1992 Annual Review and Forecast of

UTAH COAL

Production and Distribution

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STATE OF UTAH
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Executive Summary

In 1990, Utah coal production reached an all time high of 22 million tons. This record year has subsequently been followed by two consecutive years of declining production. In 1992, Utah coal production fell to 21 million tons, a 2.3 percent drop from the 21.5 million tons produced in 1991. In 1993, Utah's coal production is forecast to increase to 1991 production levels. Beyond 1993 Utah coal production is expected to remain above 20 million-tons through 1995, after which the state should see production rise above the 22 million ton mark where it is expected to plateau and remain for the forseeable future.

While falling from production levels achieved the previous year, Utah's 1992 coal production of 21 million tons was still the third highest in the one hundred and twenty three year history of recorded coal production in the state. Only 1990 and 1991 production were higher.

Utah's coal mines remain the most productive underground mines in the United States. Productivity of Utah coal mines, which was just under two tons per miner-hour (tpmh) in 1980 and 1981, has been on the rise ever since, and has hit a new high almost every year. In 1992, Utah's mines achieved a new record of 5.13 tons per miner-hour and in 1993, yet another record (5.37 tpmh) is expected to be established.

This high productivity is the direct result of the high degree of mechanization and a highly skilled workforce. Ultimately these factors will lead to more competitive coal prices that, in turn, will enhance the success of the coal industry in Utah.

The future of Utah's coal operators looks bright due to higher coal demand overseas and an expanded market for compliance coal in the United States. In 1993, production will increase by about three percent.

1992 Utah Coal Production

Production of coal in Utah was more than 21 million tons, the third highest production level in 123 years of recorded Utah coal production. Only during 1990 and 1991 did Utah mines produce more coal. Gross production was 21,753,000 tons and net production was 21,015,000 tons (Appendix, Table 1).

Even though 1992 production and employment were both down from the previous year, productivity in Utah's mines continued to improve, increasing seven percent. As a result, Utah's miners retained their position as the nation's most productive underground coal miners. Productivity in 1991 (adjusted figure) was 13 percent above 1990, and increased another seven percent in 1992.

During 1992 a total of 21,015,000 tons of coal was produced by 2,106 miners. Working an average of 243 days per year (512,000 miner days), Utah's miners produced an average of 5.13 tons per miner hour (Appendix, Table 1), a seven percent increase over 1991's 4.79 tons per miner hour. These figures are based on net production. On the basis of gross production, productivity of Utah's miners was even higher.

The Wasatch Plateau coal field was again the major coal producer in 1992. Almost 89 percent of Utah's 1992 coal production, 18.6 million tons, came from Wasatch Plateau coal field while the remaining 11 percent, or 2.4 million tons, was produced from the Book Cliffs coal field. Emery coal field, the only other coal producing field in the recent years, did not produce any coal in 1992 or in 1991. During 1993, Wasatch Plateau coal field will produce a record amount of coal, about 90 percent of Utah's total production, with less than 10 percent coming from Book Cliffs coal field and no production from Emery coal field (Appendix, Table 2).

Continuing a decade of constant growth in coal production, Carbon County led all counties in 1992 with an all time high of 10.18 million tons, or 48.4 percent of total state production. Emery County was second producing 8.25 million tons of coal, while 2.6 million tons of coal was mined in Sevier County in 1992 (Appendix, Table 3).

While the volume of coal mined from federal leases during 1992 decreased, its contribution as a percentage of total state production actually increased. This primarily was due to a decrease in production from fee lands. Coal has not been produced over the last 4 years from federally-owned land at a greater percentage of total production than in 1992 (84.5 percent). Production of coal from state lands had not reached the one million ton mark since 1980. In 1992 this mark was easily surpassed with 1,384,000 tons of coal being produced from Utah's state-owned-lands. As a percentage of total production, state land production has been at the one to five percent level. During 1992, this was

Utah Coal Industry Production, Employment, Productivity and Prices

	Production	Employment	Productivity	Prices
	Million Short Tons	No. of Employees	Tons/Miner Hour	$/Ton
1981	13.80	4,166	1.99	26.87
1982	16.91	4,296	2.05	29.42
1983	11.82	2,707	2.59	28.32
1984	12.25	2,525	2.94	29.20
1985	12.83	2,563	2.80	27.69
1986	14.26	2,881	3.08	27.64
1987	16.52	2,650	3.25	25.67
1988	18.16	2,559	3.69	22.85
1989	20.51	2,471	4.42	22.01
1990	22.01	2,791	4.22	21.78
1991	21.87	2,292	4.79	21.56
1992	21.02	2,106	5.13	21.83
1993	21.42	2,055	5.37	21.86

1993 values are forecast

more than six percent. Production from county land has always been almost non-existent and at best erratic. During 1992, coal was produced on county-owned land to the tune of 136,000 tons which amounted to just over half a percent of total production. For the first time in a decade coal production from the fee land slipped below two million ton, or 8.3 percent of total production. By contrast, coal produced from fee lands in 1983 amounted to almost 40 percent of total production (Appendix, Table 4).

During 1992, a total of seven operating longwall panels were responsible for 65 percent of production, or 13,684,000 tons. This amounted to an average of about two million tons of coal production per-panel per-year. Considering the fact that one of the longwalls was not working at full capacity because of market constraints, it leads to the conclusion that, on average, each longwall produced 2.2 million tons per year. A total of 7,331,000 tons of coal was produced by 35 continuous miners for an average of 210,000 tons per-machine per-year. However, some machines have produced between 300,000 to 500,000 tons per year.

Utah Coal Markets and Distribution of Coal in Utah

Distribution of Utah coal during the last four years has been relatively stable remaining within a two percent range. Even though the production of coal in Utah decreased by about one million tons in 1992 (compared to 1990's record year), the distribution of Utah coal was down by 341,000 tons from 1990 to 1992. Distribution of Utah coal to end-users in Utah was 13.1 million tons, about 600,000 tons less than in 1991. The distribution to end-users in other states totaled 6.1 million tons, about 245,000 tons more than in 1991. Overseas exports amounted to 2.2 million tons, about 130,000 tons above 1991 exports.

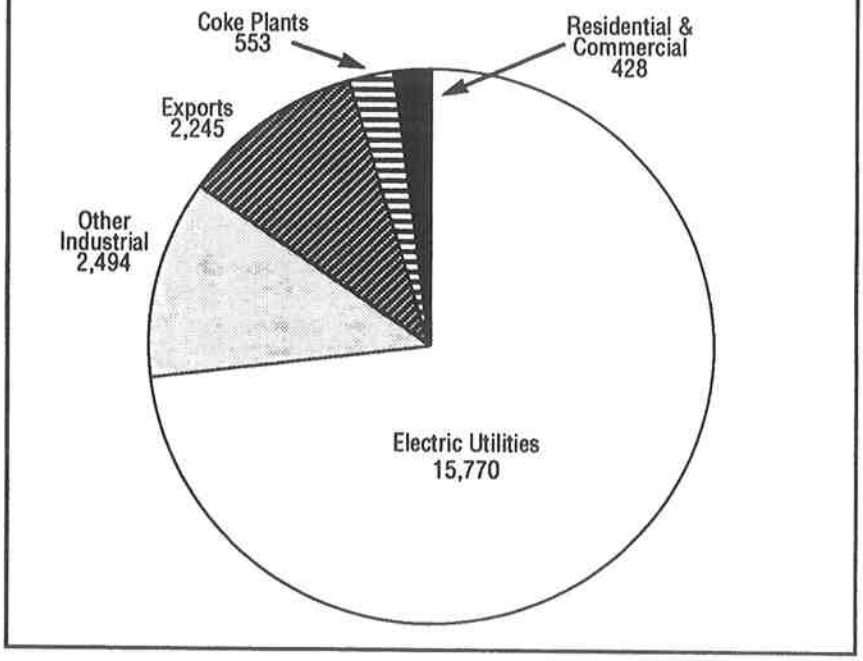
Electric Utility Markets

It has been almost two decades since electric utility consumption of coal surpassed other industrial coal and coke plant coal consumption to become the number one market for Utah coal operators. Today, more than three quarters of Utah's coal production is consumed to generate electricity in Utah and other states. If overseas exports are considered, more than 85 percent of Utah's coal production is consumed to generate electricity.

