

Arkansas

Most of the electricity in Arkansas is generated at coal-fired plants. In 1992, all of the coal that was burned by Arkansas utilities was subbituminous coal from Wyoming. Arkansas is a net exporter of electricity and it has an efficient nuclear power program. From 1989 through 1996 Arkansas' nuclear capacity factor was higher than the national average. Arkansas Nuclear, the largest plant in the State, is the only nuclear plant in Arkansas, but in 1996, it generated almost one-third of the utility electricity produced in the State. The largest utility in the State by far is the Arkansas Power and Light Company (APL). APL operates all of the five largest plants in the State. The average price of electricity, 6.15 cents per kilowatt-hour, was about 10 percent below the national average.

The second and third largest plants, Independence and White Bluff, are coal-fired. Both are almost as large as Arkansas Nuclear. Independence is located in north-eastern Arkansas near Batesville, while White Bluff is southeast of Little Rock, near Pine Bluff. The fourth and fifth largest plants are gas-fired. Ritchie, the fourth largest, is in Phillips County along the Mississippi River in the east-central part of the State. Lake Catherine, the fifth largest, is southwest of Little Rock, near Hot Springs National Park.

Emissions of sulfur dioxide, nitrogen oxides, and carbon dioxide from Arkansas electricity generators and the concentrations of these pollutants were around the

national median values in 1996. Although Arkansas participated in the Ozone Transport Assessment Group process like all the other States east of the Rocky Mountains, Arkansas generators are not subject to the recently announced proposal from the Environmental Protection Agency (EPA) requiring submission of State implementation plans to address the regional transport of ground-level ozone. However, all of Arkansas' fossil-fuel fired units will be subject to emissions reductions requirements of Phase II of EPA's Acid Rain Program, which takes effect on January 1, 2000.

In 1996, utility coal units represented just under two-fifths of Arkansas' generating capability and over half of utility net generation. Nuclear capability and net generation, on the other hand, were just over one-sixth and almost one-third, respectively, in 1996. Nonutility generation as a share of the State total was stable over the 10 years examined, at 5.2 percent of the total in 1996.

Arkansas' General Assembly requested a study on competition in the electricity industry in April 1997. The report is due by January 1999. In May 1998, the Arkansas Public Service Commission concluded hearings on when and how to open the electricity market to competition. Entergy and two other investor-owned utilities agreed that competition should not begin before 2002, when neighboring Oklahoma is scheduled to open its electricity market to retail competition.¹

¹ Energy Information Administration, Status of State Electric Utility Deregulation Activity, http://www.eia.doe.gov/cneaf/electricity/chg_str/tab5rev.html.

