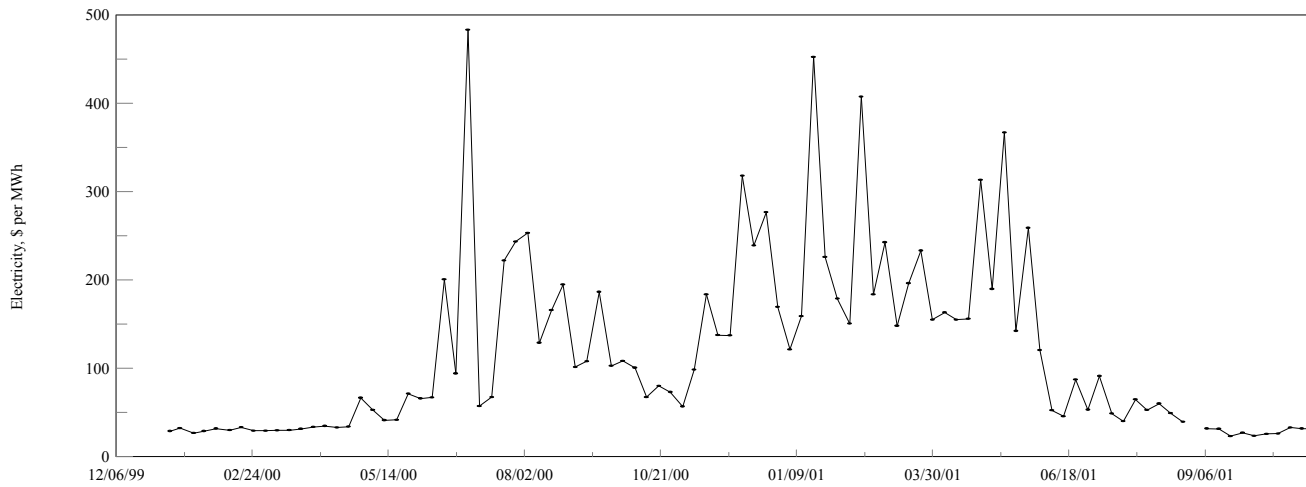
The heat content of coal delivered to coal-fired plants varies greatly, while the heat content of gas delivered is much more consistent. Coal delivered to western U.S. power plants varies from about 9,000 British Thermal units (BTU) per pound to over 12,000 BTU per pound. In addition to heat content, other properties of coal such as sulfur and ash content, hardness or

“grindability” and ash melting point must be considered when determining proper operation of a coal-fired power plant. The heat content of gas delivered to gas-fired power plants varies by about 5 percent (1,000 BTU per million cubic feet to 1,050 BTU per million cubic feet), much more consistent than the heat content of coal burned at coal-fired power plants. While heat content and other factors play a role in determining the cost of coal delivered to electric power plants, the more uniform nature of natural gas results in its price being determined by the supply and demand situation and type of contract (spot, long-term, firm price, variable price).

Natural gas prices experienced a run-up in prices during the first half of 2001 similar to electricity prices. Well head prices for natural gas rose from the mid-\$2 per thousand cubic feet (mcf) range during February 2000 to over \$9 per mcf in December 2000 and there were some sales for electric power generation in California over \$60 per mcf.

Comparing the cost of fuel per amount of electricity gener-

Figure 1
Wholesale Price of Electricity On Peak
Palo Verde and West Wing, Arizona
Jan 2000-Nov 2001



Source: Wall Street Journal

Figure 2
Utah Per Capita Electricity Demand
1980-2000



Source: BEBR calculation.

ated allows for a direct comparison of coal-fired generation with gas-fired generation and also takes into account different operating efficiencies (Figure 3). The average cost of coal at western U.S. coal-fired power plants was quite consistent over the 19

months examined, varying from a low of 0.98 cents per kWh to a high of 1.2 cents per kWh. By contrast, gas prices were higher and more volatile than coal prices. In January 2000, before the run-up in energy prices, natural gas delivered to western U.S. gas-fired power plants

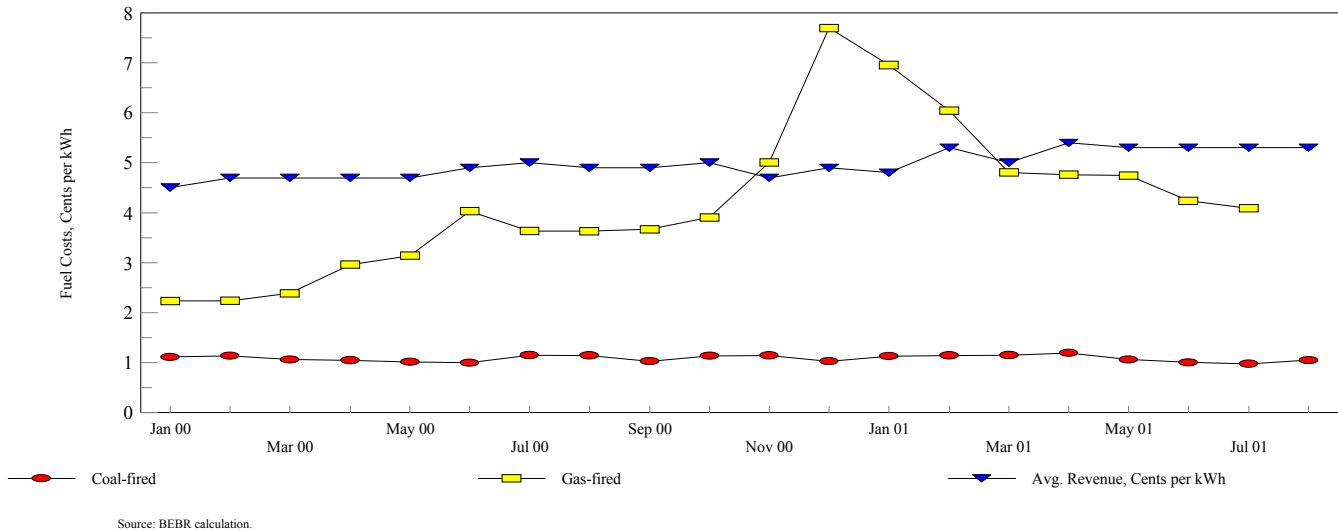
averaged 2.23 cents per kWh generated. This increased gradually through October 2000, when the price spiked to a peak of 7.69 cents per kWh during December 2000. By July 2001, the price dropped to 4.09 cents per kWh. From November 2000

Table 4
Utility-owned Power Plants in Utah

Utility Plant/County	Gen. Units	Summer Gen. Cap. (MW)	Primary Energy Source	Utility Plant/County	Gen. Units	Summer Gen. Cap. (MW)	Primary Energy Source
Beaver City Corp.				Nephi City Corp.			
Beaver Lower Hydro 1/Beaver	1	0.2	Water	Bradley/Juab	1	0.2	Water
Beaver Mid Hydro 2/Beaver	1	0.5	Water	Salt Creek/Juab	1	0.5	Water
Beaver Upper Hydro 3/Beaver	1	0.7	Water	PacifiCorp			
Bountiful City (City of)				American Fork/Utah	1	0.4	Water
Bountiful City /Davis	8	19.3	Natural Gas	Blundell/Beaver	1	23.0	Geothermal
Echo Dam/Davis	3	4.6	Water	Carbon/Carbon	2	175.0	Coal
Pine View Dam/Davis	1	1.8	Water	Cutler/Box Elder	2	29.2	Water
Brigham City Corp.				Fountain Green/Sanpete	1	0.1	Water
Box Elder/Box Elder	1	0.5	Water	Gadsby/Salt Lake	3	235.0	Natural Gas
Brigham City/Box Elder	2	1.2	Water	Granite/Salt Lake	1	1.2	Water
Bureau of Reclamation				Gunlock/Washington	1	0.5	Water
Deer Creek/Wasatch	2	5.6	Water	Hunter/Emery	3	1305.0	Coal
Flaming Gorge/Daggett	3	152.1	Water	Huntington/Emery	2	895.0	Coal
Deseret Gen. & Tran. Coop				Little Mountain/Weber	1	14.0	Natural Gas
Bonanza/Uintah	1	425.0	Coal	Olmstead/Utah	1	10.3	Water
Ephraim(City of)				Pioneer/Weber	1	4.0	Water
Hydro Plant No 1/Sanpete	1	0.2	Water	Sand Cove/Washington	1	0.5	Water
Hydro Plant No 3/Sanpete	2	2.6	Water	Snake Creek/Wasatch	1	1.0	Water
Hydro Plant No 4/Sanpete	1	0.1	Water	Stairs/Salt Lake	1	0.6	Water
Garkane Power Assn., Inc.				Upper Beaver/Beaver	1	2.2	Water
Boulder/Garfield	3	4.2	Water	Veyo/Washington	1	0.5	Water
Lower Boulder/Garfield	2	0.8	Water	Weber/Weber	1	2.0	Water
Heber Light & Power Co.				Parowan City Corp.			
Heber City /Wasatch	7	6.8	Nat Gas	Center Creek/Iron	1	0.4	Water
Lake Creek/Wasatch	1	1.2	Water	Red Creek/Iron	1	0.4	Water
Snake Creek/Wasatch	1	0.8	Water	Payson City Corp.			
Hyrum City Corp.				Payson/Utah	4	9.3	Natural Gas
Hyrum/Cache	1	0.4	Water	Provo City Corp.			
Levan Town Corp.				Bonnett/Beaver	6	12.2	Geothermal
Cobble Rock/Juab	1	0.1	Water	Provo/Utah	5	17.5	Fuel Oil
Pigeon Creek/Juab	1	0.2	Water	Spring City Corp.			
Logan (City of)				Spring City Hydro/Sanpete	1	0.3	Water
Hydro II/Cache	2	6.2	Water	Springville (City of)			
Hydro III/Cache	3	1.4	Water	Bartholomew/Utah	2	1.5	Water
Logan City/Cache	6	6.4	Fuel Oil	Hobble Creek/Utah	1	0.3	Water
Los Angeles (City of)				Spring Creek/Utah	1	0.5	Water
Intermountain/Millard	2	1640.0	Coal	Upper Bartholomew/Utah	1	0.2	Water
Manti (City of)				Whitehead/Utah	2	20.8	Natural Gas
Manti Lower/Sanpete	2	1.2	Water	St. George (City of)			
Manti Upper/Sanpete	2	1.2	Water	Bloomington/Washington	7	10.5	Fuel Oil
Monroe (City of)				Gunlock Hydro/Washington	2	0.4	Water
Lower/Sevier	1	0.2	Water	Pine Valley/Washington	1	0.6	Water
Monroe Pump Sta./Sevier	1	0.1	Water	St. George/Washington	1	14.0	Fuel Oil
Upper/Sevier	1	0.2	Water	Strawberry Water Users Assn.			
Moon Lake Electric Assn., Inc.				Payson/Utah	1	0.4	Water
Uintah/Duchesne	2	1.2	Water	Spanish Fork/Utah	1	3.9	Water
Yellowstone/Duchesne	3	0.9	Water	Weber Bas, Water Cons, Dist,			
Mt. Pleasant (City of)				Causey/Weber	2	2.1	Water
Lower-Unit /Sanpete	1	0.2	Water	Gateway/Morgan	2	3.0	Water
Unit 3/Sanpete	1	0.1	Water	Wanship/Summit	1	1.8	Water
Unit 4/Sanpete	1	1.3	Water				
Upper-Unit/Sanpete	1	0.2	Water				
Murray (City of)							
Little Cottonwood/Salt Lake	2	5.0	Water				
Murray City/Salt Lake	4	6.1	Natural Gas				