Out-of-State Markets

Distribution to out-of-state markets of Utah coal during 1992 increased by more than eight percent above the 1991 level. A total of 4.0 million tons of Utah coal was shipped to out-of-state customers. Utah has never before sold this much coal to out-of-state electric utility/cogeneration customers. The majority went to coal-fired power plants and cogeneration facilities in Nevada and California. In addition, Illinois received almost one quarter of a million tons, Washington purchased a substantial 117,000 tons, Oregon was a sizeable customer with 99,000 tons, Missouri purchased more than 79,000 tons, and Florida purchased 32,000 tons in 1992 and is committed to purchasing much more in 1993 (Appendix, Table 5).

1992 Distribution of Utah Coal by Consuming Sector
Thousand Short Tons



In Nevada, three electric power generation facilities burn bituminous or subituminous coal. Two of these plants, the Nevada Power Co.'s Reid Gardner Plant and Sierra Pacific Power Co.'s North Valmy Plant, burn Utah coal. The four units of the Nevada Power's Reid Gardner Plant, with a cumulative capacity of 612 Megawatts (MW), rely almost entirely on Utah coal. Shipments of coal to this plant totaled 1.46 million tons in 1992, a 14 percent decrease over the 1.7 million tons delivered in 1991. All of the requirements of this plant are purchased under long-term contracts, many of which were revised the past few years. There is little competition from coal produced in other states and the volume of Utah coal shipped to this plant should remain quite stable.

The two units of the Sierra Pacific Power Co.'s North Valmy Plant have a combined generation capacity of 521 MW. This plant requires about 1.45 million tons of coal per year. Utah mines supply 60 percent of the plant's coal, with Wyoming mines supplying the remaining 40 percent. In 1992, Utah coal shipments to the North Valmy Plant totaled about three quarter million tons, a decrease of 1.5 percent over 1991. Wyoming shipped about one half million tons. Utah and Wyoming coals are similar in price and quality and are of equal geographical distance from the North Valmy Plant. Neither coal demonstrates a large enough competitive advantage to expect a change in the share each supplies the North Valmy Plant in the near future.

A third coal-fired electric utility plant, one that does not burn Utah coal, is the Southern California Edison Company's Mojave Power Plant near Laughlin, Nevada. The Mojave Power Plant has a combined nameplate generation capacity of 1,636 MW and consumes about 4.2 million tons of coal per year. This coal is currently shipped to the Mojave plant through a 273-mile, 16- to 18-inch slurry pipeline from the Black Mesa-Kayenta coal mine complex near Kayenta, Arizona. At this time, Black Mesa coal is probably this plants only viable coal supply. However, competition for a share of Mojave's coal supply could occur if and when coal from Utah's southern coal fields is developed.

Besides Nevada's electric utilities, more than 1.2 million tons of Utah coal went to cogeneration facilities in California. The Energy Information Administration in adhering to a more restricted definition of electric utility and other industrial coal consumption, classifies cogeneration consumption under the definition of other industrial coal. For purposes of this report, coal shipped for consumption in cogeneration facilities is considered electric utility consumption, since its main purpose is to generate electricity for sale.

The electric utility market for Utah coal presently includes six coal-fired cogeneration units operating in Southern California. Stockton, California is the site of the first coal-fired cogeneration facility to burn Utah coal. This unit is operated by Air Products & Chemicals, Inc. and began commercial operation in March 1988. This 49.9-MW unit is capable of consuming 220,000 tons of coal per year to generate about 425 gigawatt hours (GWh) of electricity. In 1992, this plant purchased 228,000 tons of coal, all of which came from Utah. The plant generated a total of 471 gigawatt hours of electricity. Some of the electricity and all of the steam by-product were utilized by an adjacent corn wet milling plant owned by Corn Product Co. International. The remaining electricity was sold to Pacific Gas and Electric Co.

In May 1989, a second coal-fired cogeneration facility was commissioned. It is owned by Mt. Poso Cogeneration Co., a consortium of Pyropower Development Corp. (Ahlstrom Development Corp. as of July 1, 1991), Pacific Generation Co., and Bechtel Enterprises Inc. This 49.9-MW plant is located in the San Joaquin Valley and is operated by Pyropacific Operating Co. and Pacific Generation Co. During 1992, this unit purchased 218,000 tons of Utah coal and burned 216,000 tons to generate 418 GWh of electricity that was sold to Pacific Generation Co. The steam by-product was used for enhanced oil recovery in Mt. Poso Field-West.

The largest coal-fired cogeneration facility in California, with 96-MW of installed electric generation capacity, is owned by ACE Cogeneration Co., which is owned by Pyropower Development Corp., Constellation Holding, Inc. and Kerr McGee Chemical Co. This cogeneration unit is located in Trona, California, and started operation September 1990 under Kerr McGee Chemical Co., whose two soda ash plants adjacent to the ACE plant use the steam by-product. This unit has the capacity to burn 300,000 to 350,000 tons of coal per year to generate between 600 to 700 GWh of electricity. During 1992, it purchased 345,000 tons of Utah coal and burned 340,000 tons to generate 698 GWh of electricity that was purchased by Southern California Edison Co.

Ultra Power, Constellation and Hadson are the owners of a twin cogeneration plant in Bakersfield named Rio Bravo Poso and Rio Bravo Jasmin. Construction of this twin plant started on December 28, 1987 and was completed on March 23, 1990. The plant's first start-up was on Sept. 27, 1989 and it went on-line early in 1990.

During 1992, Rio Bravo Poso purchased 136,000 tons of Utah coal and burned almost all of it to generate 275 GWh of electricity that was sold to Pacific Gas and Electric. The steam by-product was used in enhanced oil recovery in Rio Bravo oil field. Rio Bravo Jasmin purchased 136,000 tons of Utah coal and burned nearly all of it to generate 275 GWh of electricity that was sold to Southern California Edison. The steam by-product of this unit was also used for the enhanced oil recovery in the Rio Bravo oil field.

Another cogeneration plant, Energy Factor, is located in Stockton. This 45-MW cogeneration plant was purchased by Sithe Energy in January 1990. The steam by-product from this plant goes to various manufacturing facilities in the area. This plant can use about 200,000 tons of coal per year. The coal supply contractor of this company is Pacific Basin Resources, a division of Oxbow Carbon & Minerals of Colorado. During 1992, this company purchased 165,000 tons of coal, 134,000 tons, or 81 percent of which, came from various Utah coal suppliers. This unit consumed 167,000 tons of coal to generate 369 GWh of which 319 GWh of net electric generation was sold to Pacific Gas & Electric.

Shipments of coal for consumption by electric power plants in Nevada are anticipated to either remain the same or decrease slightly in 1993 in comparison to 1992. While out-of-state sales to states such as Illinois, Washington, Oregon or Missouri may not be as strong in 1993 as in 1992, shipments of electric utility coal to Florida could increase as Tampa Electric begins its test burn of Sufco Coal at its Big Bend power plant later in the year. This plant could prove to be a viable out-of-state sale for Utah's high BTU, low sulfur coal. Shipment of coal to cogeneration facilities in California will not be as strong in 1993 as was in 1992.

On the whole, Utah coal distributed out-of-state to generate electricity could decrease from 4.0 million tons in 1992 to 3.5 million tons in 1993.

Utah Markets

Coal consumed in Utah to generate electricity amounted to nearly 13.8 million tons in 1992 (coal shipped to electric utility plants was 13.136 million tons). Coal consumed by coal-fired electric power plants in Utah during 1992 was higher than expected. Utah Power's Hunter I, II, and III, with availability of 85 percent and utilized availability of 97.4 percent, consumed 4.1 million tons of coal to generate 8,616 GWh of electricity. This coal was produced by Utah Power's Cottonwood mine. During 1993, this plant should be working at about a five percent higher availability, but a slightly lower utilized availability than in 1992, resulting in about three percent increase in coal burned and electricity generated.