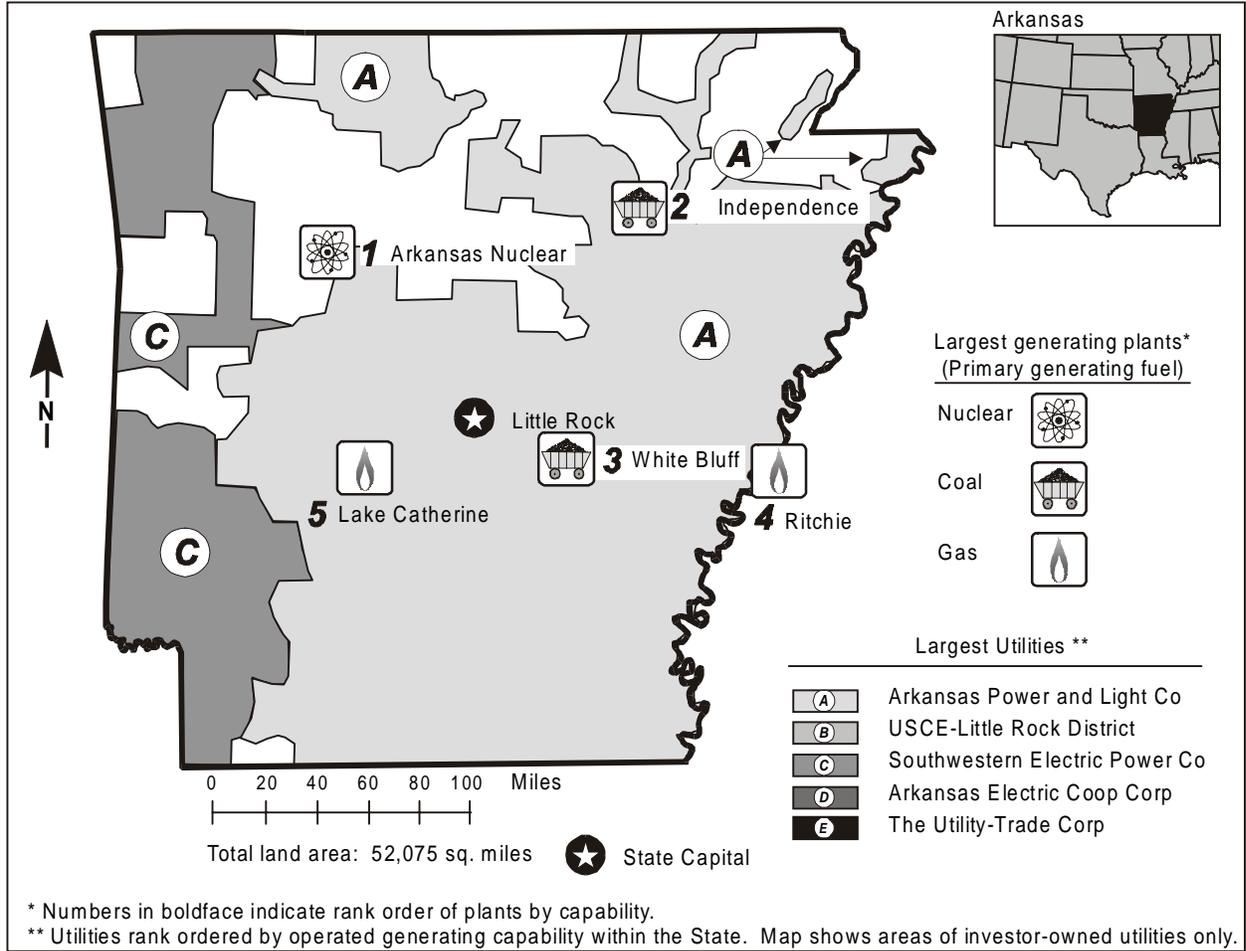


Table 1. 1996 Summary Statistics

Item	Value	U.S. Rank	Item	Value	U.S. Rank
NERC Region(s)		SPP/SERC	Utility		
Net Exporter or Importer		Exporter	Capability (MWe)	9,639	28
State Primary Generating Fuel		Coal	Generation (MWh)	43,677,535	26
Population (as of 7/96)	2,506,293	33	Average Age of Coal Plants	15 years	
Average Revenue (cents/kWh)	6.15	^a 25	Average Age of Oil-fired Plants	24 years	
Industry-Wide			Average Age of Gas-fired Plants	33 years	
Capability (MWe)	10,030	^b 26	Average Age of Nuclear Plants	19 years	
Generation (MWh)	46,059,769	^b 24	Average Age of		
Capability/person			Hydroelectric Plants	34 years	
(KWe/person)	4.00	^b 9	Average Age of Other Plants	--	
Generation/person			Nonutility^c		
(MWh/person)	18.38	^b 7	Capability (MWe)	391	31
Sulfur Dioxide Emissions	88	30	Percentage Share of Capability	3.9	33
(Thousand Short Tons)			Generation (MWh)	2,382,234	29
Nitrogen Oxide Emissions	96	30	Percentage Share of Generation	5.2	28
(Thousand Short Tons)			-- = Not applicable.		
Carbon Dioxide Emissions	33,323	30			
(Thousand Short Tons)					
Sulfur Dioxide/sq. mile (Tons)	1.68	32			
Nitrogen Oxides/sq. mile (Tons)	1.85	31			
Carbon Dioxide/sq. mile (Tons)	639.91	31			

Table 2. Five Largest Utility Plants, 1996

Plant Name	Type	Operating Utility	Net Capability (MWe)
1. Arkansas Nuclear	Nuclear	Arkansas Power & Light Co	1,694
2. Independence	Coal	Arkansas Power & Light Co	1,678
3. White Bluff	Coal	Arkansas Power & Light Co	1,659
4. Ritchie	Gas	Arkansas Power & Light Co	918
5. Lake Catherine	Gas	Arkansas Power & Light Co	756

Table 3. Top Five Utilities with Largest Generating Capability, and Type, Within the State, 1996
(Megawatts Electric)

Utility	Net Summer Capability	Net Coal Capability	Net Oil Capability	Net Gas Capability	Net Nuclear Capability	Net Hydro/Other Capability
A. Arkansas Power & Light Co	7,551	3,337	194	2,256	1,694	70
B. USCE-Little Rock District	980	--	--	--	--	980
C. Southwestern Electric Power Co.	480	480	--	--	--	--
D. Arkansas Electric Coop Corp . . .	380	--	--	315	--	65
E. The Utility-Trade Corp	169	--	--	--	--	169
Total	9,560	3,817	194	2,571	1,694	1,284
Percentage of Industry Capability	95.3	--	--	--	--	--

-- = Not applicable.

