New Mexico

New Mexico is sparsely populated—only 13 other States have a lower population. As a result, the State's generating capability is also low compared to the rest of the Nation. Ninety percent of New Mexico's utility generation of electricity in 1996 was coal-fired. This can be attributed to the abundant supply of low-sulfur bituminous coal mined within the State, mostly in northern New Mexico at the San Juan and Raton basins.[1] Coal is produced in the State mainly for the use of electric utilities and, in 1996, 62.3 percent[2] of total coal production was shipped to electric utilities within the State.[3] The largest coal-fired power plant is the 2,040-megawatt Four Corners plant, operated by the Arizona Public Service Company, the utility with the largest generating capability in the State. The second largest plant, the San Juan plant, operated by the Public Service Company of New Mexico, is also coal-fired. Both Four Corners and San Juan are in the northwestern corner of the State in San Juan County. The third and fourth largest plants are gas-fired. They are the Rio Grande plant, located in the El Paso area, and the Cunningham facility, located in the extreme southeastern corner of New Mexico. The State has no nuclear generating capability and a very small amount of oil-fired and hydroelectric capability. They are a net exporter of electricity.

Another result of the State's use of low-sulfur coal is the relatively low amount of sulfur dioxide, nitrogen oxides, and carbon dioxide emitted from their coal-fired facilities. In fact, their concentrations of emissions from all three sources ranked among the 10 lowest in the United States. Like all States west of Kansas, New Mexico had no generating units that were subject to mandatory emissions reductions pursuant to the Clean Air Act Amendments of 1990.

The average price of electricity in New Mexico was 6.76 cents per kilowatthour in 1996, just under the national average of 6.86 cents. Retail sales by utilities in the State have experienced an annual growth rate of 3.7 percent during the period 1986 to 1996. The largest share of retail sales (34.5 percent) went to the industrial sector at an average price of 4.35 cents per kilowatthour. The commercial sector share was 30.8 percent at 7.93 cents per kilowatthour; the residential sector share was 25.2 percent at 8.93 cents per kilowatthour; and the "other" sector (i.e., sales for public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales) was 9.5 percent at 5.93 cents per kilowatthour.[4]

New Mexico has taken a relatively slow approach to restructuring when compared to other States. Legislation which would have set the date for retail competition at January 1, 2001 was introduced in early 1998, but was tabled shortly thereafter. New legislation is expected to be introduced into the 1999 legislative session. Meanwhile, the Public Service Commission has ordered Public Service of New Mexico to conduct a pilot program with its Albuquerque customers, opening about 16 megawatts of their load to competition.[5]

