District of Columbia

The District of Columbia had both the second smallest population and second smallest utility capability in 1996. All of the electricity generated in the District is from two oil-fired plants, Benning, the largest, and Buzzard Point. Both plants are operated by the Potomac Electric Power Company and serve the utility as peaking units. The average price of electricity in the District, 7.35 cents per kilowatthour, was the Nation's fifteenth highest in 1996. The District of Columbia is a net importer of electricity.

Neither Benning nor Buzzard Point was designated by the Clean Air Act Amendments of 1990 as a unit mandated to begin sulfur dioxide (SO_2) and nitrogen oxides (NO_x) emissions reductions in 1995. However, it is likely that the D.C. government will need to design a State implementation plan (SIP) for reducing ground-level ozone in response to a proposal released by the Environmental Protection Agency (EPA) in October 1998. The EPA proposal does not mandate which sources must reduce pollution. However, EPA states that utilities would be one of the most likely sources of NO_x emissions reductions. The District of Columbia is also part of the Ozone Transport Commission (OTC).[1] Each of the thirteen OTC members is responsible for enacting regulations in order to achieve region-wide NO_x reductions in a consistent, enforceable manner and for allocating its NO_x Budget Program allowances among NO_x sources in the State. The targets in this program are large industrial boilers and all electricity generating facilities with a rated output of 15 megawatts or more. As of November 1998, the District of Columbia had issued a draft rule for the NO_x Budget Program. The District's emissions of SO_2 and NO_x were ranked first and second lowest nationally, and its emissions of carbon dioxide were the lowest in the Nation. The concentrations per square mile, were twelfth, twenty-sixth, and twelfth highest, respectively, however, because of its size.

Both Benning and Buzzard Point sit on the eastern side of the Anacostia River. In 1986, these utility oil units represented 99.6 percent of total generating capability and all of the net generation in the District. In 1996, their shares of both capability and generation were 100 percent. In 1986, 0.4 percent of total capability was nonutility capability. Currently, there is no nonutility capability or generation in the District of Columbia.

The District of Columbia has not moved as quickly as some States toward competition. The Public Service Commission continues to study restructuring and issued a notice of inquiry for issues to investigate on retail competition. A report was to have been released in late 1998.[2]

[1] The Ozone Transport Region comprises the States of Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Maryland, Delaware, the northern counties of Virginia, and the District of Columbia.