Figure 1. Utility Generating Capability by Primary Energy Source, 1996

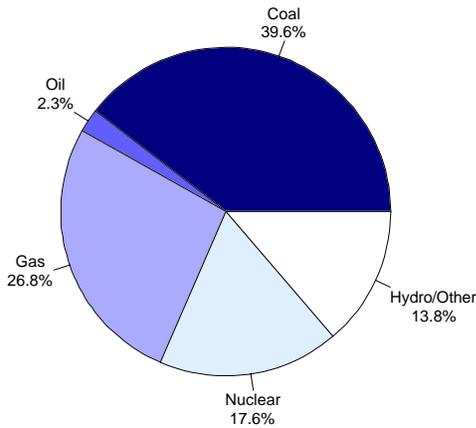


Figure 2. Utility Generation by Primary Energy Source, 1996

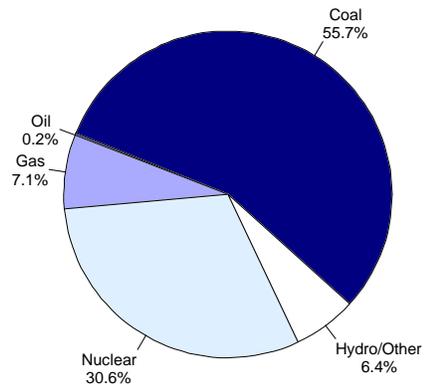


Figure 3. Energy Consumed at Electric Utilities by Primary Energy Source, 1996

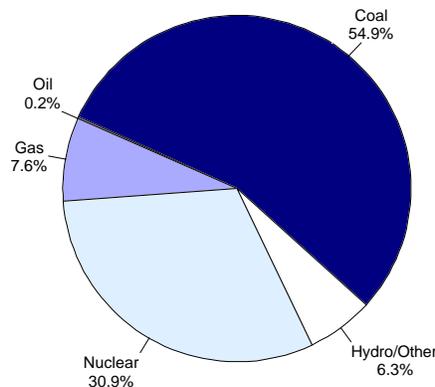


Table 4. Electric Power Industry Generating Capability, 1986, 1991, and 1996
(Megawatts Electric)

Fuel	1986	1991	1996	Percentage Share 1986	Percentage Share 1991	Percentage Share 1996
Coal	3,817	3,817	3,817	38.9	37.9	38.1
Oil	222	213	217	2.3	2.1	2.2
Gas	2,571	2,620	2,585	26.2	26.0	25.8
Nuclear	1,694	1,694	1,694	17.3	16.8	16.9
Hydro/Other	1,218	1,290	1,326	12.4	12.8	13.2
Total Utility	9,522	9,634	9,639	97.0	95.7	96.1
Total Nonutility	296	430	391	3.0	4.3	3.9
Industry	9,818	10,064	10,030	100.0	100.0	100.0

Table 5. Electric Power Industry Generation of Electricity by Primary Energy Source, 1986, 1991, and 1996
(Thousand Kilowatthours)

Fuel	1986	1991	1996	Percentage Share 1986	Percentage Share 1991	Percentage Share 1996
Coal	20,676,480	19,573,925	24,339,185	55.9	48.2	52.8
Oil	9,665	64,278	98,250	(s)	0.2	0.2
Gas	2,758,804	2,504,070	3,086,760	7.5	6.2	6.7
Nuclear	8,876,096	12,661,793	13,356,671	24.0	31.2	29.0
Hydro/Other	2,813,485	3,561,069	2,796,669	7.6	8.8	6.1
Total Utility	35,134,530	38,365,135	43,677,535	94.9	94.4	94.8
Total Nonutility	1,879,268	2,277,050	2,382,234	5.1	5.6	5.2
Industry	37,013,798	40,642,185	46,059,769	100.0	100.0	100.0

(s) = Nonzero percentage less than 0.05.