Source: *Inventory of Electric Utility Power Plants in the United States 1999*, Energy Information Administration, U.S. Department of Energy http://www.eia.doe.gov/cneaf/electricity/ipp/ipp_sum.html; *Electric Power Monthly*, March 2000, March 2001, Sept. 2001 issues. Energy Information Administration U.S. Department of Energy. http://www.eia.doe.gov/cneaf/electricity/enm/enm_sum.html

Figure 3
Western U.S. Utility Fuel Costs
Jan 2000-Aug 2001



Power Plant (county)	Operating Company	Summer Generating Capacity (MW)
Intermountain Power (Millard)	Los Angeles Water & Power	1,640.0
Hunter (Emery)	PacifiCorp	1,305.0
Huntington (Emery)	PacifiCorp	895.0
Bonanza (Uintah)	Deseret Gen. & Trans. Coop.	425.0
Gadsby (Salt Lake)	PacifiCorp	235.0
Carbon (Carbon)	PacifiCorp	175.0
Flaming Gorge (Daggett)	U.S. Bureau of Reclamation	152.1
Others (various)	Various	274.0
Total		5,101.1

Source: *Inventory of Electric Utility Power Plants in the United States 1999*, Energy Information Administration, U.S. Department of Energy. http://www.eia.doe.gov/cneaf/electricity/ipp/ipp_sum.html; *Electric Power Monthly*, March 2000, March 2001, Sept. 2001 issues. Energy Information Administration U.S. Department of Energy. http://www.eia.doe.gov/cneaf/electricity/epm/epm_sum.html

to March 2001, the average revenue received by electric utilities in Utah was not sufficient to cover the cost of fuel for gas-fired generation, while the revenue was comfortably above the cost of fuel for coal-fired generation.

Electric generating capacity will continue to be added in Utah. PacifiCorp is constructing a 160-MW gas-fired plant in West Valley City and leased five 20-MW gas-fired turbines during 2001 which were installed at the Gadsby plant in Salt Lake City.

During January 2002, PacifiCorp received permission from the Utah Public Service Commission to install three permanent 40 MW gas-fired turbines at the Gadsby plant, at an expected cost of \$80.4 million. Panda Energy International, a

privately owned, Texas-based company, announced plans to build a 1,100-MW plant west of Mona during July 2001. This plant would not be a utility-owned plant as are other large power plants in Utah, but would be a merchant plant and the energy would be sold to utilities. Most of the sales are expected to occur within Utah. Deseret Generation and Transmission Cooperative is planning on adding 80 MW of capacity to the Bonanza plant. The Intermountain Power Agency is considering adding a third generating unit to the IPP plant, with a capacity of 850-900 MW. Payson City, Questar and Utah Associated Municipal Power Systems have combined to construct a 128 MW gas-fired plant. While these plants have been announced and there has been some speculation as to the addition of a third generating unit at the PacifiCorp Hunter plant, it is unlikely all of these plants will be built. Nationwide, the amount of generating capacity added during 2001 and 2002 is expected to equal that built during the 1990s. Ninety-five percent of capacity coming online between now and 2005 is expected to be gas-fired, although coal-fired projects with total generating capacity of 65,000 MW were announced during 2001.

While the coal-fired plants have obvious advantages in terms of fuel costs, higher capital costs and longer construction process will result in future generating capacity being a mixture of coal-fired and gas-fired capacity. Coal-fire capacity will continue to be built to meet demand the electric utilities are fairly sure will

materialize in five to ten years and to insulate utilities from the more volatile price of natural gas. More immediate demand and future demand with a lower probability of materializing will be met with the quicker-and-cheaper-to-build, but more-expensive-to-operate, gas-fired generation.

PACIFICORP

The major electric utility serving Utah is PacifiCorp, headquartered in Portland, Oregon, which purchased Utah Power and Light Company in 1989 and is now a wholly owned subsidiary of Scottish Power. PacifiCorp does business in six western states. Utah accounted for 38 percent of PacifiCorp sales in 2000, followed by Oregon (33%), Wyoming (13%), Washington (8%), Idaho (6%) and California (2%).

In 2000, PacifiCorp had 646,728 customers in Utah, or 75.4 percent of total electric customers in the state. PacifiCorp operates generating plants in six states with a total capacity of 8,243.1 MW. However, since other entities own interests in several plants operated by PacifiCorp, and PacifiCorp owns interests in plants operated by other entities, the total generating capacity available to PacifiCorp is 8,331.1 MW. PacifiCorp's generation capacity satisfies about 70 percent of its customer demand for electricity; the rest is purchased. Total PacifiCorp-owned generating capacity in Utah is 2760.8 MW, or 33 percent of the company total.

Major PacifiCorp generating facilities in Utah are the Hunter Plant and Huntington plants in

Emery County, the Carbon plant in Carbon County, the Gadsby Plant in Salt Lake County, Cutler Dam in Box Elder County, the Blundell Plant in Beaver County and the Little Mountain Plant in Weber County. Of these power plants, Hunter, Huntington and Carbon are coal-fired, Gadsby and Little Mountain operate on natural gas, Cutler Dam is hydroelectric and Blundell utilizes geothermal steam. In addition, PacifiCorp operates eleven smaller hydroelectric facilities throughout Utah. PacifiCorp also operates the Deer Creek Mine in Emery County to supply coal to the Hunter and Huntington power plants. PacifiCorp also purchases coal from other suppliers in Utah.

The PacifiCorp system in Utah is essentially balanced with regard to generating capacity and demand. However, due to seasonal fluctuations in demand for electricity PacifiCorp either exports electricity from or imports electricity into Utah as necessary.

PUBLIC POWER SYSTEMS

The public power systems in Utah are primarily operated by city governments. The largest public power system in Utah, in terms of number of customers, is Provo City, with 31,126 customers in 2000. Overall, public power systems accounted for 180,989 customers in Utah in 2000, or 21.1 percent of total electric customers in Utah. Of the publicly owned electric utilities serving Utah, only one, the Navajo Tribal Utility Authority serves customers outside of Utah, with customers in Arizona accounting for 85

percent of sales, New Mexico 14 percent and Utah 1 percent. The Los Angeles Department of Water and Power operates the Intermountain Power Plant near Lynndyl, Utah, although it does not have retail sales or customers in Utah.

Of the 41 publicly owned electric systems in Utah, only 19 operate generating facilities. The other 22 systems rely on purchased power. Total summer generating capability operated by public power systems in Utah is 172.4 MW. The public power systems with the largest summer generating capability in Utah are Provo, with 29.7 MW, followed by Bountiful (25.7 MW) and St. George (25.5 MW). Energy sources utilized by publicly owned power plants are a mixture of natural gas, fuel oil, hydroelectric and geothermal steam.

There is a high degree of cooperation between the publicly owned electric systems in Utah. Two organizations have been formed under the Utah Interlocal Government Cooperation Act to serve the publically owned utilities. These organizations are the Utah Associated Municipal Power Systems and the Utah Municipal Power Agency. Both provide wholesale electricity to members and act as a pool to balance supply and demand for electricity among their members. Both of these entities act on a not-for-profit basis.

Utah Associated Municipal Power Systems

The Utah Associated Municipal Power Systems (UAMPS) is headquartered in Salt Lake City, Utah and has 44 members in five states. Members

outside of Utah are Fallon, Nevada, Fredonia, Arizona, Gallup, New Mexico, Idaho Falls, Idaho, Page, Arizona, the Truckee-Donner Public Utility District in Truckee, California and the United Electric Cooperative in Hepburn, Idaho. Members of UAMPS are listed in Table 6. Eighteen UAMPS members own generating facilities, while the other 26 members rely on power delivered through UAMPS. Total summer generating capability of facilities owned by UAMPS members is 184.8 MW. The UAMPS member with the largest installed generating capacity is Idaho Falls, Idaho, with a capacity of 50.4 MW. The Utah-based member of UAMPS with the largest installed generating capacity is Bountiful, with 25.7 MW.

In addition to generating capacity owned by the UAMPS members, UAMPS owns an interest in several generating plants. UAMPS owns an undivided 14.582 percent interest in Unit II at the Hunter Power Plant, operated by PacifiCorp., representing about 64 MW of electric power and is used by UAMPS to meet base load needs.

In 1994, UAMPS acquired a 7.028 percent interest in Unit 4 at the San Juan Generating Station, located approximately 16 miles northwest of Farmington, New Mexico. The station is operated by the Public Service Company of New Mexico and has a generating capability of 1,643 MW. The UAMPS interest in the San Juan Station is about 35 MW. As with its interest in the Hunter II Unit, UAMPS uses its interest in the

San Juan Station to meet base load needs.