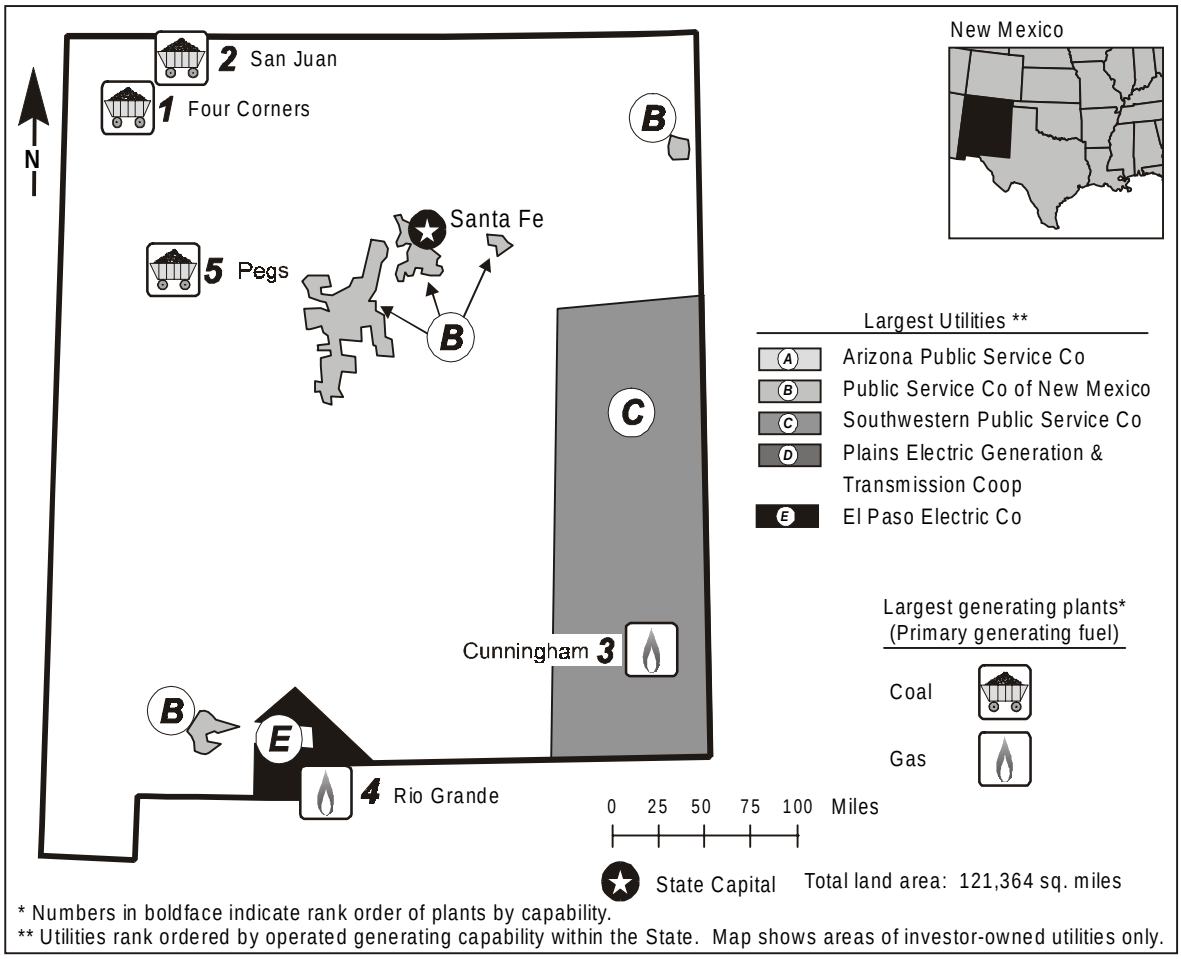
[1] Energy Information Administration, *State Coal Profiles*, DOE/EIA-0576 (Washington, DC, January 1994), p. 63.

[2] Energy Information Administration, *Coal Distribution Report January-December 1996*, DOE/EIA-0125(96/4) (Washington, DC), Tables 33 and 34.

[3] It is interesting to note that coal production in New Mexico was on the rise in the early 1900s but trended downward in mid-century, due chiefly to mine closings resulting from competition from natural gas and crude oil produced in New Mexico and neighboring States. In the late 1960s the State's coal industry was re-established with the opening of large mines to supply fuel for new coal-burning power plants built in New Mexico and Arizona to meet the growing demand for electricity in the Southwest. Rising almost steadily since then, the State's coal production in 1976 was over 25 million short tons.

[4] Energy Information Administration, *Electric Power Annual 1996 Volume II*, DOE/EIA-0348(96)/2 (Washington, DC, December 1997), Table 7.

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



* Numbers in boldface indicate rank order of plants by capability.
** Utilities rank ordered by operated generating capability within the State. Map shows areas of investor-owned utilities only.

Table 1. 1996 Summary Statistics

Item	Value	U.S. Rank
NERC Region(s)		SPP/WSCC
Net Exporter or Importer		Exporter
State Primary Generating Fuel		Coal
Population (as of 7/96)	1,711,256	36
Average Revenue (cents/kWh)	6.76	[a]32
Industry		
Capability (MWe)	5,314	[b]33
Generation (MWh)	30,185,827	[b]32
Capability/person (KWe/person)	3.11	[b]20
Generation/person (MWh/person)	17.64	[b]9
Sulfur Dioxide Emissions (Thousand Short Tons)	61	33
Nitrogen Oxide Emissions (Thousand Short Tons)	122	26
Carbon Dioxide Emissions (Thousand Short Tons)	31,171	32
Sulfur Dioxide/sq. mile (Tons)	0.50	42
Nitrogen Oxides/sq. mile (Tons)	1.00	41
Carbon Dioxide/sq. mile (Tons)	256.84	42

Item	Value	U.S. Rank
Utility		
Capability (MWe)	5,077	38
Generation (MWh)	29,364,389	34
Average Age of Coal Plants	23 years	
Average Age of Oil-fired Plants	29 years	
Average Age of Gas-fired Plants	31 years	
Average Age of Nuclear Plants	--	
Average Age of Hydroelectric Plants	31 years	
Average Age of Other Plants	--	
Nonutility[c]		
Capability (MWe)	237	37
Percentage Share of Capability	4.5	30
Generation (MWh)	821,438	37
Percentage Share of Generation	2.7	38

-- = Not applicable.