Huntington I and II, with plant availability of about 88.4 percent and utilized availability of over 98.7 percent, consumed about 2.7 million tons of coal to generate 6,168 GWh of electricity. This coal was produced by Utah Power's Deer Creek mine. During 1993, this plant should be working at about a two percent higher availability, but a slightly lower utilized availability than in 1992, resulting in about five percent more coal burn and electricity generation. The Carbon Plant, with availability of 94.4 percent and utilized availability of almost 91.2 percent, consumed more than 523,000 tons of coal to generate 1,308 GWh of electricity. The coal for this plant was purchased on the spot market by competitive bids from various companies. Going to the spot market to meet the coal needs of its Carbon plant, helped Utah Power reduce coal costs. During 1992, Coastal States Energy was the major supplier, with Cyprus Plateau Coal Co. and Castle Valley Resources each having an equal share of the remainder.

It is very likely that the utilized plant availability for Utah

Power could be slightly higher in 1993 than in 1992, and coal consumption could surpass 7.3 million tons. However, coal produced for distribution to Utah electric utilities is likely to decrease by three quarters of a million tons in 1993. Utah Power's Hunter and Huntington plants currently have large stockpiles of coal on site. These plants are expected to draw a portion of their 1993 coal requirements from stockpiles, reducing their purchases of Utah coal.

Intermountain Power Plant (IPP) (of the Los Angeles Department of Water and Power) with availability of almost 93 percent operated at a capacity factor (utilized availability) of 90.8 percent during 1992. The two units of this plant with the total name plate capacity of 1,640 MW, burned 4.9 million tons of coal to generate 12,911 GWh. The amount of coal purchased was close to that consumed. Eighty percent of the coal was purchased through five long-term contracts and the remaining 20 percent was purchased on the spot market. All the generated electricity was sold outside of the state. During 1993, this plant would perform at the same level as in 1992.

During 1992, the Bonanza plant of Deseret Generation and Transmission (DG&T) with the rated peak capacity of 420 megawatts, had an availability of 97.9 percent and a capacity factor of 87.0 percent. This plant consumed 1.51 million tons of Colorado coal to generate 3,186 GWh of electricity, 2,013 GWh or 63 percent of which was sold outside of the state. The coal was purchased from Deserado mine located just 36 miles east of the plant in Colorado.

During 1993, the availability will decrease to 87 percent due to scheduled maintenance. The capacity factor would increase to 81.6 percent and the amount of coal consumed will be 1.5 million tons, resulting in 3,070 GWh of electricity generation, of which two thirds will be sold outside of Utah.

This plant is considered to have one of the lowest emission rates per kwh generated in the country.

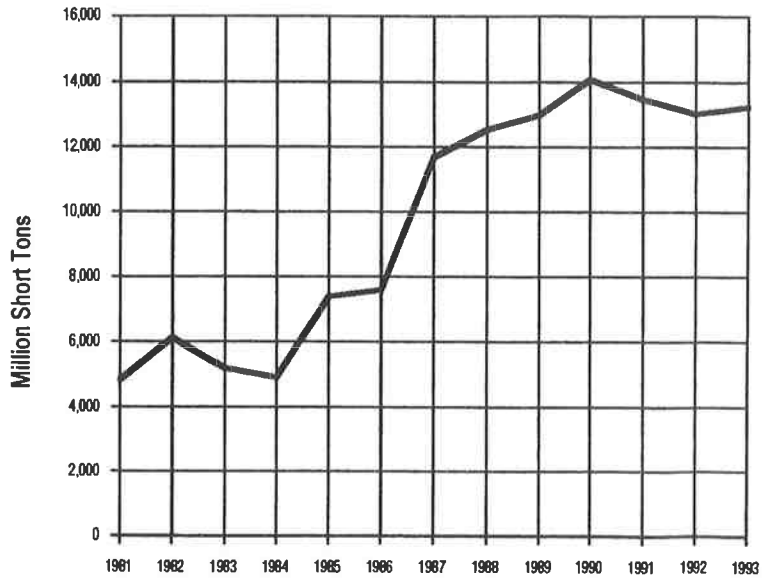
Utah Coking Coal Markets

The market for Utah-produced coking coal is limited to Geneva Works steel mill, Orem, Utah, owned by Basic Manufacturing and Technology of Utah, Inc. Coal purchased by Geneva Works to make coke totaled 1.182 million tons during 1992. The plant consumed 1.197 million tons to make coke for steel production.

As the coke-making battery of Geneva Works ages, its capacity to make coking coal has decreased limiting the plants steel-making capacity. During 1992, Geneva overcame this constraint by directly purchasing 240 thousand tons of coke from outside of Utah to produce a total of 2.3 million tons of steel.

In mid-1992, Geneva Works seriously contemplated the purchasing of the Mid-Continent mine in Carbondale, Colorado (which had been in

1992 Distribution of Coal to Utah Electric Utilities



1993 values are forecast

a bankruptcy court in Denver for some time) to supply its requirement of mid-volatile hard coking coal. The final decision was against this move.

To meet its requirement of low- to mid-volatile hard coking coal, Geneva Works has negotiated a long term contract with eastern producers and a five year, 500,000 tons-per-year transportation contract with Southern Pacific railroad.

During 1992, Geneva bought 278 thousand tons of low-volatile Pennsylvania coking coal from Cooney Brothers Coal Company of Cresson, Pennsylvania and burned it and three thousand tons of the same coal from its stockpile, for a total of 281 thousand tons. In addition, Geneva bought 88 thousand tons of high-volatile Colorado coking coal from Pacific Basin Resources of Littleton, Colorado. This coal is from the same seam as the coal Geneva purchased from the Bear Coal Co., Inc. of Somerset, Colorado during 1991.

Geneva also bought 204 thousand tons of mid-volatile Virginia coal from the United Coal Company of Bristol, Virginia and burned that coal along with three thousand tons from its stockpile, for a total of 207 thousand tons.

It also purchased and consumed about 60 thousand tons of mid-volatile Virginia coking coal from Cardinal Coal Company, a division of Pittston Coal.

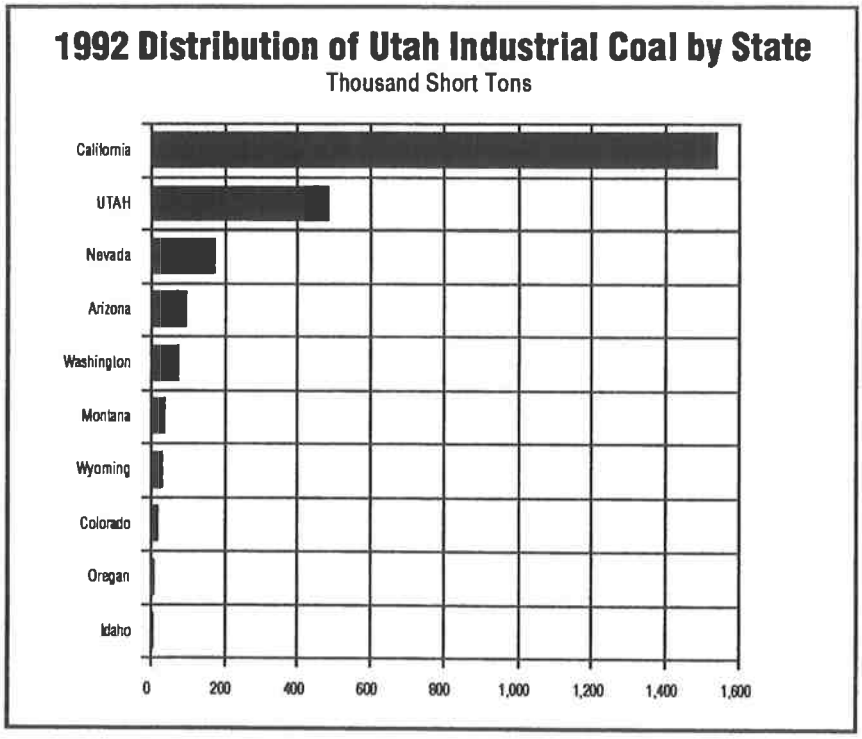
Utah mines provided 553 thousand tons of high-volatile coking coal which was consumed along with seven thousand tons from the Geneva stockpile, for a total of 560 thousand tons.