UAMPS has a firm allocation of electric power from the Western Area Power Administration, Salt Lake City Area/Integrated Projects (SLCAIP) and acts as a single purchasing agent for its members. In 2000, UAMPS purchased 770,906 MWh of electricity from the SLCAIP and was the second largest purchaser of electricity from the SLCAIP.

UAMPS also acts as a scheduling agent for its members who have called back power from the Intermountain Power Project pursuant to the Excess Power Sales Agreement.

Utah Municipal Power Agency

The Utah Municipal Power Agency (UMPA) is headquartered in Spanish Fork, Utah and has six members: Levan, Manti, Nephi, Provo, Salem and Spanish Fork. Of these, Levan, Manti, Nephi and Provo operate generating facilities. Total summer generating capability operated by UMPA members is 33.1 MW. In addition, UMPA owns 3.75 percent of the Bonanza Power Plant operated by Deseret Generation and Transmission Cooperative or about 15 MW. Provo City owns 6.25 percent of Unit I at the Hunter Power Plant, or about 28 MW. UMPA also contracts with the Western Area Power Administration for approximately 80 MW from the Salt Lake City Area/Integrated Projects and 4 MW from the Provo River Project. UMPA also contracts with PacifiCorp for another 25 MW of power and purchases power on the open market as needed.

Table 6
Members of the Utah Associated Municipal Power Systems

	Number of Customers	Peak Draw 2000-2001 (kilowatts)
Beaver	1,252	4,102
Blanding	1,547	5,192
Bountiful	15,430	71,282
Brigham City	6,569	29,667
Central Utah Water Conservancy District	na	na
Eagle Mountain	849	2,584
Enterprise	509	1,336
Ephraim	1,386	5,357
Fairview	700	1,415
Fallon, Nevada	4,121	14,729
Fillmore	1,289	4,673
Fredonia, Arizona	633	1,809
Gallup, New Mexico	9,880	34,021
Heber Light & Power	6,963	13,647
Hildale	871	4,555
Holden	200	424
Hurricane	3,558	13,413
Hyrum	1,908	12,031
Idaho Falls, Idaho	22,678	144,952
Kanab	1,452	4,706
Kanosh	233	451
Kaysville	6,237	24,394
Lehi	5,528	17,829
Logan	15,611	78,772
Meadow	156	409
Monroe	865	1,811
Morgan	1,096	2,675
Mt. Pleasant	1,648	2,790
Murray	15,789	88,849
Oak City	244	670
Page, Arizona	3,800	19,311
Paragonah	217	373
Parowan	1,262	2,754
Payson	4,372	13,052
Price	4,798	12,989
Santa Clara	1,500	7,639
Spring City	460	654
Springville	7,564	42,070
St. George	20,383	111,970
Strawberry Electric Service District	2,771	10,152
Truckee-Donner PUD, California	11,382	28,277
United Electric Co-op, Heyburn, Idaho	na	na
Washington	3,015	11,956
Weber Basin Water Conservancy District	6,798	15,012

Source: Utah Associated Municipal Power Systems. <http://www.uamps.com>

Note: Due to different measuring periods, data may not be identical to that reported by the Energy Information Administration.

Intermountain Power Agency

The Intermountain Power Agency (IPA) was organized in June, 1977 by 23 Utah municipalities under the Utah Interlocal Cooperation Act. The IPA is a separate legal and political subdivision of the State of Utah. IPA was organized to finance and construct an electric power plant, after the Colorado River Storage Project (CRSP) stated that there would not be sufficient electricity generated by the CRSP to meet future needs. During August, 1978, IPA offered power sales contracts and 23 Utah municipalities, six Utah electric cooperatives, Utah Power and Light and six California municipalities agreed to accept generation capacity from the project. While the power plant is owned by IPA, the plant is actually operated by the Los Angeles Department of Water and Power.

The Intermountain Power Plant consists of three main components, the power plant, the Southern Transmission System and the Northern Transmission System. The power plant is located near Lynndyl in Millard County. It is a coal-fired power plant with two generating units with net summer generating capabilities of 820 MW each. The Southern Transmission System is a 500 kV direct current line that extends 490 miles from the power plant to Adelanto, California with an alternating current/direct current converter at each end. The Northern Transmission System consists of two segments. One segment consists of two parallel 345 kV alternating current transmission lines and extends approximately

50 miles from the power plant to a switchyard near Mona, Utah. The other segment is a single 230 kV alternating current transmission line from the power plant approximately 144 miles to a switchyard north of Ely, Nevada. The IPA also owns 50 percent of the Genwal Resources Crandall Canyon Mine in Emery County and the West Ridge Mine in Carbon County. These two mines, operated by Andalex

Resources, supply about 25 percent of the coal required by the power plant; the remainder is purchased on the open market.

IPP customers and their legal entitlements to power from the plant are listed in Table 7. While California purchasers are legally obligated to take about 75 percent of the energy, in the past essentially all of the energy has

been purchased by the California purchasers. Utah municipalities and cooperatives have the right to recall power from the California purchasers and recently announced the intent to recall a portion of that power. Utah Power and Light has been selling energy equivalent to that it purchases from IPP to the Los Angeles Department of Water and Power.

Table 7			
Utilities Entitled to Power from the Intermountain Power Project			
	Entitlement percent		Entitlement percent
California Purchasers		Utah Municipal Purchasers	
Los Angeles Dept. of Water and Power	44.617	Murray City	4.000
City of Anaheim	13.225	Logan City	2.469
City of Riverside	7.617	The City of Bountiful	1.695
City of Pasadena	4.409	Kaysville City	0.739
City of Burbank	3.371	Heber Light & Power Company	0.627
City of Glendale	1.704	Hyrum City	0.551
Total California Purchasers	74.943	Fillmore City	0.512
		The City of Ephraim	0.503
Cooperative Purchasers		Lehi City	0.430
Moon Lake Electric Assn.	2.000	Beaver City	0.413
Mt. Wheeler Power	1.786	Parowan City	0.364
Dixie-Escalante Rural Electric Assn.	1.534	Price	0.361
Garkane Power Assn.	1.267	Mount Pleasant	0.357
Bridger Valley Electric Assn.	0.230	City of Enterprise	0.199
Flowell Electric Assn.	0.200	Morgan City	0.190
Total Cooperative Purchasers	7.017	City of Hurricane	0.147
		Monroe City	0.130
Investor-Owned Purchasers		City of Fairview	0.120
PacifiCorp	4.000	Spring City	0.060
Total Investor-Owned Purchasers	4.000	Town of Holden	0.048
		Town of Meadow	0.045
		Kanosh Town	0.040
		Town of Oak City	0.040
		Total Utah Municipal Purchasers	14.040

Source: Intermountain Power Agency. <http://www.ipautah.com/pdf/aboutipa.pdf>

COOPERATIVES

There are nine electric distribution cooperatives and three generation and transmission cooperatives doing business in Utah. Electric cooperatives are private companies that are legally established to be owned by and operated for the benefit of those receiving services. Electric cooperatives generate, transmit, and/or distribute electricity to specific areas not served by other utilities. They are generally exempt from federal income tax laws and usually receive initial financing from the Rural Utilities Service.

Distribution Cooperatives

Of the nine distribution cooperatives serving Utah, only one, the Flowell Electric Association, operates solely in Utah. The other eight serve customers in several states.

The Bridger Valley Electric Association is based in Mountain View, Wyoming and serves 5,503 customers in Wyoming, with 90 percent of sales and Utah (10%). The Bridger Valley Electric Association is a member of the Deseret Generation & Transmission Cooperative and purchases power from the Western Area Power Administration.

The Dixie Escalante Rural Electric Association serves 7,078 customers in Utah, (91% of sales) and Arizona (9%). The association, founded in 1978 and is headquartered in Beryl, Utah, serves customers in Iron and Washington counties, Utah. The association does not operate generating facilities, but is a member of Deseret Generation and Transmission Cooperative

and also purchases power from the Western Area Power Administration.

The Empire Electric Association serves 13,984 customers in Colorado (96% of sales) and Utah (4%). The association operates in Dolores, Montezuma and San Miguel counties, Colorado and San Juan County, Utah. The association does not operate generating facilities, but purchases power from the Tri-State Generation and Transmission Cooperative.

The Flowell Electric Association was founded in 1943 and is headquartered in Fillmore, Utah. The cooperative serves 380 customers in Millard County. Flowell Electric Association does not operate any generating facilities, but is a member of Deseret Generation and Transmission Cooperative and also purchases power from the Western Area Power Administration.

Garkane Power Association serves about 7,902 customers in Utah (92% of sales) and Arizona (8%). The association serves customers in Garfield, Kane, Piute, Sevier and Wayne counties, Utah and Coconino and Mohave counties, Arizona. The association operates two hydroelectric power plants in Garfield County, Utah with a total capacity of 5.0 MW. Garkane Power is also a member of the Deseret Generation and Transmission Cooperative and purchases power from the Western Area Power Administration.

Moon Lake Electric Association serves 14,439 customers in Colorado (59% of sales) and Utah (41%). The

cooperative was organized in 1938 and serves customers in Daggett, Duchesne and Uintah counties, Utah and Garfield, Moffit and Rio Blanco counties, Colorado. The company owns 2.1 MW of generating capacity in two hydroelectric plants on the Uintah and Yellowstone rivers and is a member of the Deseret Generation and Transmission Cooperative. Moon Lake Electric also purchases power from the Western Area Power Administration.

Mount Wheeler Power serves 6,595 customers in Nevada (95% of sales) and Utah (5%). In Utah, Mt. Wheeler Power serves parts of Juab, Millard and Tooele counties. The cooperative was incorporated in 1963 and began delivering electric service in 1971. The cooperative is a member of Deseret Generation and Transmission Cooperative and also purchases power from the Western Area Power Administration.