Table 2. Five Largest Utility Plants, 1996

Plant Name	Type	Operating Utility	Net Capability (MWe)
1. Four Corners	Coal	Arizona Public Service Co	2,040
2. San Juan	Coal	Public Service Co of NM	1,614
3. Cunningham	Gas	Southwestern Public Service Co	267
4. Rio Grande	Gas	El Paso Electric Co	246
5. Pegs	Coal	Plains Elec Gen&Trans Coop Inc	235

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. Arizona Public Service Co	2,040	2,040	--	--	--	--
B. Public Service Co of NM	1,788	1,614	--	174	--	--
C. Southwestern Public Service Co	491	--	14	477	--	--
D. Plains Elec Gen&Trans Coop Inc	280	235	--	45	--	--
E. El Paso Electric Co	246	--	--	241	--	--
Total	4,845	3,889	14	942	--	--
Percentage of Industry Capability	91.2	--	--	--	--	--

-- = Not applicable.

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

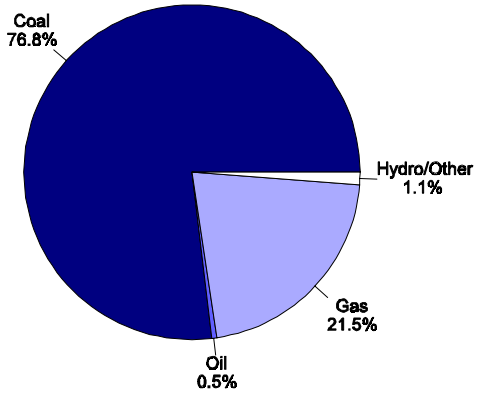


Figure 2. Utility Generation by Primary Energy Source, 1996

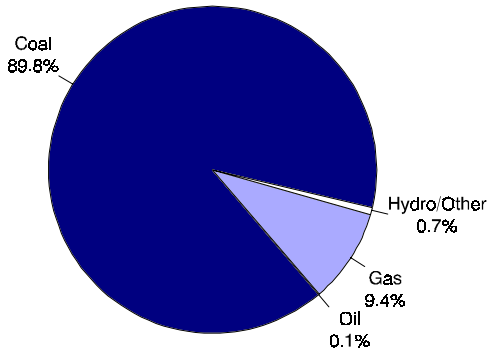


Figure 3. Energy Consumed at Electric Utilities by Primary Energy Source, 1996

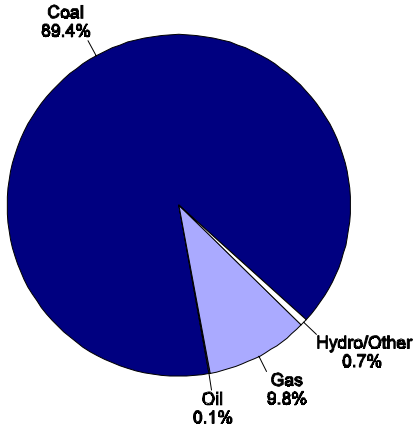


Table 4. Electric Power Industry Generating Capability by Primary Energy Source, 1986, 1991, and 1996
(Megawatts Electric)

Fuel	1986	1991	1996	Percentage Share 1986	Percentage Share 1991	Percentage Share 1996
Coal	3,894	3,901	3,901	*75.7*	*77.3*	*76.8*
Oil	25	24	24	*0.5*	*0.5*	*0.5*
Gas	1,197	1,063	1,094	*23.3*	*21.1*	*21.5*
Nuclear	--	--	--	--	--	--
Hydro/Other	25	58	58	*0.5*	*1.1*	*1.1*
Total Utility	5,141	5,045	5,077	*100.0*	*100.0*	*100.0*
Total Nonutility	W	W	237	--	--	--

-- = Not applicable. W = Withheld.