The consumption of coking coal by Geneva is expected to slowly decrease as the units get older. In 1993, Geneva will purchase 251 thousand tons of coking coal from Cooney Brothers, about 180 thousand tons of coking coal from Pacific Basin Resources, 142 thousand tons of mid-volatile coking coal from United Coal Company and will double its 1992 purchase of Virginia coking coal from the Cardinal Coal Co. Locally, Geneva will purchase 519 thousand tons of coking coal for a total of 1.212 million tons and consume 1.193 million tons in its steel production.

Other Industrial Coal Markets

Out-of-State Markets

Since 1989, when the shipment of coal to other states for industrial consumption peaked at 2.4 million tons, this type of consumption has been on the decline, reaching 2.0 million tons in 1992.



During 1992, a total of six operators shipped 2,006,000 tons of industrial coal to nine western states. The largest recipient of industrial coal was California. More than three quarters of all the industrial coal from Utah went to various chemical and cement manufacturing plants in California. Nevada received 176,000 tons for use mainly in cement plants. Arizona was next with 100,000 tons. Washington purchased 39,000

tons, followed by Montana, with 39,000 tons, Wyoming, with 34,000 tons, Colorado, with 23,000 tons, Oregon, with 11,000 tons and finally Idaho, with 7,000 tons.

Utah Markets

In 1992, industrial consumption of coal in Utah decreased by 20 percent, to 497,000 tons from 624,000 tons the previous year. More than one half of the total industrial coal was used by Kennecott Copper. During 1992, Kennecott consumed 9.2 trillion BTU (262,000 tons of coal and 2.9 billion cubic feet of natural gas) to generate 853 GWh of electricity. Kennecott's consumption of 262,000 tons was down 12 percent from 299,000 tons the previous year. This was due to Kennecott burning coal for only eight months of the year rather than 10 months the previous year.

In 1993, Kennecott's electric generation will increase by 14 percent resulting in a greater coal and natural gas consumption. Total coal consumption will amount to 309,000 tons and natural gas consumption will increase to 3.2 billion cubic feet.

The Devils Slide plant of Ideal Basic Industries, switched from Wyoming coal to natural gas in 1991 and continued to burn natural gas throughout until August of 1992. In August 1992, the price of natural gas increased to a point where the consumption of coal became a more desirable economic alternative. During the remainder of 1992, Devils Slide plant used 27,000 tons of coal. A significant event that occurred in converting from natural gas to coal was the plant did not automatically switch to Wyoming coal as it had in the past, but instead started to use Utah coal. Of the 27,000 tons of coal burned in 1992, the plant purchased 18,000 tons of coal from Utah and only 9,000 tons of coal from Wyoming. Utah coal quality used in the plant was satisfactory, however the hardness of Utah coal compared to Wyoming coal might prove to be a slight disadvantage.

During 1993, this plant is expected to use 40,000 tons of Utah coal and 10,000 tons of Wyoming coal to produce 350,000 tons of cement.

Ashgrove Cement, formerly Southwest Portland Cement purchased 96,660 tons of Utah coal and consumed 96,340 tons to produce 668,000 tons of cement. In addition to coal, Ashgrove uses small amounts of diesel fuel to start up its kilns after rebricking or maintenance. This amounted to 1,337 barrels of diesel fuel in 1992.

Ashgrove will probably use 68,000 tons of Utah coal in 1993 along with some used tires and used motor oil. Early in 1993 Ashgrove received regulatory approval to use alternative fuel for its energy needs and the plant is forecasting to supply about 15 percent of its energy requirements from used tires and another 15 percent from used motor oils. Ashgrove will continue to be one of the important industrial coal users for years to come and its use of used tire and motor oil should not affect its coal consumption more than 30 percent.

Nearly 100,000 tons was consumed by other industrial coal consumers, such as gypsum and lime plants.

Industrial coal consumption in Utah will increase from 495,000 tons in 1992 to about 519,000 tons in 1993, but the actual increase could be slightly smaller than the forecast.

Residential and Commercial Coal Markets

Out-of-State Markets

Since the early 1980's when consumption was about 300,000 tons per year, demand for residential and commercial coal had been on the decline. By 1990, it stood at only 59,000 tons, its lowest level. In 1991, sales of Utah coal to this market increased to 76,000 tons and in 1992, to 81,000 tons. Idaho and Washington are the major consumers of Utah coal for residential and commercial use. Colorado, Montana and Nevada also consume small amounts (Appendix, Table 5). Consumption by the residential and commercial sectors in these states will probably increase in the near future.

Utah Markets

During 1992, residential and commercial consumption of coal in Utah increased nine percent to 343,000 tons. Out of 537,000 households in Utah more than 7,200 (or 1.3 percent) use coal product for pri-

mary home heating. This is the statewide average. Residents of some counties use coal product in a much higher percentage. More than 20 percent of residents of Emery and Wayne counties use coal for home heating. In Millard, Juab and Sanpete counties this percentage is above 18 and in Sevier and Carbon above 16. On the other hand, for residents of Davis, Weber and Salt Lake counties coal consumption for home heating is almost non-existent. Commercial consumption of coal for space heating in Davis, Weber and Salt Lake counties are also low.

Two elements affect out-of-state residential and commercial consumption. One is consideration for the environment and adherence to standards set by various air quality control agencies. The other is the cost of the fuel. During the last five years natural gas declined in price and became very competitive with coal on a cent-per-million-Btu-delivered basis. However, recent increases in the spot price of natural gas could provide an economic incentive for consumers to switch back to coal if local air quality regulations permit. Accordingly, Utah coal producers might see an increase in out-of-state consumption of Utah coal by residential and commercial markets.

In 1993, the out-of-state consumption will increase to 195,000 tons and Utah consumption will increase to 362,000 tons for a total of 557,000 tons.

Coal Imports

Utah imports coal for use in coking ovens, industrial plants and a coal-fired power plant in Uintah County. There are no imports to the residential and commercial sector. In 1992 companies operating in Utah imported 2,155,000 tons of coal.

Utah imports low to mid volatile hard coking coal to mix with its own high volatile coking coal for Geneva steel mill. Imports of industrial coal to Utah was basically for the use of Devils Slide plant of Ideal Basic Industries which is located in Morgan near the Wyoming border. However, this plant's consumption is now beginning to be met by Utah coal and imports to this plant could cease in the near future in favor of Utah coal. The only other import of coal to Utah is about 1.5 million tons of electric utility coal to Bonanza plant of Deseret Generation and Transmission (DG&T). Shipments of Colorado coal for this plant has more to do with the mine, the railroad and the plant having the same owner than anything else.

Coal shipped to Utah from mines in other states increased in 1992 compared to 1991. This was expected due to higher consumption of coal by the Deseret Generation and Transmission Bonanza Plant, which imports its coal from Colorado. This plant purchased 1.517 million tons of coal from Colorado in 1992. In 1993, the Bonanza Plant is expected to keep its purchases at the 1.5 million ton level.

Geneva Work's coal imports should increase from 629,000 tons in 1992 to 693,000 tons in 1993.