The Raft River Rural Electric Cooperative serves 2,929 customers in Idaho (78% of sales), Utah (20%) and Nevada (2%). The cooperative was founded in 1939 and is headquartered in Malta, Idaho. Raft River Rural Electric is a member of the Pacific Northwest Generating Cooperative.

The Wells Rural Electric Company serves 5,355 customers in Nevada (96% of sales) and Utah (4%). The cooperative was founded in 1958 and contracted with Idaho Power to supply wholesale electricity. In 1961, the cooperative purchased the Wendover Power Company and began servicing Utah residents.

Generation and Transmission Cooperatives

There are three generation and transmission cooperatives that serve distribution cooperatives doing business in Utah. These are the Deseret Generation and Transmission Cooperative, the Tri-State Generation and Transmission Cooperative and the Pacific Northwest Generating Cooperative.

The Tri-State Generation and Transmission Cooperative is based in Denver, Colorado and serves distribution cooperatives based in Colorado, Nebraska, New Mexico and Wyoming. Tri-State Generation and Transmission cooperative owns generating capacity and purchases energy from the Western Area Power Administration. A portion of San Juan County, Utah is served by Empire Electric Association, headquartered in Cortez, Colorado, which obtains wholesale power from Tri-State Generation and Transmission Cooperative.

The Pacific Northwest Generating Cooperative is based in Portland, Oregon and serves 15 distribution cooperatives in the northwest. The Pacific Northwest Generating Cooperative purchases energy from the Bonneville Power Administration on behalf of its members. A portion of Box Elder County, Utah is served by the Raft River Rural Electric Cooperative, which is headquartered in Malta, Idaho and obtains wholesale power from the Pacific Northwest Generating Cooperative.

Deseret Generation and Transmission Cooperative (DG&T) was organized in 1978 to construct and operate the Bonanza Power Plant. The cooperative is headquartered in South Jordan, Utah. Members of DG&T are six electric distribution cooperatives. These members are the Bridger Valley Electric Association, the Dixie Escalante Rural Electric Association, Flowell Electric Association, Garkane Power Association, Moon Lake Electric Association and Mount Wheeler Power.

The Bonanza Power Plant is a 425-MW generating capability coal-fired facility located south of Vernal, Utah. Coal is supplied to the Bonanza Plant by the Deserado Mine, located approximately 35 miles from the power plant in Colorado and is transported from the mine to the power plant via the 35-mile electric Deseret Western Railway. Both the mine and the railway are owned by DG&T. In addition to the Bonanza Power Plant, DG&T owns 25 percent of the Hunter II unit at the PacifiCorp Hunter Plant. This represents about 118 MW of electric power. Approximately 297 miles of transmission lines are owned and operated by DG&T to deliver power to its customers.

In addition to the member cooperatives, DG&T sells energy to other customers. Past customers have included: Aquila Energy, Constellation Power Source, Arizona Public Service Company, Public Service Company of Colorado, Idaho Power Company, PacifiCorp, City of Anaheim, California, City

of Riverside, California, Utah Municipal Power Agency and Enron Power Marketing. DG&T also sells directly to industrial customers. Past industrial customers have included Chevron, PennzEnergy Company, Coastal Oil and Gas and BHP Minerals.

WESTERN AREA POWER ADMINISTRATION

Numerous dams constructed by the federal government throughout the country are associated with hydroelectric power plants. Examples familiar to most Utahns are the power plants at Flaming Gorge Dam and Glen Canyon Dam. Electricity from these power plants is marketed by various agencies within the Department of Energy. The Western Area Power Administration (WAPA) has responsibility for marketing electricity from federally operated dams that make up 14 individual water projects in Arizona, California, Colorado, Nevada, Nebraska, New Mexico, North Dakota, South Dakota and Utah and in portions of Iowa, Kansas, Minnesota, Texas and Wyoming. WAPA does not actually operate the power plants, but owns transmission lines and markets energy. Most of the power plants are operated by the Bureau of Reclamation, although some are operated by other agencies. WAPA is also responsible for marketing the United States' portion of the energy generated by the coal-fired Navajo Generating Station located near Page, Arizona. This power plant is operated by the Salt River Project (an Arizona state government entity), has a

generating capacity of 2,250 MW and is 24.3 percent owned by the federal government.

Within WAPA, individual water projects that commonly generate electricity provided to utilities doing business in Utah include the Salt Lake City Area/Integrated Projects (SLCAIP) and the Provo River Project. As opportunities arise, Utah utilities also purchase energy from other projects within WAPA.

Salt Lake City Area/Integrated Projects

The SLCAIP is a consolidation of the Colorado River Storage Project, the Collbran Project and the Rio Grande Project. These three individual projects were combined into the Salt Lake City

Area/Integrated Projects for marketing purposes in 1987. Power plants within the SLCAIP are listed in Table 8. These power plants have a combined maximum generating capacity of 1,864 MW. The largest power plant in the SLCAIP is Glen Canyon Dam, with a maximum capacity of 1,356 MW or 73 percent of total SLCAIP generating capacity. The only SLCAIP generating plant located in Utah is Flaming Gorge Dam, with a capacity of 152 MW. Net generation at SLCAIP facilities during 2000 was 6,138 GWh, down from 7,336 GWh in 1999 and 8,540 GWh in 1998.

In addition to that generated at Bureau of Reclamation dams, the SLCAIP purchases significant amounts of

electricity to meet demand from customers. During 2000, SLCAIP purchased 2,026,166 MWh of electricity from 36 different organizations, up from 1,089,486 MWh and 27 organizations in 1999. The Parker-Davis Project (another project within the WAPA which markets power produced by dams on the lower Colorado River) sold 24,841 MWh to the SLCAIP. The other 2,001,325 MWh sold to the SLCAIP during 2000 was sold by a mixture of investor-owned utilities, municipalities, cooperatives and power marketers. The utility selling the most energy to the SLCAIP in 2000 was Public Service Company of Colorado, which sold 313,734 MWh. Entities that operate in Utah and sold energy to the SLCAIP

Table 8 Power Plants Western Area Power Administration Salt Lake City Area/Integrated Projects			
Power Plant	River	Generating Units	Capacity (MW)
Arizona			
Glen Canyon	Colorado	8	1,356
Colorado			
Blue Mesa	Gunnison	2	96
Crystal	Gunnison	1	28
Lower Molina	Pipeline	1	5
McPhee	Dolores	1	1
Morrow Point	Gunnison	2	165
Towaoc	Canal	1	11
Upper Molina	Pipeline	1	9
New Mexico			
Elephant Butte	Rio Grande	3	28
Utah			
Flaming Gorge	Green	3	152
Wyoming			
Fontenelle	Green	1	13
Total		na	1864

Source: FY 2000 Operations Summary, Western Area Power Administration.
<http://www.wapa.gov/media/pdf/2000OpsSum.pdf>

in 2000 are PacifiCorp (170,049 MWh), UAMPS (10,077 MWh) and UMPA (26,565 MWh).

During 2000, the SLCAIP sold 7,770,238 MWh of electricity for \$153,554,260. The amount of electricity sold to utilities doing business in Utah was 2,186,014 MWh, or 27 per-

cent of the total (Table 9). The average rate charged was 1.79 cents per kWh. The SLCAIP sold electricity to 19 different customers in Utah during 2000. Two of these customers were UAMPS and UMPA; therefore, the number of electric systems receiving power from WAPA in

Utah is greater than 19. UAMPS purchased the most energy from SLCAIP during 2000 (778,777 MWh), followed by UMPA (473,348 MWh), Moon Lake Electric Association (263,100 MWh) and the Navajo Tribal Utility Authority (127,168 MWh).

Table 9
Purchases of Electricity from the Western Area Power Administration
Salt Lake City Area/Integrated Projects
(by utilities serving Utah)

	Contract Rate of Delivery (kW)		FY 2000 Sales	
	Summer	Winter	Energy (MWh)	Revenue (\$)
Municipalities				
Brigham City	8,932	12,594	50,081	849,950
Helper	304	472	2,142	33,360
UAMPS	139,999	207,336	778,777	13,592,910
Price	1,119	1,702	8,087	123,660
UMPA	79,126	93,566	473,348	7,160,794
Rural Electric Cooperatives				
Bridger Valley Electric Coop	8,497	10,558	46,797	776,268
Dixie Escalante Rural Electric Assn.	19,072	24,085	102,427	1,720,416
Flowell Electric Assn.	4,475	385	11,564	193,981
Garkane Power Assn.	14,556	19,679	79,655	1,351,817
Moon Lake Electric Assn.	50,142	62,822	263,100	4,462,691
Mt. Wheeler Power Assn.	23,946	16,902	96,292	1,623,067
Federal Agencies				
Defense Depot Ogden	3,169	3,532	15,477	221,316
Hill Air Force Base	3,555	3,592	23,501	314,162
Navajo Tribal Utility Authority	21,802	23,677	127,168	1,968,748
Tooele Army Depot	920	1,307	6,000	94,563
State Agencies				
University of Utah	3,104	3,461	21,771	290,151
Utah State University	1,124	1,152	10,163	101,662
Irrigation Districts				
Weber Basin Conservancy District	—	—	4,363	45,645
Investor-owned Utilities				
PacifiCorp	—	—	65,301	4,175,841
Total			2,186,014	39,101,002

Source: *FY 2000 Operations Summary*, Western Area Power Administration. <http://www.wapa.gov/media/pdf/2000OpsSum.pdf>

Provo River Project

The Provo River Project consists of the Deer Creek Dam and Power Plant near Heber City, Utah. Construction began on the dam in 1938, but because of World War II, it was not completed until 1951. The power plant began operating in 1958, with a generating capacity of 5.3 MW. Prior to November 1999, summer energy was purchased by the Colorado River Storage Project and winter energy was exchanged with Utah Power and Light in accordance with a 1933 agreement. Provo River Project power is now marketed independently of the Colorado River Storage Project. The power is marketed by WAPA to customers of UMPA and UAMPS in the Provo River drainage. On March 2, 2000, customers of the Provo River Project agreed to pay all operating, maintenance and replacement costs of the Provo River Project and in return receive all power produced.