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	21,504,999	22,129,312	26,357,179	*91.1*	*88.3*	*89.8*
Oil	37,660	32,240	22,452	*0.2*	*0.1*	*0.1*
Gas	1,891,676	2,665,953	2,773,259	*8.0*	*10.6*	*9.4*
Nuclear	--	--	--	--	--	--
Hydro/Other	166,340	237,108	211,499	*0.7*	*0.9*	*0.7*
Total Utility	23,600,676	25,064,613	29,364,389	*100.0*	*100.0*	*100.0*
Total Nonutility	W	W	821,438	--	--	--

-- = Not applicable. W = Withheld.

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

Fuel	1986	1991	1996	Percentage Share 1986	Percentage Share 1991	Percentage Share 1996
Coal	0.240	0.233	0.277	*91.2*	*88.1*	*89.4*
Oil	(s)	(s)	(s)	*0.2*	*0.1*	*0.1*
Gas	0.021	0.029	0.030	*8.0*	*10.8*	*9.8*
Nuclear	--	--	--	--	--	--
Hydro/Other	0.002	0.002	0.002	*0.7*	*0.9*	*0.7*
Total Utility	0.263	0.265	0.310	*100.0*	*100.0*	*100.0*
Total Nonutility	W	W	0.011	--	--	--

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

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

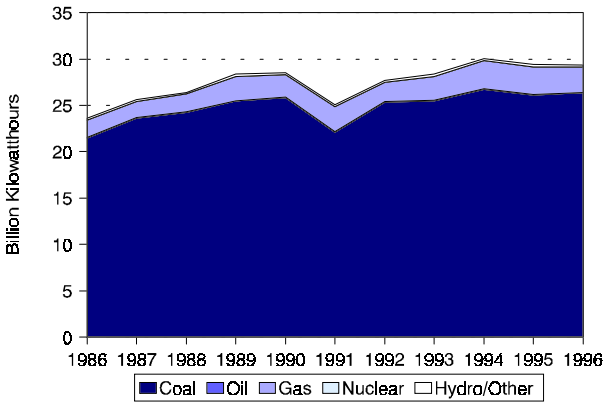


Figure 5. Utility Delivered Fuel Prices for Coal, Oil, and Gas, 1986-1996
(1996 Dollars)

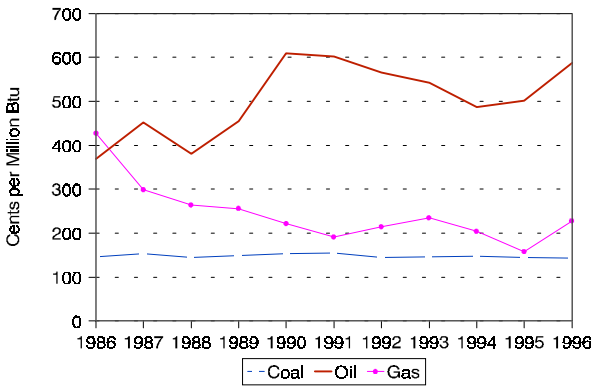


Table 7. Utility Delivered Fuel Prices for Coal, Oil, and Gas, 1986, 1991, and 1996
(Cents per Million Btu, 1996 Dollars)

Fuel	1986	1991	1996	Annual Growth Rate 1986-1996 (Percent)
Coal	146.3	154.7	142.8	-0.2
Oil	369.3	601.7	586.8	4.7
Gas	427.3	191.2	227.9	-6.1

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	40	50	61	4.3
Nitrogen Oxides[d] . .	136	103	122	-1.1
Carbon Dioxide[d] . . .	27,540	26,626	31,171	1.2