Table 6. Electric Power Industry Consumption by Primary Fuel, 1986, 1991, and 1996
(Quadrillion Btu)

Fuel	1986	1991	1996	Percentage Share 1986	Percentage Share 1991	Percentage Share 1996
Coal	0.217	0.209	0.252	46.7	41.7	45.3
Oil	(s)	0.001	0.001	0.1	0.1	0.2
Gas	0.030	0.028	0.035	6.4	5.7	6.3
Nuclear	0.096	0.136	0.142	20.6	27.1	25.5
Hydro/Other	0.029	0.037	0.029	6.3	7.3	5.2
Total Utility	0.372	0.411	0.458	80.1	82.0	82.4
Total Nonutility	0.092	0.091	0.098	19.9	18.0	17.6
Industry	0.465	0.502	0.557	100.0	100.0	100.0

-- = Not applicable. (s) = Nonzero value less than 0.0005.

Figure 4. Utility Generation of Electricity by Primary Energy Source, 1986-1996

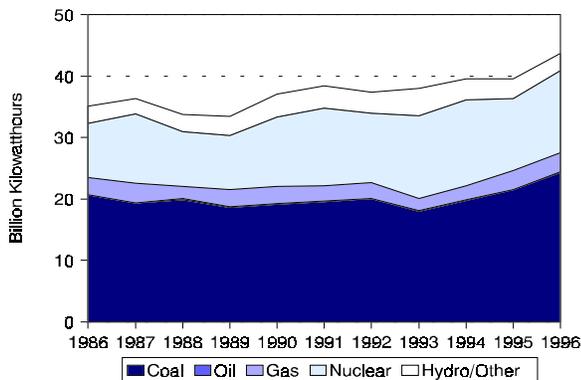


Figure 5. Utility Delivered Fuel Prices for Coal, Oil, and Gas, 1986-1996
(1996 Dollars)

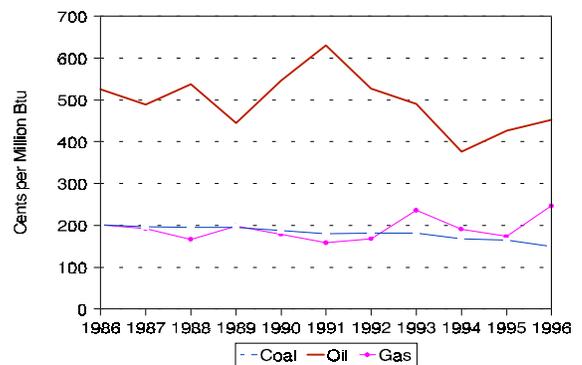


Table 7. Utility Delivered Fuel Prices for Coal, Oil, and Gas, 1986, 1991, and 1996
(Cents per Million Btu, 1996 Dollars)

Fuel	1986	1991	1996	Annual Growth Rate 1986-1996 (Percent)
Coal	201.8	179.5	150.3	-2.9
Oil	525.1	630.2	452.5	-1.5
Gas	201.1	158.4	246.6	2.1

Table 8. Electric Power Industry Emissions Estimates, 1986, 1991, and 1996
(Thousand Short Tons)

Emission Type	1986	1991	1996	Annual Growth Rate 1986-1996 (Percent)
Sulfur Dioxide . .	71	78	88	2.1
Nitrogen Oxides ^d	84	90	96	1.3
Carbon Dioxide	24,258	29,236	33,323	3.2