Other power projects within the WAPA also have an effect on the supply of electricity in Utah. During 2000, UMPA purchased 1,525 MWh of electricity from the Parker-Davis Project for \$22,690. Additionally, the Tri-State Generation and Transmission Cooperative, which supplies power to Empire Electric Association in San Juan County, purchased power from the Loveland Area Projects.

SUMMARY

Demand for electricity rose 5.9 percent in Utah during 2000 and is expected to increase between 2 percent and 7 percent annually for the next 10 years.

The increased demand is a combination of rising per capita consumption of electricity and growth in Utah's population.

The electric system servicing Utah and the western portion of the United States will continue to consist of an interconnected network of generating facilities, transmission and distribution lines, which are operated by a collection of investor-owned utilities, cooperatives and government agencies. Base-load requirements will continue to be met by centrally located generating plants although alternative methods of supplying electricity, such as microturbines and fuel cells, will undoubtedly become more important.

Ensuring an adequate supply of electricity will require increased generating capacity along with associated transmission lines. Some changes in the structure of the industry are likely to occur in response to market forces. Smaller electric utilities, especially publicly owned and cooperative utilities, will need to continue to form alliances to achieve economies of scale.

References

CoBank. <http://www.cobank.com>

"Construction to be Slowed by Electricity Market Glut," *Engineering News-Record*. Jan. 7/Jan14, 2002. p. 17.

Dailey, Will. "Enormous Generation Capacity Addition Expected in 2002," *Coal Age*, Marketwatch. January, 2002.

Deseret Generation & Transmission Cooperative and Subsidiary. *2000 Annual Report*.

Electric Power Annual 1999. Energy Information Administration, U.S. Department of Energy, August 2000.

Electric Power Monthly. Energy Information Administration, U.S. Department of Energy, April 2000-November 2001 issues.

Electric Sales and Revenue 2000. Energy Information Administration, U.S. Department of Energy, January 2002.

Ewart, Ellen. "The European Coal Industry: Hard Times for Hard Coal." *Coal Age*, Marketwatch. September 2001.

Huber, Peter, W. "Dig More Coal - The PCs are Coming." *Forbes Magazine*. May 31, 1999.

Intermountain Power Agency. *Annual Disclosure Report of Fiscal Year 1999-2000*.

Inventory of Electric Utility Power Plants in the United States 1999. Energy Information Administration, U.S. Department of Energy, September 2000.

National Rural Utilities Cooperative Finance Corporation. <http://www.nrucfc.org>

Oberbeck, Steven. "Utah May Need Twice as Much Electricity Soon." *The Salt Lake Tribune*. Feb. 7, 2001.

PacifiCorp. SEC Form-10K. Dated May 24, 2001.

PacifiCorp. SEC Form-10K. Dated June 16, 2000.

Vaninetti, B. S. "New Generating Capacity: How Much is Too Much." *Coal Age*, Marketwatch. October 2001.

Wallace, Brice. "Power Play." *Deseret News*. Nov. 11, 2001.

Wallace, Brice. "Utah Power gets OK for Additional Gadsby Unit." *Deseret News*. Feb. 1, 2002.

Western Area Power Administration. *FY 2000 Operations Summary*.

Glossary of Electric Industry Terms

Distribution System: The portion of an electric system that is dedicated to delivering electric energy to an end user. Distribution lines are generally defined as 69 kV and lower.

Electric Utility: A corporation, person, agency, authority or other legal entity or instrumentality that owns and/or operates facilities within the United States, its territories or Puerto Rico for the generation, transmission, distribution or sale of electric energy primarily for use by the public and files forms listed in the Code of Federal Regulations, Title 18, Part 141.

Energy: The capacity for doing work, as measured by potential energy or the conversion of this capacity to motion (kinetic energy). Electric energy is usually measured in kilowatthours.

Generator Nameplate Capacity: The full-load continuous rating of a generator under specific conditions as designated by the manufacturer. Installed generator nameplate rating is usually indicated on a nameplate physically attached to the generator.

Gigawatt (GW): One billion watts.

Gigawatthour (GWh): One billion watthours.

Kilowatt (kW): One thousand watts.

Kilowatthour (kWh): One thousand watthours. The average Utah household consumed 9,289 kWh of electric energy during 2000.

Megawatt (MW): One million watts.

Megawatthour (MWh): One million watthours.

Net Generation: The total amount of electric energy produced by the generating units at a generating station less the electric energy consumed at the generating station for station use.

Net Summer and Net Winter Generating Capability: The generating capacity generally achieved during summer and winter months after plant electrical requirements have been achieved. Net generating capacity is determined by the utility based on historical performance. Generating capabilities cited in this report are net summer generating capabilities unless otherwise indicated.

Power: The rate at which energy is generated or consumed. Electric power is usually measured in watts. It is common to use the term power when referring to electric energy, when energy is the correct term.

Transmission: The movement or transfer of electric energy over an interconnected group of lines and associated equipment for moving or transferring electric energy in bulk between points of supply and points at which it is transformed for delivery over the distribution system lines to consumers or is delivered to other electric systems. Transmission lines are generally defined as 115 kV and higher.

Watt: An unit of power commonly used to measure electric power. One horsepower is equal to 746 watts. The typical Utah residence had an average electric power draw of 964 watts during 2000.

Watthour (Wh): An electric energy unit of measure equal to one watt of power supplied to or taken from, an electric circuit for one hour.

Utah Business Statistics

	November 2000	November 2001	% Change from Year Ago	12-Month Average Current Year	12-Month Average Last Year	12-Month Average % Change
UTAH DATA						
Total Personal Income (seas. adj. at ann. rates, mil. dol., qtls.)	na	na	na	54,539	51,666	5.6
New Corporations (no.)	510	685	34.3	857	655	31.0
New Car, Truck and Motor Home Sales (no.)	6,793	na	na	6,726	7,133	-5.7
Agriculture						
Average Prices Received by Farmers (dol.)						
Lambs (cwt.)	80.00	55.00	-31.3	73.17	85.00	-13.9
Barley (per bushel)	1.88	2.21	17.6	2.11	1.92	10.0
Alfalfa Hay, Baled (per ton) ¹	82.00	100.00	22.0	92.25	75.08	22.9
Commercial Red Meat Production (thous. of lbs.)	43,600	44,900	3.0	43,342	41,333	4.9
Milk Production (mil. lbs., qtls.)	na	na	na	404	448	-9.8
Construction						
Total Permit Construction (thous. of dol.)	295,333.2	384,506.1	30.2	334,946.1	332,555.1	0.7
Residential	150,830.4	177,389.5	17.6	194,549.4	181,809.2	7.0
Nonresidential	112,456.3	74,977.5	-33.3	84,677.9	102,338.4	-17.3
Additions, Alterations and Repairs	32,046.5	32,139.1	0.3	47,385.5	48,406.7	-2.1
New Dwelling Units (no.)	1,250	1,516.0	21.3	1,633.8	1,549.3	5.4
Employment ²						
Civilian Labor Force (thous.)	1,130.1	1,126.7	-0.3	1,127.7	1,104.1	2.1
Employed	1,096.5	1,075.2	-1.9	1,083.7	1,069.1	1.4
Unemployed	33.6	51.5	53.3	43.9	35.0	25.6
Percent of Labor Force	3.0	4.6	53.3	3.9	3.1	24.8
Nonagricultural Jobs (thous.)	1,093.8	1,087.0	-0.6	1,086.9	1,072.5	1.3
Mining	8.0	7.7	-3.8	8.0	8.0	0.0
Contract Construction	71.6	73.2	2.2	70.8	72.0	-1.7
Manufacturing	131.7	124.7	-5.3	129.2	131.2	-1.5
Transportation, Communications and Utilities	61.7	59.8	-3.1	61.1	60.7	0.6
Wholesale Trade	52.5	50.6	-3.6	52.1	51.9	0.3
Retail Trade	205.8	202.1	-1.8	200.7	199.6	0.6
Finance, Insurance and Real Estate	58.4	60.4	3.4	58.9	57.2	3.0
Services ³	315.5	314.0	-0.5	317.0	308.0	2.9
Federal Government	31.3	33.6	7.3	33.7	32.5	3.7
State Government ⁴	59.4	60.9	2.5	58.6	57.3	2.2
Local Government ⁴	97.9	100.0	2.1	96.7	94.1	2.8
Average Weekly Hours						
Mining	44.9	42.8	-4.7	43.0	43.8	-1.8
Manufacturing	39.0	37.4	-4.1	38.6	39.6	-2.5
Wholesale Trade	39.2	38.1	-2.8	40.2	39.5	1.8
Retail Trade	27.8	27.5	-1.1	27.7	27.9	-0.9
Amount of Unemployment Compensation (thous. of dol.)	7,906.1	15,534.7	96.5	13,391.6	8,318.5	61.0
Finance (qtls.)						
Total State and National Chartered In-State Banks	na	na	na	33	32	3.1
Total Assets (mil. of dol.)	na	na	na	31,354.0	29,924.7	4.8
Total Liabilities (mil. of dol.)	na	na	na	28,738.9	27,472.5	4.6
Total Equity Capital (mil. of dol.)	na	na	na	2,613.8	2,452.2	6.6
Capital to Assets ⁵	na	na	na	9.0	8.8	1.8
Loan Loss Reserve Ratio	na	na	na	1.9	1.38	40.1
Loans to Assets	na	na	na	55.2	64.84	-14.9
Temporary Investment Ratio	na	na	na	21.6	9.62	124.4
Return on Assets	na	na	na	0.8	0.95	-15.3
Production						
Crude Oil (thous. of bbls.)	1,252.9	1,217.9	-2.8	1,270.8	1,304.1	-2.6
Natural Gas (mil. of cu. ft.)	23,611.0	25,438.8	7.7	24,046.3	23,127.0	4.0
Coal (thous. short tons)	2,107	1,955	-7.2	2,158.1	2,217	-2.6
Crude Oil to Refineries, Barrels Received (thous. of bbls.)	4,044	4,109	1.6	4,120.5	4,081	1.0
Travel/Tourism						
Air Passengers (total no. on and off, S.L. Int'l. Airport)	1,497,694	1,373,621	-8.3	1,579,841	1,659,461	-4.8
Highway Traffic Count Across State Lines (both directions)	56,902	59,777	5.1	64,168	66,536	-3.6
Visits to State and National Parks and Monuments	499,033	470,639	-5.7	1,109,606	1,132,634	-2.0
Utilities						
Natural Gas Customers (residential and commercial)	694,208	707,528	1.9	704,898	684,984	2.9
Natural Gas Customers (industrial)	1,033	1,039	0.6	1,044	1,066	-2.0
Telephone Lines in Service (Qwest, residential access)	771,582	707,701	-8.3	728,676	776,940	-6.2
Telephone Lines in Service (Qwest, business/public access)	427,901	426,270	-0.4	427,740	635,612	-32.7