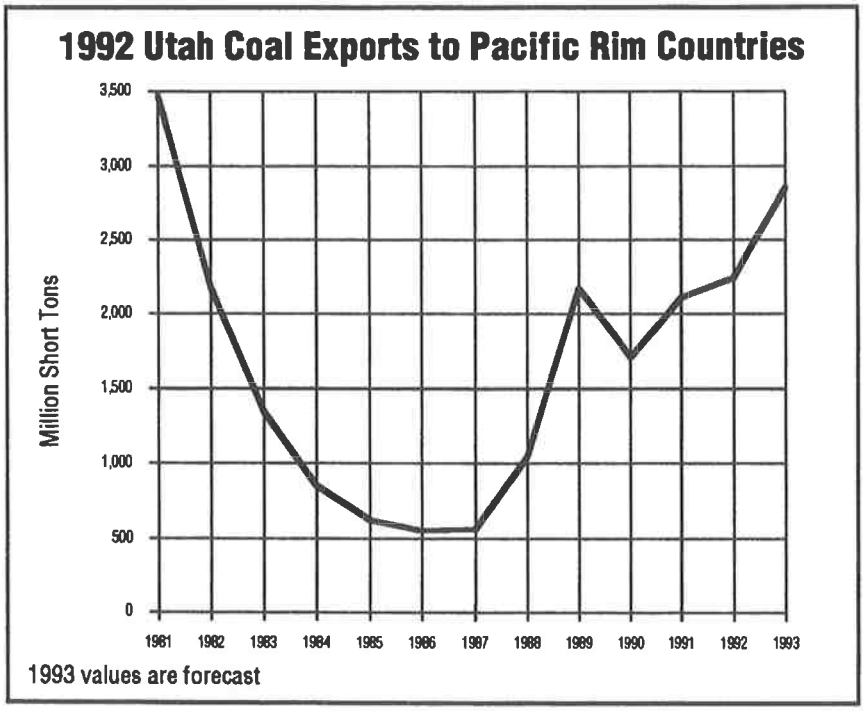
Ideal Basic Industries' Devils Slide Plant purchased a little more than 9,000 tons of Wyoming coal when it switched from natural gas during the second half of 1992. During 1993, this unit will probably purchase 10,000 tons of industrial coal from Wyoming.

There is no indication that coal will be imported into Utah for use by the residential and commercial sector in 1993. Altogether, the imports of coal into Utah are expected to rise to 2.2 million tons in 1993.

Overseas Exports

Utah coal exports to overseas markets during 1992 were quite encouraging, surpassing the impressive exports of the previous year (Appendix, Table 1). While the number of Utah mines exporting coal in 1992 decreased from eight the previous year, to six, coal exports increased 133,000 tons to 2.245 million tons. Utah has a unique position in the coal export market. Its low cost, high productivity, low sulfur high BTU coal is closer to west coast ports for shipment to Pacific Rim countries than any other U.S. coal. U.S. coal may be slightly more expensive than other coals in the Pacific Rim region but it is a

better coal. In addition to the coal quality, U.S. coal producers do not have deliverability problems. This is a great asset that the Pacific Rim countries value very highly. The cost of production and price of Utah coal has steadily decreased over the past decade as a result of increased productivity. This has made Utah coal almost competitive on a price-per-ton basis with coal produced in other countries. Foreign coal producers price advantage is the result of cheaper labor and less stringent environmental and safety regulations.



Utah coal production for export is influenced by the world coal market. During the next 10 years, steam coal demand will rise in Europe as well as Pacific Rim. European coal imports will go up by about 80 percent during this period, due to greater consumption, but more importantly, because of production curtailment in Europe. Production will fall for several reasons. First, Europe has historically used lignite coal, but will discontinue its use because of environmental considerations. Second, many European coal mines are unprofitable to operate but have continued to produce coal with subsidies from their country's governments. There subsidies will end soon, making many of these mines unprofitable. There are also some deep underground coal mines that are more difficult to mine. The production from those mines will also stop when faced with competition from coal imports. This would effect Utah coal exports. As other major eastern exporting coal companies with subsidiaries in Utah start to ship more coal to Europe they may shift more of their Pacific Rim obligation to their Utah subsidiaries and affiliates. On the other hand, increased imports in the Asian coal market are basically consumption driven and will continue to be in the five percent range for the next 10 years. In this market fuel oil competes very strongly with coal.

The major coal exporters of today will also be the major coal exporters for the next 10 to 20 years. Australia's exports (120MMT) will rise by 75 percent, while United State's (105MMT) and South Africa's (55MMT) exports will increase by 35 percent. Canada's exports (40MMT) should remain constant and Poland's (35MMT) and Russia's (50MMT) exports should start to decline, mostly because the mines are old and very deep. South America (15MMT) and Indonesia (5MMT) coal exports should increase by almost 100 percent within the next decade.

For 1993, Utah coal exports should increase by more than 25 percent to 2.853 million tons.

1992 Activities of Utah Coal Operators

PacifiCorp

The Deer Creek and Cottonwood Mines, owned by PacifiCorp and operated by Energy West Mining Co. experienced continued success in 1992. The mines produced 3,539,000 and 3,267,000 tons respectively at an average F. O. B. mine cost of $18.67.

Most of the Deer Creek coal was mined from the central portion of the reserves. All longwall mining was in this area producing a total of 2,713,000 tons. Development mining produced the remaining tonnage of 826,000. Some development mining was in the northern reserve, north of the Roans Canyon Fault. This mining is in preparation for longwall mining to commence in late 1993.

The Cottonwood mine produced 2,583,000 tons using longwall methods, with the remaining 684,000 mined on development.

In September of 1992, PacifiCorp acquired the idle Trail Mountain mine from Arco Coal Co. Some rehabilitation work was completed in 1992 and will continue in 1993. Production from this property will resume in 1994 as part of the Cottonwood Mine expansion.

Coastal States Energy Company

The U.S. Clean Air Act has provided an opportunity for the expanded use of low-sulfur coal in domestic markets. In 1992, Coastal began to see a positive impact from this federal legislation as there was increased interest in its Utah coal for shipment to Midwestern and Southeastern utilities, including new shipments to Missouri Public Service, City of Springfield Utilities and Tampa Electric as well as continuing shipments to Illinois Power. Expectations for long-term business in this market sector are high.

Low-sulfur coal is also expected to be a cost-effective, environmentally acceptable solution in the international market place. Compared to 1991, export sales of coal increased by about ten percent in 1992. Coastal anticipates that demand in the Pacific Rim for its Utah coal will continue to grow in the near term. Pacific Rim exports should grow by more than twenty-five percent in 1993, due primarily to the purchase of Cravat Coal by Coastal.

The construction of the 2.2 mile long conveyor belt at the Skyline Mines was started in mid-1992 and completed in early 1993. The state-of-the-art, environmentally sensitive conveyor, known as a Japanese tube conveyor, is a single belt designed to follow the lay of the land and the adjacent road without any transfer points between loading at the crusher and unloading at the rail load-out facility.

In 1992, the SUFCo and Skyline mines combined to produce more than 7.7 million tons, similar to production levels achieved in 1991. Coastal expects to increase production in 1993 by about 10 percent, becoming Utah's largest coal producer.

Valley Camp of Utah, Inc.

Valley Camp of Utah, Inc., a subsidiary of the Quaker State Oil Co., laid off most of its miners July 1, 1992, as its last contract expired in June. Valley Camp went on standby status with seven salaried workers and four union personnel. Coal production was reduced considerably. Subsequently, Quaker State Oil Co., in conforming with its previously announced divesture of all its coal holdings, offered Valley Camp of Utah for sale and appointed J.P. Morgan to handle the sale. It is unlikely that any coal will be produced in 1993.

Quaker Coal of Kentucky (no relation to Quaker State Oil Company) has shown some interest in obtaining Valley Camp of Utah, but the talks are not yet in the final stages.

Mountain Coal Co.

Mountain Coal Co., previously known as Beaver Creek Coal Company, a subsidiary of Arco, discontinued its Utah coal operation and put its emphasis on its Colorado activities. The Utah coal mine (Trail Mountain) was sold to Utah Power but the load out facility and the coal stockpile at the load out was not part of

the sale. The Trial Mountain mine will become active in 1994 as part of Utah Power's Cottonwood mine expansion.

Sunnyside Coal Co.

Sunnyside mine expanded its operation by about 14 percent during 1992 compared to 1991. The longwall panel was moved to a new location, extending the life of the mine by one and one half to two years. It is quite likely that Sunnyside will start a new panel two or three more times within the next five years, further extending the life of the mine.

Sunnyside, in addition to providing the high-volatile coking coal requirement of Orem-based Geneva Steel, does sell coal to other end user sectors. In 1992, Sunnyside shipped 88,000 tons of coal to out-of-state utilities and 32,000 tons of coal to out-of-state industrial end users. Some coal has also been sold to the residential and commercial sector within Utah.