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

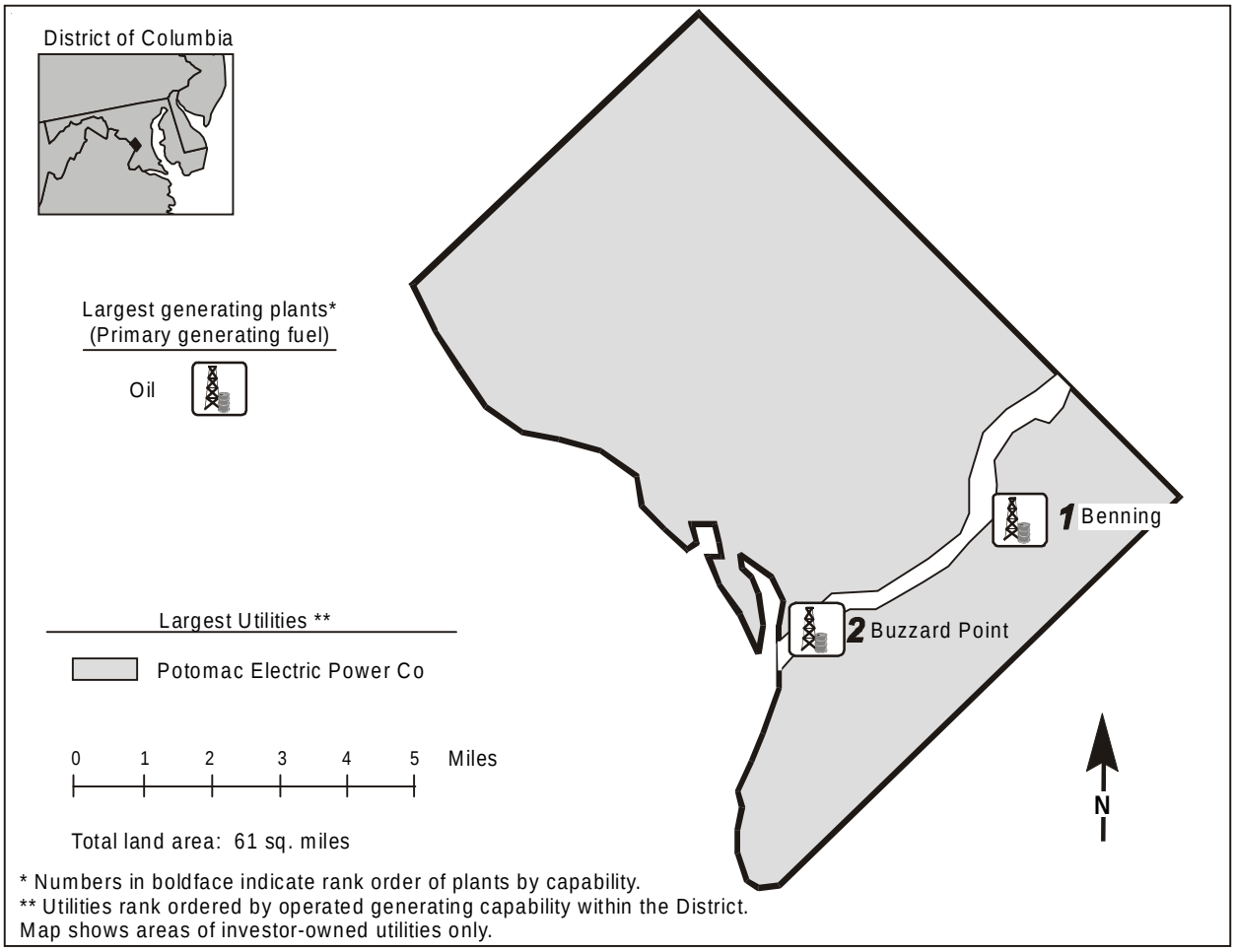

Table 1. 1996 Summary Statistics

Item	Value	U.S. Rank
NERC Region(s)		MAAC
Net Exporter or Importer		Importer
Primary Generating Fuel		Oil
Population (as of 7/96)	539,279	50
Average Revenue (cents/kWh)	7.35	[a]37
Industry		
Capability (MWe)	806	[b]45
Generation (MWh)	109,809	[b]45
Capability/person (KWe/person)	1.49	[b]44
Generation/person (MWh/person)	0.20	[b]45
Sulfur Dioxide Emissions (Thousand Short Tons)	1	50
Nitrogen Oxide Emissions (Thousand Short Tons)	(s)	51
Carbon Dioxide Emissions (Thousand Short Tons)	137	51
Sulfur Dioxide/sq. mile (Tons)	11.72	12
Nitrogen Oxides/sq. mile (Tons)	2.85	26
Carbon Dioxide/sq. mile (Tons)	2,248.02	12

Item	Value	U.S. Rank
Utility		
Capability (MWe)	806	50
Generation (MWh)	109,809	51
Average Age of Coal Plants	--	
Average Age of Oil-fired Plants	27 years	
Average Age of Gas-fired Plants	--	
Average Age of Nuclear Plants	--	
Average Age of Hydroelectric Plants	--	
Average Age of Other Plants	--	
Nonutility[c]		
Capability (MWe)	--	45
Percentage Share of Capability	--	45
Generation (MWh)	--	45
Percentage Share of Generation	--	45

-- = Not applicable. (s) = Nonzero value less than 0.5.

Table 2. Two Largest Utility Plants, 1996

Plant Name	Type	Operating Utility	Net Capability (MWe)
1. Benning	Oil	Potomac Electric Power Co	550
2. Buzzard Point	Oil	Potomac Electric Power Co	256

Table 3. Utility Generating Capability and Type, 1996
(Megawatts Electric)

Utility	Net Summer Capability	Net Coal Capability	Net Oil Capability	Net Gas Capability	Net Nuclear Capability	Net Hydro/Other Capability
A. Potomac Electric Power Co	806	--	806	--	--	--
Total	806	--	806	--	--	--
Percentage of Industry Capability	100.0	--	--	--	--	--

-- = Not applicable.