Utah Business Statistics

UTAH DATA	November 2000	November 2001	% Change from Year Ago	12-Month Average Current Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Nonagricultural Employment (thous.)	86.2	88.5	2.7	87.3	84.7	3.1
Unemployment Rate (seasonally adjusted)	3.0	3.5	16.7	3.4	2.9	17.5
Authorized Permit Construction (thous. of dol.)	21,416.4	32,912.2	53.7	33,057.5	33,032.9	0.1
New Dwelling Units (no.)	118	258	118.6	211	188	12.7
New Car, Truck and Motor Home Sales, Owner's County (no.)	na	na	na	na	733	na
Natural Gas Customers (residential and commercial)	75,307	77,068	2.3	76,282	74,495	2.4
Natural Gas Customers (industrial)	92	91	-1.1	92	94	-2.9
Telephone Lines in Service (Qwest, residential access)	94,933	93,706	-1.3	94,695	94,153	0.6
Telephone Lines in Service (Qwest, business access)	29,689	30,884	4.0	31,070	28,925	7.4
Salt Lake County						
Nonagricultural Employment (thous.)	556.2	546.7	-1.7	552.2	543.7	1.5
Unemployment Rate (seasonally adjusted)	3.0	4.2	40.0	3.7	2.9	28.3
Authorized Permit Construction (thous. of dol.)	110,808.2	87,043.7	-21.4	114,123.8	120,366.0	-5.2
New Dwelling Units (no.)	377	371	-1.6	437	400	9.3
New Car, Truck and Motor Home Sales, Owner's County (no.)	na	na	na	na	3,713	na
Natural Gas Customers (residential and commercial)	293,637	296,810	1.1	296,299	289,576	2.3
Natural Gas Customers (industrial)	458	466	1.7	464	475	-2.3
Telephone Lines in Service (Qwest, residential access)	340,792	313,712	-7.9	326,559	345,708	-5.5
Telephone Lines in Service (Qwest, business access)	234,812	234,219	-0.3	234,784	226,833	3.5
Utah County						
Nonagricultural Employment (thous.)	157.8	157.3	-0.3	155.4	152.1	2.1
Unemployment Rate (seasonally adjusted)	2.5	3.7	48.0	3.2	2.6	26.7
Authorized Permit Construction (thous. of dol.)	54,181.9	44,095.4	-18.6	68,470.3	63,445.8	7.9
New Dwelling Units (no.)	273	250	-8.4	356	343	3.7
New Car, Truck and Motor Home Sales, Owner's County (no.)	na	na	na	na	900	na
Natural Gas Customers (residential and commercial)	100,771	104,199	3.4	102,970	99,156	3.8
Natural Gas Customers (industrial)	150	144	-4.0	147	151	-2.9
Telephone Lines in Service (Qwest, residential access)	111,935	107,111	-4.3	108,325	111,974	-3.3
Telephone Lines in Service (Qwest, business access)	57,709	59,558	3.2	60,208	55,561	8.4
Weber County						
Nonagricultural Employment (thous.)	87.7	87.3	-0.5	87.5	88.6	-1.2
Unemployment Rate (seasonally adjusted)	4.3	4.6	7.0	4.5	4.0	10.1
Authorized Permit Construction (thous. of dol.)	17,227.8	28,654.1	66.3	20,915.0	31,302.8	-33.2
New Dwelling Units (no.)	108	66	-38.9	106	130	-17.8
New Car, Truck and Motor Home Sales, Owner's County (no.)	na	na	na	na	464	na
Natural Gas Customers (residential and commercial)	67,799	68,414	0.9	67,987	66,791	1.8
Natural Gas Customers (industrial)	99	100	1.0	98	101	-2.9
Telephone Lines in Service (Qwest, residential access)	59,957	53,287	-11.1	55,506	63,578	-12.7
Telephone Lines in Service (Qwest, business access)	31,769	34,012	7.1	33,826	30,463	11.0

na Not Available

¹ Mid-month prices. ² Some figures not strictly comparable due to reclassification. ³ Includes services by nonprofit and religious organizations. ⁴ Includes public schools and college institutions. ⁵ Includes allowance for loan losses.

Sources:

Personal Income	U.S. Department of Commerce, Bureau of Economic Analysis.
New Corporations	Utah Department of Commerce, Division of Corporations and Commercial Code.
New Car and Truck Sales	Utah State Tax Commission, Economic and Statistics Unit, <i>Utah Car and Truck Sales</i> .
Agriculture	U.S. Department of Agriculture, Utah Agricultural Statistics Service, <i>Utah Agriculture</i> .
Construction Data	Bureau of Economic and Business Research, University of Utah, <i>Utah Construction Report</i> .
Employment Data	Utah Department of Workforce Services, <i>Utah Labor Market Report</i> .
Finance Data	Utah Department of Financial Institutions.
Crude Oil Production	Utah Division of Oil, Gas and Mining, <i>Oil and Gas Production Report</i> and Utah Office of Energy and Resource Planning.
Natural Gas Production	Utah Division of Oil, Gas and Mining, <i>Oil and Gas Production Report</i> .
Coal Production	U.S. Department of Energy, Energy Information Administration.
Air Passengers	SLC International Airport, Statistics Division, <i>Air Traffic Statistics and Activity Report</i> .
Highway Traffic Count	Utah Department of Transportation, <i>Automatic Traffic Recorder Data Report</i> .
Visits to State and National Parks and Monuments	U.S. Forest Service and Utah State Parks and Recreation Department.
Utilities Data	Cooperating Utility Companies.

Utah Business Statistics

	December 2000	December 2001	% Change from Year Ago	12-Month Average Current Year	12-Month Average Last Year	12-Month Average % Change
UTAH DATA						
Total Personal Income (seas. adj. at ann. rates, mil. of dol., qtl.)	53,630	55,209	2.9	54,934	52,532	4.6
New Corporations (no.)	731	691	-5.5	854	649	31.5
New Car, Truck and Motor Home Sales (no.)	6,726	na	na	na	7,170	na
Agriculture						
Average Prices Received by Farmers (dol.)						
Lambs (cwt.)	75.00	60.00	-20.0	71.92	84.42	-14.8
Barley (per bushel)	2.02	2.22	9.9	2.13	1.93	10.2
Alfalfa Hay, Baled (per ton) ¹	82.00	94.00	14.6	93.25	75.67	23.2
Commercial Red Meat Production (thous. of lbs.)	38,600	39,800	3.1	43,442	41,417	4.9
Milk Production (mil. lbs., qtl.)	412	408	-1.0	403	430	-6.4
Construction						
Total Permit Construction (thous. of dol.)	229,645.8	195,686.0	-14.8	332,116.1	327,993.5	1.3
Residential	117,783.3	135,918.2	15.4	196,060.6	178,296.3	10.0
Nonresidential	79,572.4	33,266.7	-58.2	80,819.1	101,086.7	-20.0
Additions, Alterations and Repairs	32,290.1	23,501.1	-27.2	46,653.1	48,609.5	-4.0
New Dwelling Units (no.)	1,059	1,129.0	6.6	1,640	1,513	8.4
Employment ³						
Civilian Labor Force (thous.)	1,110.7	1,123.5	1.2	1,128.7	1,105.1	2.1
Employed	1,078.6	1,068.6	-0.9	1,082.8	1,069.6	1.2
Unemployed	32.1	54.9	71.0	45.8	35.4	29.4
Percent of Labor Force	2.9	4.9	69.0	4.1	3.2	28.4
Nonagricultural Jobs (thous.)	1,102.2	1,085.6	-1.5	1,085.5	1,074.7	1.0
Mining	7.9	7.7	-2.5	8.0	8.0	-0.3
Contract Construction	70.0	69.7	-0.4	70.8	71.8	-1.4
Manufacturing	131.5	123.0	-6.5	128.5	131.1	-2.0
Transportation, Communications and Utilities	62.1	59.3	-4.5	60.8	60.8	0.0
Wholesale Trade	52.9	50.4	-4.7	51.8	52.0	-0.2
Retail Trade	208.8	204.4	-2.1	200.4	199.8	0.3
Finance, Insurance and Real Estate	59.2	60.6	2.4	59.0	57.3	2.9
Services ⁴	321.0	316.4	-1.4	316.6	309.5	2.3
Federal Government	31.8	33.7	6.0	33.9	32.6	3.9
State Government ⁵	58.8	60.3	2.6	58.7	57.5	2.1
Local Government ⁵	98.2	100.1	1.9	96.8	94.3	2.7
Average Weekly Hours						
Mining	42.0	44.8	6.7	43.2	43.8	-1.2
Manufacturing	37.0	39.7	7.3	38.8	39.4	-1.4
Wholesale Trade	38.5	39.5	2.6	40.2	39.5	2.0
Retail Trade	27.8	27.4	-1.4	27.7	27.9	-0.9
Amount of Unemployment Compensation (thous. of dol.)	9,631.4	26,402.7	174.1	14,789.2	8,498.8	74.0
Finance (qtl.)						
Total State and National Chartered In-State Banks	33	32	-3.0	33	33	0.8
Total Assets (mil. of dol.)	28,355.8	32,946.3	16.2	32,501.7	29,624.1	9.7
Total Liabilities (mil. of dol.)	25,867.0	30,305.1	17.2	29,848.5	27,149.3	9.9
Total Equity Capital (mil. of dol.)	2,488.7	2,639.0	6.0	2,651.4	2,474.8	7.1
Capital to Assets ⁶	9.91	8.01	-19.2	8.50	9.06	-6.2
Loan Loss Reserve Ratio	1.64	2.46	50.0	2.14	1.47	45.7
Loans to Assets	69.02	41.73	-39.5	48.38	65.96	-26.7
Temporary Investment Ratio	4.88	5.62	15.2	21.76	8.48	156.7
Return on Assets	0.42	0.67	59.5	0.87	0.68	27.4
Production						
Crude Oil (thous. of bbls.)	1,293.6	1,263.8	-2.3	1,268.3	1,300.6	-2.5
Natural Gas (mil. of cu. ft.)	25,704.0	25,794.7	0.4	24,053.9	23,380.1	2.9
Coal (thous. short tons)	2,218	1,551	-30.1	2,103	2,233	-5.8
Crude Oil to Refineries, Barrels Received (thous. of bbls.)	3,942	4,093	3.8	4,133	4,040	2.3
Travel/Tourism						
Air Passengers (total no. on and off, S.L. Int'l. Airport)	1,545,740	1,502,150	-2.8	1,576,208	1,658,467	-5.0
Highway Traffic Count Across State Lines (both directions)	54,912	54,770	-0.3	64,157	66,482	-3.5
Visits to State and National Parks and Monuments	308,730	282,113	-8.6	1,107,388	1,127,160	-1.8
Utilities						
Natural Gas Customers (residential and commercial)	698,716	714,137	2.2	706,299	686,624	2.9
Natural Gas Customers (industrial)	1,033	1,031	-0.2	1,044	1,062	-1.7
Telephone Lines in Service (Qwest, residential access)	766,944	704,012	-8.2	723,432	776,258	-6.8
Telephone Lines in Service (Qwest, business/public access)	430,413	429,075	-0.3	427,628	642,074	-33.4