Figure 6. Estimated Sulfur Dioxide Emissions, 1986-1996

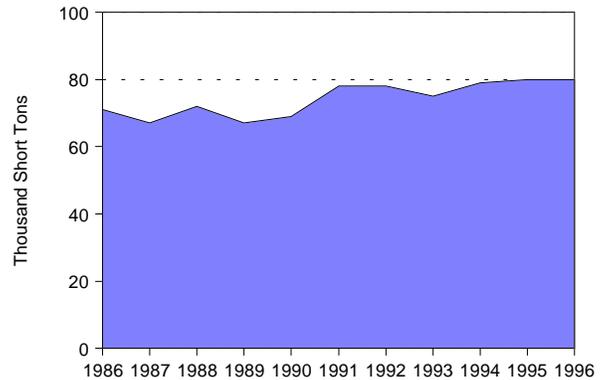


Figure 7. Estimated Nitrogen Oxide Emissions, 1986-1996

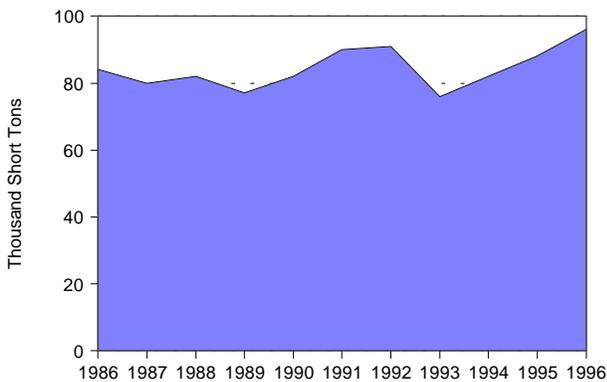


Figure 8. Estimated Carbon Dioxide Emissions, 1986-1996

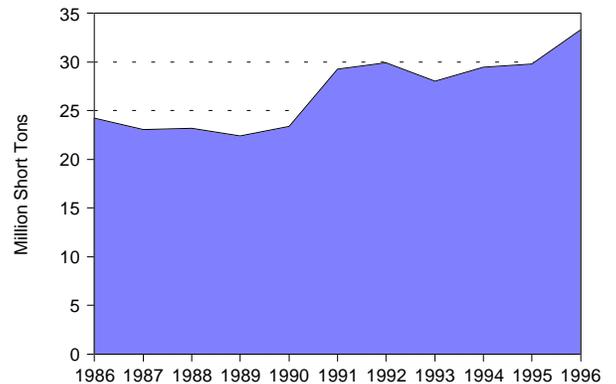


Table 9. Utility Retail Sales by Sector, 1986, 1991, and 1996
(Megawatthours)

Sector	1986	1991	1996	Annual Growth Rate 1986-1996 (Percent)	Percentage Share 1986	Percentage Share 1991	Percentage Share 1996
Residential . .	9,253,757	11,000,632	12,933,994	3.4	40.4	38.7	35.8
Commercial	5,344,310	6,300,359	7,442,490	3.4	23.3	22.2	20.6
Industrial . . .	7,762,783	10,517,510	15,139,481	6.9	33.9	37.0	41.9
Other	571,040	621,756	620,611	0.8	2.5	2.2	1.7
Total	22,931,891	28,440,257	36,136,576	4.7	100.0	100.0	100.0

Figure 9. Nuclear Power Capacity Factor Comparison, 1986-1996

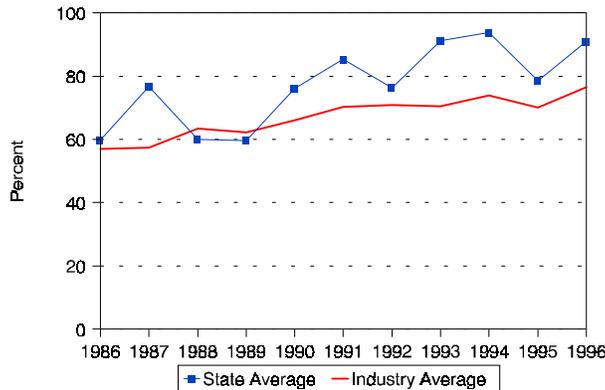


Table 9. Utility Retail Sales Statistics, 1986, 1991, and 1996

Item	Investor-Owned Utility	Public	Federal	Cooperative	Total
	1986				
Number of Utilities	4	15	--	19	38
Number of Retail Customers	675,867	115,670	--	278,625	1,070,162
Retail Sales (MWh)	16,361,136	2,681,080	--	3,889,675	22,931,891
Percentage of Retail Sales	71.4	11.7	--	17.0	100.0
Revenue from Retail Sales (thousand 1996 \$)	1,393,867	201,730	--	380,756	1,976,353
Percentage of Revenue	70.5	10.2	--	19.3	100.0
1991					
Number of Utilities	4	15	--	17	36
Number of Retail Customers	717,765	133,648	--	306,295	1,157,708
Retail Sales (MWh)	19,272,464	3,546,264	--	5,621,529	28,440,257
Percentage of Retail Sales	67.8	12.5	--	19.8	100.0
Revenue from Retail Sales (thousand 1996 \$)	1,490,054	229,013	--	419,477	2,138,544
Percentage of Revenue	69.7	10.7	--	19.6	100.0
1996					
Number of Utilities	4	15	--	17	36
Number of Retail Customers	770,999	146,011	--	357,012	1,274,022
Retail Sales (MWh)	22,656,231	4,620,702	--	8,859,643	36,136,576
Percentage of Retail Sales	62.7	12.8	--	24.5	100.0
Revenue from Retail Sales (thousand 1996 \$)	1,505,351	249,341	--	469,060	223,712
Percentage of Revenue	67.7	11.2	--	21.1	100.0

-- = Not applicable.