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

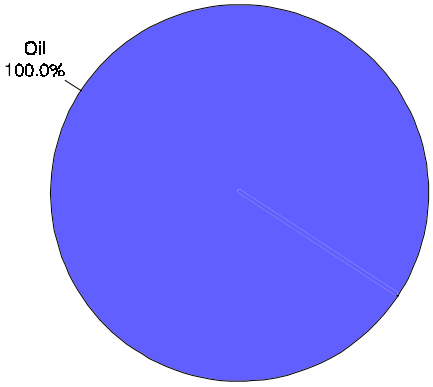

Figure 2. Utility Generation by Primary Energy Source, 1996

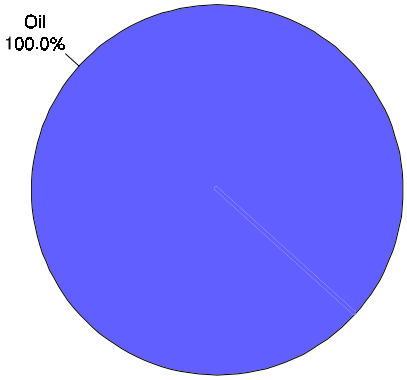

Figure 3. Energy Consumed at the Electric Utility by Primary Energy Source, 1996

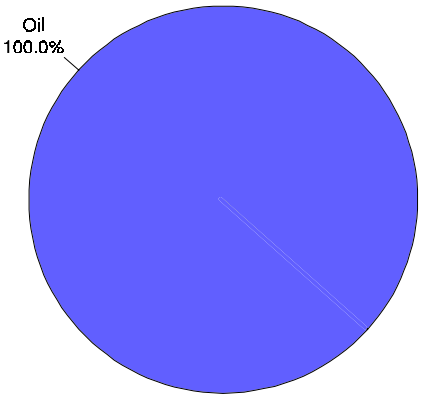

Table 4. Electric Power Industry Generating Capability by Primary Energy Source, 1986, 1991, and 1996
(Megawatts Electric)

Fuel	1986	1991	1996	Percentage Share 1986	Percentage Share 1991	Percentage Share 1996
Coal	--	--	--	--	--	--
Oil	806	806	806	99.6	99.6	100.0
Gas	--	--	--	--	--	--
Nuclear	--	--	--	--	--	--
Hydro/Other	--	--	--	--	--	--
Total Utility	806	806	806	99.6	99.6	100.0
Total Nonutility	3	3	--	0.4	0.4	--
Industry	809	809	806	100.0	100.0	100.0

-- = Not applicable.

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	--	--	--	--	--	--
Oil	165,000	179,814	109,809	100.0	100.0	100.0
Gas	--	--	--	--	--	--
Nuclear	--	--	--	--	--	--
Hydro/Other	--	--	--	--	--	--
Total Utility	165,000	179,814	109,809	100.0	100.0	100.0
Total Nonutility	--	--	--	--	--	--
Industry	165,000	179,814	109,809	100.0	100.0	100.0

-- = Not applicable.

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	--	--	--	--	--	--
Oil	0.003	0.003	0.002	100.0	100.0	100.0
Gas	--	--	--	--	--	--
Nuclear	--	--	--	--	--	--
Hydro/Other	--	--	--	--	--	--
Total Utility	0.003	0.003	0.002	100.0	100.0	100.0
Total Nonutility	--	--	--	--	--	--
Industry	0.003	0.003	0.002	100.0	100.0	100.0

-- = Not applicable.

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

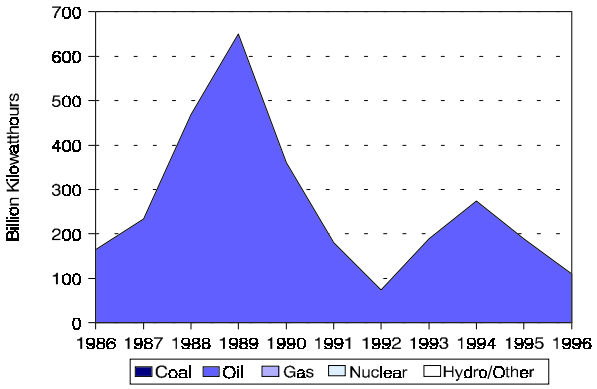

Figure 5. Utility Delivered Fuel Prices for Coal, Oil, and Gas, 1986-1996
(1996 Dollars)

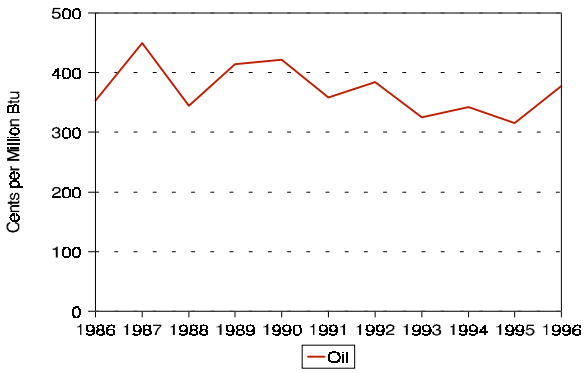

Table 7. Utility Delivered Fuel Prices for Coal, Oil, and Gas, 1986, 1991, and 1996
(Cents per Million Btu, 1996 Dollars)

Fuel	1986	1991	1996	Annual Growth Rate 1986-1996 (Percent)
Coal	--	--	--	--
Oil	352.9	358.2	378.2	0.7
Gas	--	--	--	--

-- = Not applicable.