Soldier Creek Coal Company

Sun Company, parent of Soldier Creek Coal Company, has been trying to divest its coal holdings for some time. Soldier Canyon mine is also for sale and it is very likely that one of the operating coal companies in Utah may purchase the mine. Soldier Creek is not producing as much coal as it did the past three years. During 1992, production was down to about one third that of previous years. In 1993, production will not be much different than 1992.

Andalex Resources, Inc.

Andalex's production of 1.2 million ton during 1992 matched that of the previous year and it is expected to produce at the same level in 1993. Andalex's three mines, namely the Pinnacle, Apex and Aberdeen mines have a high rate of productivity considering they only have continuous miners. The market for Andalex's coal is very stable, mostly consisting of contract sales catering to the needs of electrical utilities in Utah and other western states. In addition a sizable percentage goes to overseas exports and the stoker markets.

Andalex, at this time, is not vigorously pursuing the spot market, which at best is very tenuous and price-wise unrepresentative of the real cost of underground coal mining.

Cyprus Plateau Coal Company

During 1992, mining at Cyprus Plateau's Star Point Mine remained very steady. Production from its longwall and continuous miner sections continued at a high level. Conditions in the mine also remain favorable. These favorable conditions are projected to allow the mine to maintain high productivity.

The mine continues to ship to long- and short-term customers, both domestically and overseas. The majority of the coal is shipped by rail with some shipped by truck to local customers. Coal quality continues to remain consistent to meet customer specifications.

The outlook for Cyprus Plateau the next few years remains very positive. Cyprus Minerals, the parent company of Cyprus Plateau, obtained two coal supply contracts from Tai Power. These are seven-year contracts and could amount to one million tons per year to be initially supplied by Cyprus' Orchard Valley mine in Colorado. Cyprus Plateau will begin to ship part of the requirement of Tai Power in 1994. This would be a welcome addition to Utah's export market.

United States Fuel Co.

During 1992, U.S. Fuel continued operation at a reduced level and produced only enough to supply the contract it had along with most of its stockpile coal.

During 1993, U.S. Fuel will not produce any coal. By the end of June 1993, one mine was sealed and by the beginning of the fourth quarter of 1993 the other two mines will be sealed. The cleaning of the stockpile will soon be completed and reclamation work will begin.

Co-op Coal Company

Co-op produced enough coal in 1992 to meet the needs of its usual customers and also enabled it to reduce its stockpile to some extent. Co-op has been one of the steady coal producers in Utah during the past decade. It's production, small as it is, has had a steady, average growth with some annual fluctuations. Co-op distributes coal to electric utilities outside of Utah, as well as to industrial and residential and

commercial sectors inside and outside of Utah.

Co-op was awarded a 50,000 ton contract to supply the James River plant of Springfield (MO) City utilities for test burning. If this Utah coal turns out to be compatible, it could be a quarter of a million ton contract for Co-op coal.

Consolidation Coal Co.

Consolidation Coal Company, which is one of the top five coal producers in the United States, elected not to put its Emery coal mine back into active status during 1992. Consol's main interest in the west is directed towards developing its CX Ranch coal mine in Powder River Basin (PRB) coal field in Montana rather than actively pursue coal production from its Utah coal mine. This decision, however, may have had more to do with geography then geology.

Coal Leasing Activity in Utah

During 1992, there were no federal coal leases sold in Utah. Two small acreages were lease modifications; a 50- and a 60-acre to Cyprus Plateau Coal Company. The former was made in 1991 and the latter in 1993.

On January 10, 1991, Coastal States Energy Co. filed a Lease By Application (LBA) for 2,020 acres of federal land in Winter Quarters Canyon in the Wasatch Plateau coal field. The application covered sections 2, 3, 10 and 11 in Township 13S and Range 6E. The tract delineation has been made for 3,351 acres. This LBA should be going out for competitive bid before the end of the year. Coastal needs more reserves as it extends the Skyline mine. Adequate reserves are essential for long term contracts. Coal operators, in general, attempt to keep a 30-year coal reserve on hand on the basis of their ongoing operation.

On February 21, 1991 Sage Point Coal Company (Soldier Creek Coal Co.), a subsidiary of Sun Coal company filed an LBA for 1,104 acres of federal leases to expand its continuous miner operation into a longwall operation. This lease is located in Township 12S and Range 12E, Sections 31, 33 and 34, named Soldier Canyon Tract. A year later and prior to the tract delineation, Sage Point indicated to the Bureau of Land Management that the LBA was going to be withdrawn. On May 22, 1992, Sage Point Coal Company filed a new LBA for 2,098 acres for the Alkali Creek Tract in Township 13S and Range 1E, sections 1, 11, 12, 13, 14, 15, 23 and 24. This new LBA can be used for continuous miner as well as longwall operation. Work has been done on this LBA by BLM during 1992 and 1993.

The first LBA for Crandall Canyon was submitted by Mining and Energy Resources, Inc. (MERI) of Golden, Colorado on December 29, 1989 covering an area of 3,431 acres in Wasatch Plateau coal field. Subsequently on March 3, 1991 Genwal Coal Company, a subsidiary of Nevada Investment Electric Company (NIECO) filed for an LBA covering an area of 1,974 acres overlapping some of the previously applied for LBA by MERI. Tract delineation, made for the Crandall Canyon covered an area of 3,384 acres. This tract should go out for competitive bid prior to the end of 1993. On February 4, 1993 Genwal Coal Co. filed another LBA for 4,051 acres of federal leases on land adjoining its presently operating mine and the previously applied for LBA. This LBA is not expected to go for competitive bid until 1994.

PacifiCorp Electric Operations (Utah Power) of Salt Lake City submitted an LBA on February 26, 1991 for 7,864 acres in the Trail Mountain/Cottonwood Creek area of the Wasatch Plateau coal field in Emery County. This application is in full conformity with responsible and prudent coal operation. BLM is processing this application and probably by 1994 this lease will be offered for competitive bid.

The state of Utah is interested in exchanging some of its school trust lands in holding with federal government lands, that are the subject of these proposed LBAs. If this exchange takes place it will be to the advantage of the school trust fund and will benefit the state education. However, there are costs to state and local governments that should be considered.

The Division of State Lands and Forestry is proposing to exchange some state land (about 68,000 acres) with 28 thousand acres of federal land covering the above mentioned six coal properties with an estimated tonnage of 231 million and an estimated bonus bid value of $56 million.

The school trust fund will gain but the state's share of the federal royalty will decrease. The decrease in the federal royalty will impact the allocation to UDOT. This in turn will reduce the county single purpose service district allocation from UDOT by $1.0 million per year. Maintenance and repair of the roads and their safety would suffer, if each county impacted (Carbon, Emery, Sevier) did

not raise residential property tax in order to fund road repairs.

In addition, the Board of Regents, the State Board of Education, the Division of Geological Survey and Utah State University Water Research Lab will be finacialy impacted. Together, these agencies will lose more than $3.2 million per year in their allocation of the state's share of the federal land mineral royalty.

Should the land exchange take place, the community impact fund of Carbon, Emery and Sevier counties would lose a total of $2.6 million per year.

While such an exchange would offer a good return to the school trust fund, the counties of Carbon, Emery and Sevier would suffer financially as less money becomes available to the counties to cope with the impact of the coal industry on their communities.

The coal industry, which is providing the high return on the school trust land could eventually suffer as the quality of repair and maintenance of the coal-haul roads begin to deteriorate if counties do not raise property taxes.