Figure 6. Estimated Sulfur Dioxide Emissions, 1986-1996

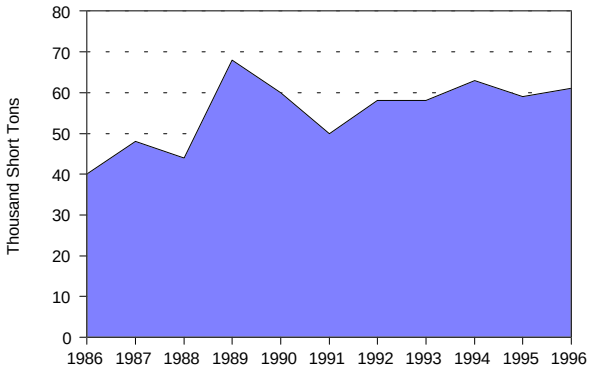


Figure 7. Estimated Nitrogen Oxide Emissions, 1986-1996

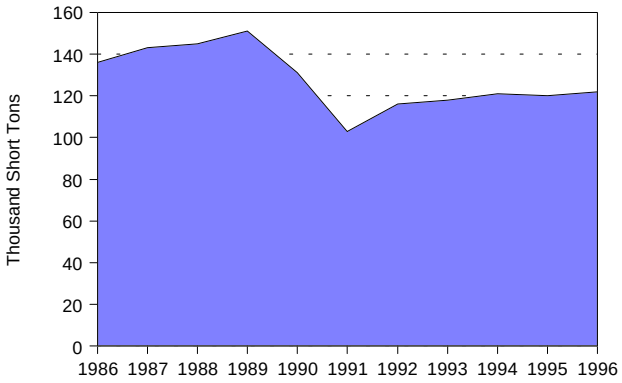


Figure 8. Estimated Carbon Dioxide Emissions, 1986-1996

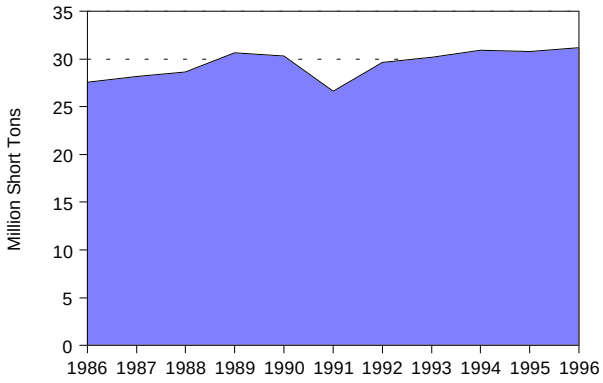


Table 9. Utility Retail Sales by Sector, 1986, 1991, and 1996
(Megawatthours)

Sector	1986	1991	1996	Annual Growth Rate 1986-1996 (Percent)	Percentage Share 1986	Percentage Share 1991	Percentage Share 1996
Residential . .	3,143,717	3,665,112	4,328,452	3.2	26.4	26.0	25.2
Commercial	3,802,181	4,532,876	5,295,854	3.4	31.9	32.2	30.8
Industrial . . .	3,902,152	4,546,441	5,920,823	4.3	32.8	32.3	34.5
Other	1,052,833	1,339,515	1,628,264	4.5	8.8	9.5	9.5
Total	11,900,888	14,083,944	17,173,393	3.7	100.0	100.0	100.0

Table 10. Utility Retail Sales Statistics, 1986, 1991, and 1996

Item	Investor-Owned Utility	Public	Federal	Cooperative	Total
			1986		
Number of Utilities	4	7	2	20	33
Number of Retail Customers	436,672	54,195	5,702	128,664	625,233
Retail Sales (MWh)	8,579,909	864,336	188,270	2,268,373	11,900,888
Percentage of Retail Sales	72.1	7.3	1.6	19.1	100.0
Revenue from Retail Sales (thousand 1996 $)[e]	806,366	83,217	5,357	243,955	1,140,454
Percentage of Revenue	70.7	7.3	0.6	21.4	100.0
			1991		
Number of Utilities	4	8	1	20	33
Number of Retail Customers	482,696	63,802	4	140,690	687,192
Retail Sales (MWh)	10,205,063	1,268,559	117,926	2,492,396	14,083,944
Percentage of Retail Sales	72.5	9.0	0.8	17.7	100.0
Revenue from Retail Sales (thousand 1996 $)[e]	817,032	97,850	2,316	212,016	1,129,501
Percentage of Revenue	72.3	8.7	0.2	18.8	100.0
			1996		
Number of Utilities	4	8	1	20	33
Number of Retail Customers	547,430	69,521	5	162,478	779,434
Retail Sales (MWh)	12,243,814	1,434,702	178,185	3,316,692	17,173,393
Percentage of Retail Sales	71.3	8.4	1.0	19.3	100.0
Revenue from Retail Sales (thousand 1996 $)[e]	825,999	102,203	3,864	228,527	1,160,593
Percentage of Revenue	71.2	8.8	0.3	19.7	100.0