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	1	1	1	-6.7
Nitrogen Oxides[d] . . .	(s)	(s)	(s)	-4.8
Carbon Dioxide[d] . . .	224	233	137	-4.8

(s) = Nonzero value less than 0.05.

Figure 6. Estimated Sulfur Dioxide Emissions, 1986-1996

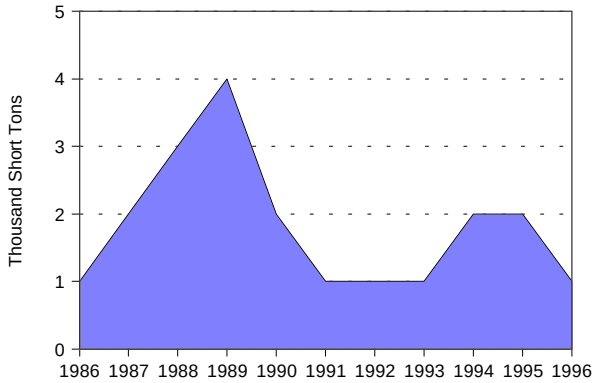

Figure 7. Estimated Nitrogen Oxide Emissions, 1986-1996

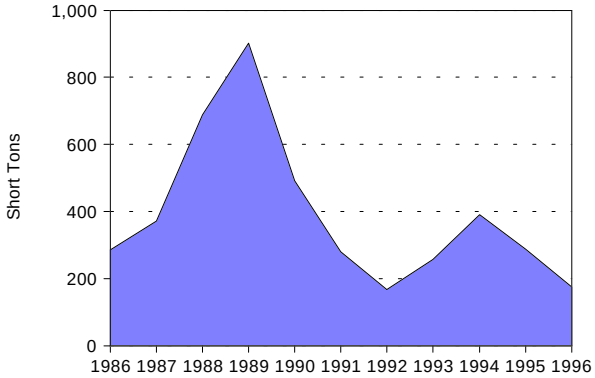

Figure 8. Estimated Carbon Dioxide Emissions, 1986-1996

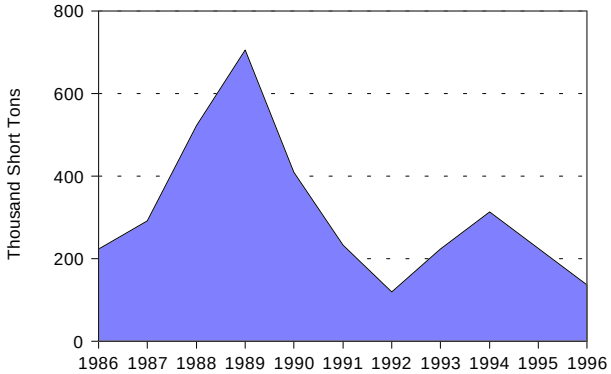

Table 9. Utility Retail Sales by Sector, 1986, 1991, and 1996
(Megawatthours)

Sector	1986	1991	1996	Annual Growth Rate 1986-1996 (Percent)	Percentage Share 1986	Percentage Share 1991	Percentage Share 1996
Residential . .	1,331,502	1,580,079	1,614,293	1.9	15.5	15.5	15.9
Commercial .	4,344,515	5,238,080	7,904,611	6.2	50.6	51.4	78.0
Industrial . . .	2,605,645	3,053,128	251,644	-20.8	30.3	29.9	2.5
Other	306,608	323,876	366,119	1.8	3.6	3.2	3.6
Total	8,588,270	10,195,163	10,136,667	1.7	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	1	--	--	--	1
Number of Retail Customers	208,271	--	--	--	208,271
Retail Sales (MWh)	8,588,270	--	--	--	8,588,270
Percentage of Retail Sales	100.0	--	--	--	100.0
Revenue from Retail Sales (thousand 1996 $)[e]	757,849	--	--	--	757,849
Percentage of Revenue	100.0	--	--	--	100.0
			1991		
Number of Utilities	1	--	--	--	1
Number of Retail Customers	219,971	--	--	--	219,971
Retail Sales (MWh)	10,195,163	--	--	--	10,195,163
Percentage of Retail Sales	100.0	--	--	--	100.0
Revenue from Retail Sales (thousand 1996 $)[e]	716,584	--	--	--	716,584
Percentage of Revenue	100.0	--	--	--	100.0
			1996		
Number of Utilities	1	--	--	--	1
Number of Retail Customers	218,979	--	--	--	218,979
Retail Sales (MWh)	10,136,667	--	--	--	10,136,667
Percentage of Retail Sales	100.0	--	--	--	100.0
Revenue from Retail Sales (thousand 1996 $)[e]	744,568	--	--	--	744,568
Percentage of Revenue	100.0	--	--	--	100.0

-- = Not applicable.