Utah Business Statistics

UTAH DATA	December 2000	December 2001	% Change from Year Ago	12-Month Average Current Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Nonagricultural Employment (thous.)	86.1	88.5	2.7	87.5	84.8	3.1
Unemployment Rate (seasonally adjusted)	2.9	4.4	51.7	3.5	2.9	21.1
Authorized Permit Construction (thous. of dol.)	26,385.2	20,419.9	-22.6	32,560.4	33,463.6	-2.7
New Dwelling Units (no.)	102	136	33.3	214	187	14.8
New Car, Truck and Motor Home Sales, Owner's County (no.)	na	na	na	na	743	na
Natural Gas Customers (residential and commercial)	74,770	77,692	3.9	76,547	74,598	2.6
Natural Gas Customers (industrial)	92	91	-1.1	92	94	-2.9
Telephone Lines in Service (Qwest, residential access)	95,096	93,448	-1.7	94,557	94,316	0.3
Telephone Lines in Service (Qwest, business access)	29,958	30,946	3.3	31,152	29,151	6.9
Salt Lake County						
Nonagricultural Employment (thous.)	561.4	546.6	-2.6	550.9	545.1	1.1
Unemployment Rate (seasonally adjusted)	3.0	5.3	76.7	3.9	2.9	33.7
Authorized Permit Construction (thous. of dol.)	61,787.3	82,068.6	32.8	115,813.9	118,431.1	-2.2
New Dwelling Units (no.)	200	382	91.0	452	389	16.4
New Car, Truck and Motor Home Sales, Owner's County (no.)	na	na	na	na	3,774	na
Natural Gas Customers (residential and commercial)	294,855	299,516	1.6	296,723	289,978	2.3
Natural Gas Customers (industrial)	460	467	1.5	465	473	-1.8
Telephone Lines in Service (Qwest, residential access)	337,671	310,910	-7.9	324,328	345,036	-6.0
Telephone Lines in Service (Qwest, business access)	236,060	235,605	-0.2	234,746	230,224	2.0
Utah County						
Nonagricultural Employment (thous.)	158.4	155.4	-1.9	155.1	152.5	1.7
Unemployment Rate (seasonally adjusted)	2.6	5.5	111.5	3.5	2.6	35.3
Authorized Permit Construction (thous. of dol.)	38,229.8	40,741.0	6.6	68,679.6	61,927.9	10.9
New Dwelling Units (no.)	222	224	0.9	356	326	9.3
New Car, Truck and Motor Home Sales, Owner's County (no.)	na	na	na	na	910	na
Natural Gas Customers (residential and commercial)	101,614	105,209	3.5	103,297	99,509	3.8
Natural Gas Customers (industrial)	150	140	-6.7	146	151	-3.6
Telephone Lines in Service (Qwest, residential access)	111,178	106,538	-4.2	107,938	111,974	-3.6
Telephone Lines in Service (Qwest, business access)	57,754	58,978	2.1	60,310	56,424	6.9
Weber County						
Nonagricultural Employment (thous.)	88.1	87.7	-0.5	87.5	88.5	-1.2
Unemployment Rate (seasonally adjusted)	4.1	6.1	48.8	4.6	4.1	13.1
Authorized Permit Construction (thous. of dol.)	8,885.1	8,562.0	-3.6	20,888.1	29,955.8	-30.3
New Dwelling Units (no.)	57	60	5.3	107	123	-13.1
New Car, Truck and Motor Home Sales, Owner's County (no.)	na	na	na	na	476	na
Natural Gas Customers (residential and commercial)	68,364	69,128	1.1	68,057	66,961	1.6
Natural Gas Customers (industrial)	99	100	1.0	99	101	-2.5
Telephone Lines in Service (Qwest, residential access)	58,532	52,984	-9.5	55,043	63,067	-12.7
Telephone Lines in Service (Qwest, business access)	31,780	34,624	8.9	34,063	31,203	9.2

na Not Available

¹ Mid-month prices. ² Some figures not strictly comparable due to reclassification. ³ Includes services by nonprofit and religious organizations. ⁴ Includes public schools and college institutions. ⁵ Includes allowance for loan losses.

Sources:

Personal Income	U.S. Department of Commerce, Bureau of Economic Analysis.
New Corporations	Utah Department of Commerce, Division of Corporations and Commercial Code.
New Car and Truck Sales	Utah State Tax Commission, Economic and Statistics Unit, <i>Utah Car and Truck Sales</i> .
Agriculture	U.S. Department of Agriculture, Utah Agricultural Statistics Service, <i>Utah Agriculture</i> .
Construction Data	Bureau of Economic and Business Research, University of Utah, <i>Utah Construction Report</i> .
Employment Data	Utah Department of Workforce Services, <i>Utah Labor Market Report</i> .
Finance Data	Utah Department of Financial Institutions.
Crude Oil Production	Utah Division of Oil, Gas and Mining, <i>Oil and Gas Production Report</i> and Utah Office of Energy and Resource Planning.
Natural Gas Production	Utah Division of Oil, Gas and Mining, <i>Oil and Gas Production Report</i> .
Coal Production	U.S. Department of Energy, Energy Information Administration.
Air Passengers	SLC International Airport, Statistics Division, <i>Air Traffic Statistics and Activity Report</i> .
Highway Traffic Count	Utah Department of Transportation, <i>Automatic Traffic Recorder Data Report</i> .
Visits to State and National Parks and Monuments	U.S. Forest Service and Utah State Parks and Recreation Department.
Utilities Data	Cooperating Utility Companies.

Utah Business Statistics

	November 2000	November 2001	% Change from Year Ago	12-Month Average Current Year	12-Month Average Last Year	12-Month Average % Change
NATIONAL DATA						
U.S. Gross Domestic Product (seas. adj. at ann. rates, bil., qrtly.)	na	na	na	10,149.3	9,638.3	5.3
Total Personal Income (seas. adj. at ann. rates, bil. of dol.)	8,422.1	8,757.2	4.0	8,772.0	8,241.8	6.4
Industrial Production Index (seasonally adjusted, 1992=100)	145.8	137.2	-5.9	141.1	145.5	-3.1
Capacity Utilization Rate (seasonally adjusted, percent)	80.7	74.7	-7.4	77.3	82.0	-5.8
Net Exports of Goods & Services (millions of dollars; seasonally adj.)	-32,978.0	-28,545.0	-13.4	-29,521.9	-30,644.3	-3.7
Exports of Goods & Services (millions of dollars; seasonally adj.)	90,478.0	77,736.0	-14.1	84,593.8	88,405.8	-4.3
Imports of Goods & Services (millions of dollars; seasonally adj.)	123,456.0	106,281.0	-13.9	114,365.8	119,049.9	-3.9
Composite Index of 11 Leading Indicators (1992=100)	109.1	110.1	0.9	109.2	107.9	1.2
Price Indexes						
Consumer Price Indexes (not seasonally adjusted, 1982-84=100)						
CPI-U (All Urban Consumers) All Items	174.1	177.4	1.9	176.8	171.7	3.0
CPI-U (All Urban Consumers) Food and Beverages	169.5	175.2	3.4	173.2	168.0	3.1
CPI-U (All Urban Consumers) Housing	171.6	176.9	3.1	175.9	169.0	4.1
CPI-U (All Urban Consumers) Transportation	155.2	150.2	-3.2	154.7	152.8	1.3
CPI-U (All Urban Consumers) Medical Care	264.1	276.7	4.8	271.7	259.9	4.6
CPI-U (All Urban Consumers) Energy	129.0	116.0	-10.1	130.7	123.3	6.0
Producer Price Index (not seasonally adjusted, 1982=100)						
Producer Price Index, All Finished Goods	139.9	138.4	-1.1	140.9	137.5	2.5
GDP Implicit Price Deflator (seasonally adjusted, 1992=100, qrtly.)	na	na	na	108.9	106.3	2.4
Corporate Profits (seas. adj. at ann. rates, bil., qrtly.)						
Profits Before Taxes	na	na	na	747.8	877.9	-14.8
Profits-Tax Liability	na	na	na	230.8	279.3	-17.4
Profits After Taxes	na	na	na	517.0	599.8	-13.8
Civilian Employment (seasonally adjusted)						
Labor Force (mil.)	141.1	142.3	0.8	141.8	140.8	0.7
Employment (mil.)	135.5	134.3	-0.9	134.7	135.1	-0.3
Unemployment Rate	4.0	5.6	40.0	4.6	4.0	15.1
Value of New Construction Put In Place						
Total Construction (seas. adj. at ann. rates, bil. of dol.)	826.7	856.0	3.5	860.3	814.9	5.6
Private Const.: Residential (seas. adj. at ann. rates, bil. of dol.) ^b	374.3	369.5	-1.3	391.7	375.2	4.4
New Housing Units (seas. adj. at ann. rates, bil. of dol.)	259.9	280.0	7.7	276.1	265.4	4.1
Private Const.: Nonresidential (seas. adj. at ann. rates, bil. of dol.)	215.3	193.0	-10.4	211.4	207.8	1.7
Interest Rates						
Federal Funds Rate	6.51	2.09	-67.9	4.27	6.15	-30.6
Discount Rate on New 91-Day Treasury Bills	6.36	1.91	-70.0	3.82	5.95	-35.8
Yield on Long-Term Treasury Bonds	5.78	5.12	-11.4	5.49	6.01	-8.6
Average Prime Rate Charged by Banks	9.50	5.10	-46.3	7.31	9.15	-20.1
Mortgage Rate (conventional 1st mortgage, new home, U.S. avg.)	7.75	6.66	-14.0	7.00	8.11	-13.7

na Not Available

^b Includes residential improvements, not shown separately.