Outlook for Utah's Coal Industry

Forecast for 1993

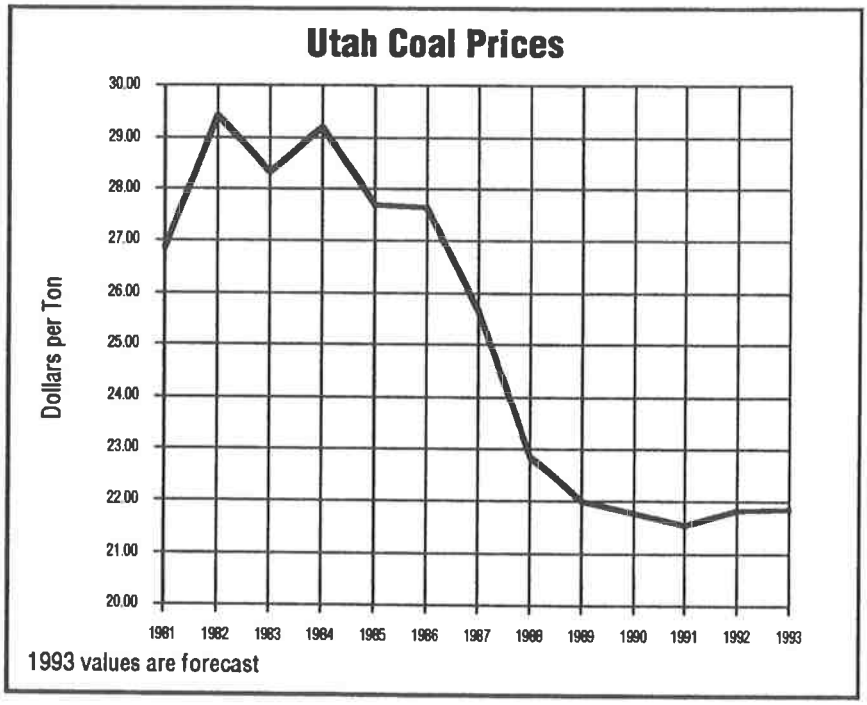
Prices

The decline in coal prices that began, from the Utah coal price peak of $29.42 per ton in 1982, appears to have ended in 1991, at $21.56. During 1992, the average coal price in Utah stood at $21.83. Even though this price change amounts to only a 1.25 percent increase, the significance is not in the amount but the direction. This might be the beginning of a price increase, a tedious and slow process but, a belated and welcomed occurrence in Utah's coal activities.

The overall spot price of coal fell by about $3 per ton while the contract prices inched up due to the escalation clauses in long term contracts. There were no renegotiations of significance on existing contracts nor were the prices of long term contracts negotiated down as has occurred during the last five years.

The contract price of coal at the electric utility plant in Utah went up by 3.5 percent in 1992 compared to 1991 at the same time the spot price of coal purchased by the electric utilities went down by more than six percent. The main reason for the drop in the price of coal on the spot market was the lack of demand for the available coal offered for sale.

During 1993, coal prices in Utah will inch up again slightly. Even though the increase may be a fraction of one percent, nevertheless it will be in the positive direction. Spot coal will still be uncharacteristically low but the overall average price will see some support.



For 1993, the average price of coal in Utah may not rise much above $21.86 but it will not be far below it either.

Production

Utah coal production for 1993 will surpass that of 1992 despite a dismal showing at the beginning of the year. It is expected that the amount of production will be somewhere between 1991 production of 21.9 million tons and 1992 production of 21.0 million tons. The actual forecast amount is 21.4 million tons but it could be slightly higher.

Distribution

During 1993, distribution of Utah coal will remain the same as 1992 even though the production may increase by 400,000 tons. Distribution of electric utility coal to out-of-state customers may decrease by as much as 17 percent. This may be a pessimistic forecast. On the optimistic side, the distribution to out-of-state customers may only be down a few percent from 1992 which is well within normal fluctuation. The distribution to electric utilities within the state will remain the same as 1992.

The distribution of Utah coal to electric utilities within the state should show very little fluctuation from one year to the next, only a slight decrease, unless new facilities are built or some of the older

units are retired. Older units experience more down time due to maintenance and repair, so a slight decrease in distribution is expected. The only unit that could affect the electric utility coal usage within the state is the IPP plant of the Los Angeles Department of Water and Power. During wetter years in the Pacific Northwest, more hydropower became available at lower cost compared to burning coal. This would, to some extent, curtail the operation of IPP units resulting in less consumption of Utah coal.

Coke plant consumption of Utah coking coal will not change much from one year to the next, it is expected that in 1993 a similar amount of Utah coking coal will be consumed as in 1992.

Distribution of Utah industrial coal within and outside of the state during 1993 will remain the same as 1992 at 2.5 million tons per year decreasing only slightly in the future as some of the larger units get older.

Distribution to residential and commercial sectors will also remain steady, increasing slightly from one year to the next as the price of natural gas goes up and some commercial operations begin switching from natural gas to coal.

During 1993, distribution to the export market will increase in excess of 25 percent, more than offsetting other decreases in distribution to other sectors.

The general outlook for Utah coal industry is bright. We have seen companies expand operation and double in size within three to four years. We also have seen many companies apply for new federal coal leases indicating continuing interest in Utah's coal reserves. On the pessimistic side we have also seen some coal operators move their operations to other states, sell, or otherwise dispose of their Utah coal properties.

Coal production in Utah has enjoyed a steady growth since the mid-1980s and has doubled in size during less than a decade. Despite coal prices that have declined steadily for a decade, coal production in Utah has doubled. This is indicative of a strong and healthy coal industry.

Federal Programs and Legislative Issues

Clean coal technology

The passage of the Clean Air Act of 1970 demonstrated a commitment by government to preserve the environment and improve air quality standards. This action seemed adequate at the time, but after the quadrupling of crude oil prices in late 1973 and early 1974 by the Organization of Petroleum Exporting Countries (OPEC), and subsequent switching by electric utility companies from natural gas/fuel oil to coal, the desirability of having a new set of laws that could better integrate the economic advantage and energy security associated with using coal and considerations of air quality, acid rain and global climate change, while maintaining our international competitiveness, became apparent. This finally led to the adoption by Congress of the Clean Air Act Amendments of 1990 (Public Law 101-549).

Shortly after the baseload fuel changeover to coal, the Administration realized it could not abandon its leadership in directing the integration of these divergent interests, and, through a series of clean coal technology demonstration programs, set the guidelines for future activities. This includes financial participation by the Administration of up to 50 percent in various technological developments that will lead to cleaner, more efficient and less costly coal burning than present conventional processes. The aim of this preemptive action was concentrated on three stages:

1)Pre-combustion: which includes physically, chemically or biologically cleaning coal by removing pollutants from it prior to burning;

2)Combustion: which includes modification of burning processes and/or the addition of pollutant absorbing substances during combustion; and

3)Post-combustion: which includes employing various methods to remove pollutants from flue gases prior to their

Transmission's Bonanza plant which does not use Utah coal.

While EPACT encourages the consumption of natural gas versus coal, it does not abandon coal. It supports the cleaner use of coal. The consumption of both coal and natural gas is supported by EPACT at the expense of petroleum products. In the final analysis, natural gas can only compete with coal on a limited basis. As soon as the price of a million Btu of gas (1,000 ft3) goes up by 10¢, some of the consumers of natural gas will switch to coal increasing the consumption of coal while reducing the demand for natural gas and lowering the price of natural gas to near its original level. This is why EPACT will not be deleterious to coal production in general and to Utah coal in particular.

Appendix

Table 1 **Historical Production, Distribution and Consumption of Coal in Utah**

Table 2 **Utah Coal Production by Coal Field**

Table 3 **Utah Coal Production by County**

Table 4 **Utah Coal Production by Landownership**

Table 5 **Distribution of Utah Coal 1992**

Table 1 **Historical Production, Distribution and Consumption of Coal in Utah**
Thousand Short Tons

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
PRODUCTION	13,808	16,912	11,829	12,259	12,831	14,269	16,521	18,164	20,517	22,012	21,875	21,015	21,418
DISTRIBUTION	14,627	15,397	12,188	12,074	14,361	13,243	16,989	18,244	21,289	21,680	21,673	21,339	21,374
E U OUTSIDE UTAH	2,688	3,643	3,404	3,730	3,746	2,989	3,182	2,797	2,623	3,373	3,608	4,000	3,315
E U IN UTAH	4,837	6,153	5,220	4,912	7,385	7,614	11,677	12,533	12,963	14,053	13,472	13,136	13,196
C P OUTSIDE UTAH	779	859	0	0	0	0	0	0	0	0	0	0	0
C P IN UTAH	1,297	831	886	1,392	1,328	868	291	1,259	1,277	1,296	1,310	1,182	1,225
IND OUTSIDE UTAH	1,645	1,349	1,091	1,542	1,866	1,745	1,813	1,996	2,401	2,327	2,158	2,006	1,930
IND IN UTAH	591	812	664	551	450	374	349	739	810	619	624	497	501
R/C OUTSIDE UTAH	180	233	292	311	312	81	83	88	84	59	76	81	195
R/C IN UTAH	197	177	191	258	252	191	204	236	323	382	320	347	362
OVERSEAS EXPORTS	3,472	2,177	1,346	849	625	551	555	1,044	2,175	1,708	2,112	2,245	2,853
TOTAL IMPORTS	1,136	797	937	1,539	1,580	1,145	1,165	2,448	2,367	2,137	2,007	2,155	2,203
IMPORTS E U	8	18	0	224	193	659	905	1,300	1,400	1,449	1,310	1,517	1,500
IMPORTS C P	1,030	695	854	1,229	1,289	383	160	1,088	922	679	695	629	693
IMPORTS IND	98	84	83	85	98	103	100	60	45	7	2	9	10
IMPORTS R/C	0	0	0	1	0	0	0	0	0	2	0	0	0
COAL OPERATORS	16	16	15	15	15	16	16	14	14	13	12	12	12
ACTIVE MINES	28	29	25	21	21	21	18	21	20	18	16	16	16
EMPLOYEES	4,166	4,296	2,707	2,525	2,563	2,881	2,650	2,559	2,471	2,791	2,292	2,106	2,055
PRODUCTIVITY,T/MH	1.99	2.05	2.59	2.94	2.8	3.08	3.25	3.69	4.42	4.22	4.79	5.13	5.37
AVERAGE PRICE $/TON	$26.87	$29.42	$28.32	$29.20	$27.69	$27.64	$25.67	$22.85	$22.01	$21.78	$21.56	$21.83	$21.86
TOTAL VALUE $1,000,000	$371	$498	$335	$358	$355	$394	$417	$415	$451	$479	$472	$459	$468

Values for 1993 are forecast.
All distributions include imports. EU=Electric Utilities. CP=Coke Plants. IND=Industrial. R/C=Residential and Commercial.

Table 2 **Utah Coal Production by Coal Field**
Thousand Short Tons

	Wasatch Plateau	Book Cliffs	Emery	Sego	Coalville	Others	Total
1870-1981	166,404	234,547	5,723	2,654	4,262	2,332	415,922
1982	12,342	3,718	852	0	0	0	16,912
1983	10,173	1,568	88	0	0	0	11,829
1984	10,266	1,993	0	0	0	0	12,259
1985	9,386	2,805	640	0	0	0	12,831
1986	10,906	2,860	503	0	0	0	14,269
1987	13,871	2,348	269	0	33	0	16,521
1988	15,218	2,363	548	0	35	0	18,164
1989	17,146	2,785	586	0	0	0	20,517
1990	18,591	3,085	336	0	0	0	22,012
1991	18,934	2,941	0	0	0	0	21,875
1992	18,631	2,384	0	0	0	0	21,015
Cumulative Production	321,868	263,397	9,545	2,654	4,330	2,332	604,126

Table 3 **Utah Coal Production by County**
Thousand Short Tons

	Carbon	Emery	Sevier	Summit	Iron	Kane	Others	Total
1870-1959	211,028	49,166	4,046	4,012	521	45	2,846	271,664
1960	3,698	1,137	49	20	50	0	1	4,955
1961	3,916	1,124	47	20	52	0	0	5,159
1962	3,105	1,077	49	20	46	0	0	4,297
1963	3,493	752	47	18	48	1	0	4,359
1964	3,752	848	47	17	54	2	0	4,720
1965	3,779	1,101	61	13	36	2	0	4,992
1966	3,380	1,170	65	15	4	2	0	4,636
1967	2,971	1,113	72	13	3	2	0	4,174
1968	3,062	1,167	70	13	3	2	0	4,317
1969	3,367	1,200	72	12	4	2	0	4,657
1970	3,349	1,292	79	13	0	0	0	4,733
1971	3,347	1,097	158	12	0	12	0	4,626
1972	2,956	1,656	184	6	0	0	0	4,802
1973	2,866	2,445	339	0	0	0	0	5,650
1974	2,754	2,901	391	0	0	0	0	6,046
1975	2,984	3,126	827	0	0	0	0	6,937
1976	3,868	3,057	1,043	0	0	0	0	7,968
1977	4,390	3,107	1,337	0	0	0	4	8,838
1978	4,005	3,640	1,558	0	0	0	50	9,253
1979	5,292	5,147	1,657	0	0	0	0	12,096
1980	5,096	6,319	1,821	0	0	0	0	13,236
1981	6,123	5,609	2,076	0	0	0	0	13,808
1982	8,335	6,329	2,248	0	0	0	0	16,912
1983	4,194	5,404	2,231	0	0	0	0	11,829
1984	5,293	4,825	2,141	0	0	0	0	12,259
1985	6,518	4,516	1,797	0	0	0	0	12,831
1986	6,505	5,404	2,360	0	0	0	0	14,269
1987	7,495	6,765	2,228	33	0	0	0	16,521
1988	7,703	7,801	2,625	35	0	0	0	18,164
1989	8,927	8,531	3,059	0	0	0	0	20,517
1990	10,022	9,103	2,887	0	0	0	0	22,012
1991	10,026	8,770	3,079	0	0	0	0	21,875
1992	10,180	8,250	2,600	0	0	0	0	21,030
Total	377,779	174,949	43,350	4,272	821	70	2,901	604,142

Table 4 **Utah Coal Production by Landownership**
Thousand Short Tons

	Federal Land		State Land		County Land		Fee Land		Total
	Production	Percentage	Production	Percentage	Production	Percentage	Production	Percentage	
1980	8,663	65.5%	1,105	8.3%	0	0.0%	3,468	26.2%	13,236
1981	8,719	63.1%	929	6.7%	0	0.0%	4,160	30.1%	13,808
1982	10,925	64.6%	998	5.9%	0	0.0%	4,989	29.5%	16,912
1983	6,725	56.9%	419	3.5%	0	0.0%	4,685	39.6%	11,829
1984	8,096	66.0%	285	2.3%	0	0.0%	3,878	31.6%	12,259
1985	9,178	71.5%	510	4.0%	0	0.0%	3,143	24.5%	12,831
1986	11,075	77.6%	502	3.5%	0	0.0%	2,692	18.9%	14,269
1987	13,343	80.8%	488	3.0%	0	0.0%	2,690	16.3%	16,521
1988	15,887	87.5%	263	1.4%	0	0.0%	2,014	11.1%	18,164
1989	16,931	82.5%	375	1.8%	153	0.7%	3,058	14.9%	20,517
1990	17,136	77.8%	794	3.6%	606	2.8%	3,476	15.8%	22,012
1991	18,425	84.2%	942	4.3%	144	0.7%	2,364	10.8%	21,875
1992	17,760	84.5%	1,384	6.6%	136	0.6%	1,735	8.3%	21,015

Table 5 **Distribution of Utah Coal 1992**
By Destination and End-Use, Thousand Short Tons

Destination	Electric Utilities	Coke Plants	Other Industrial	Residential & Commercial	Total
Arizona	0	0	100	0	100
California	1,244	0	1,540	0	2,784
Colorado	0	0	23	2	25
Florida	32	0	0	0	32
Idaho	0	0	7	18	25
Illinois	229	0	0	0	229
Montana	0	0	39	3	42
Missouri	79	0	0	0	79
Nevada	2,200	0	176	2	2,378
Oregan	99	0	11	0	110
UTAH	**11,619**	**553**	**486**	**349**	**13,007**
Washington	117	0	76	56	249
Wyoming	0	0	34	0	34
Pacific Rim	2,245	0	0	0	2,245
Total	17,864	553	2,492	430	21,339