Sources:

U.S. Gross Domestic Product

U.S. Department of Commerce, *Survey of Current Business*.

Total Personal Income

U.S. Department of Commerce, *Survey of Current Business*.

Industrial Production Index

Board of Governors of the Federal Reserve System, *Federal Reserve Bulletin*.

Capacity Utilization Rate

Board of Governors of the Federal Reserve System, *Federal Reserve Bulletin*.

Export/Import Data

U.S. Department of Commerce, *Survey of Current Business*.

Composite Index of 11 Leading Indicators

The Conference Board, Inc.

Consumer Price Indices

U.S. Department of Labor, Bureau of Labor Statistics, *Monthly Labor Review*.

Producer Price Index

U.S. Department of Labor, Bureau of Labor Statistics, *Monthly Labor Review*.

GDP Implicit Price Deflator

U.S. Department of Commerce, *Survey of Current Business*.

Corporate Profits

U.S. Department of Commerce, *Survey of Current Business*.

National Employment Data

U.S. Department of Labor, Bureau of Labor Statistics, *Monthly Labor Review*.

National Construction Data

U.S. Department of Commerce, Bureau of the Census, *Value of New Construction Put in Place*.

Interest Rates

Board of Governors of the Federal Reserve System, *Federal Reserve Bulletin*.

Utah Business Statistics

NATIONAL DATA	December 2000	December 2001	% Change from Year Ago	12-Month Average Current Year	12-Month Average Last Year	12-Month Average % Change
U.S. Gross Domestic Product (seas. adj. at ann. rates, bil., qrtly.)	10,027.9	10,263.3	2.3	10,208.1	9,882.5	3.3
Total Personal Income (seas. adj. at ann. rates, bil. of dol.)	8,461.0	8,784.8	3.8	8,799.0	8,280.3	6.3
Industrial Production Index (seasonally adjusted, 1992=100)	145.1	136.8	-5.7	140.4	145.7	-3.7
Capacity Utilization Rate (seasonally adjusted, percent)	80.2	74.4	-7.2	76.8	81.8	-6.2
Net Exports of Goods & Services (millions of dollars; seasonally adj.)	-33,290.0	-25,295.0	-24.0	-28,855.7	-31,311.8	-7.8
Exports of Goods & Services (millions of dollars; seasonally adj.)	89,241.0	77,860.0	-12.8	83,645.4	88,808.8	-5.8
Imports of Goods & Services (millions of dollars; seasonally adj.)	122,532.0	103,155.0	-15.8	112,751.0	120,120.5	-6.1
Composite Index of 11 Leading Indicators (1992=100)	108.5	111.5	2.8	109.5	108.1	1.3
Price Indexes						
Consumer Price Indexes (not seasonally adjusted, 1982-84=100)						
CPI-U (All Urban Consumers) All Items	174.0	176.7	1.6	177.1	172.2	2.8
CPI-U (All Urban Consumers) Food and Beverages	170.5	175.2	2.8	173.6	168.4	3.1
CPI-U (All Urban Consumers) Housing	171.9	176.9	2.9	176.4	169.6	4.0
CPI-U (All Urban Consumers) Transportation	154.4	148.5	-3.8	154.3	153.3	0.6
CPI-U (All Urban Consumers) Medical Care	264.8	277.2	4.7	272.8	260.8	4.6
CPI-U (All Urban Consumers) Energy	128.1	111.4	-13.0	129.3	124.6	3.8
Producer Price Index (not seasonally adjusted, 1982=100)						
Producer Price Index, All Finished Goods	139.7	137.2	-1.8	140.7	137.9	2.1
GDP Implicit Price Deflator (seasonally adjusted, 1992=100, qrtly.)	107.8	109.7	1.8	109.4	107.0	2.2
Corporate Profits (seas. adj. at ann. rates, bil., qrtly.)						
Profits Before Taxes	816.5	619.4	-24.1	698.5	864.4	-19.2
Profits-Tax Liability	253.5	194.1	-23.4	216.0	273.8	-21.1
Profits After Taxes	563.0	425.2	-24.5	482.5	590.6	-18.3
Civilian Employment (seasonally adjusted)						
Labor Force (mil.)	141.5	142.3	0.6	141.8	140.9	0.7
Employment (mil.)	135.8	134.1	-1.3	134.6	135.3	-0.5
Unemployment Rate	4.0	5.8	45.0	4.8	4.0	19.1
Value of New Construction Put In Place						
Total Construction (seas. adj. at ann. rates, bil. of dol.)	838.7	862.6	2.8	862.2	817.1	5.5
Private Const.: Residential (seas. adj. at ann. rates, bil. of dol.) ^b	379.6	399.2	5.2	393.4	375.3	4.8
New Housing Units (seas. adj. at ann. rates, bil. of dol.)	263.5	281.2	6.7	277.6	265.2	4.7
Private Const.: Nonresidential (seas. adj. at ann. rates, bil. of dol.)	218.0	190.8	-12.5	209.1	209.9	-0.3
Interest Rates						
Federal Funds Rate	6.40	1.82	-71.6	3.89	6.24	-37.7
Discount Rate on New 91-Day Treasury Bills	5.94	1.72	-71.0	3.47	6.00	-42.1
Yield on Long-Term Treasury Bonds	5.49	5.48	-0.2	5.49	5.94	-7.6
Average Prime Rate Charged by Banks	9.50	4.84	-49.1	6.92	9.23	-25.0
Mortgage Rate (conventional 1st mortgage, new home, U.S. avg.)	7.38	7.07	-4.3	6.97	8.06	-13.5

na Not Available

^b Includes residential improvements, not shown separately.

Sources:

U.S. Gross Domestic Product

U.S. Department of Commerce, *Survey of Current Business*.

Total Personal Income

U.S. Department of Commerce, *Survey of Current Business*.

Industrial Production Index

Board of Governors of the Federal Reserve System, *Federal Reserve Bulletin*.

Capacity Utilization Rate

Board of Governors of the Federal Reserve System, *Federal Reserve Bulletin*.

Export/Import Data

U.S. Department of Commerce, *Survey of Current Business*.

Composite Index of 11 Leading Indicators

The Conference Board, Inc.

Consumer Price Indices

U.S. Department of Labor, Bureau of Labor Statistics, *Monthly Labor Review*.

Producer Price Index

U.S. Department of Labor, Bureau of Labor Statistics, *Monthly Labor Review*.

GDP Implicit Price Deflator

U.S. Department of Commerce, *Survey of Current Business*.

Corporate Profits

U.S. Department of Commerce, *Survey of Current Business*.

National Employment Data

U.S. Department of Labor, Bureau of Labor Statistics, *Monthly Labor Review*.

National Construction Data

U.S. Department of Commerce, Bureau of the Census, *Value of New Construction Put in Place*.

Interest Rates

Board of Governors of the Federal Reserve System, *Federal Reserve Bulletin*.

Bureau of Economic and Business Research
University of Utah
1645 E Campus Center Dr Rm 401
Salt Lake City UT 84112-9302

Nonprofit Org.
U.S. Postage Paid
Permit No. 1529
Salt Lake City, UT

Address Service Requested

The Bureau of Economic and Business Research, is located in the David Eccles School of Business at the University of Utah. BEBR conducts research related to the structure and performance of the Utah economy, particularly with respect to its human and natural resources and policies for enhancing the well-being of its people.

The *Utah Economic and Business Review* is published 6 times per year. Each issue features one or more articles dealing with contemporary trends and developments relating to the Utah economy, along with selected monthly and year-to-date business statistics. The *Utah Economic and Business Review* is mailed free to subscribers in the United States.

UTAH ECONOMIC AND BUSINESS REVIEW

VOLUME 62 NOS. 1 & 2



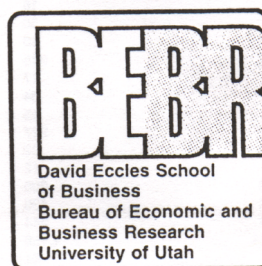
J. Bernard Machen
President

David Eccles School of Business

Jack W. Brittain *Dean*

Bureau of Economic and Business Research

R. Thayne Robson *Director*



James A. Wood
Jan E. Crispin
Alan E. Isaacson
Pamela S. Perlich
Kurtis J. Millington
Joseph T. Dunlop

Research Staff

Senior Economist
Senior Economist
Research Analyst
Senior Research Economist
Research Assistant
Research Assistant

Office Staff

Cathy Crawford *Administrative Assistant*
Diane S. Gillam *Accountant / Editor*

<http://www.business.utah.edu/BEBR/>

The University seeks to provide equal access to its programs, services and activities to people with disabilities