Table 1.
 2006 Summary Statistics

Item	Value	U.S. Rank
Virginia		
NERC Region(s)		RFC/SERC
Primary Energy Source		Coal
Net Summer Capacity (megawatts)	22,648	17
Electric Utilities	18,166	15
Independent Power Producers & Combined Heat and Power	4,482	20
Net Generation (megawatthours)	73,069,537	21
Electric Utilities	61,176,351	17
Independent Power Producers & Combined Heat and Power	11,893,186	26
Emissions (thousand metric tons)		
Sulfur Dioxide	197	18
Nitrogen Oxide	59	31
Carbon Dioxide	42,068	22
Sulfur Dioxide (lbs/MWh)	5.9	18
Nitrogen Oxide (lbs/MWh)	1.8	33
Carbon Dioxide (lbs/MWh)	1,269	30
Total Retail Sales (megawatthours)	106,721,241	11
Full Service Provider Sales (megawatthours)	106,679,301	9
Deregulated Sales (megawatthours)	41,940	20
Direct Use (megawatthours)	2,618,130	12
Average Retail Price (cents/kWh)	6.86	39

Table 2. Ten Largest Plants by Generating Capacity, 2006

Plant	Primary Energy Source or Technology	Operating Company	Net Summer Capacity (MW)	
Virginia				
1. Bath County	Pumped Storage	Virginia Electric & Power Co	2,759	
2. North Anna	Nuclear	Virginia Electric & Power Co	1,835	
3. Possum Point	Gas	Virginia Electric & Power Co	1,706	
4. Chesterfield	Coal	Virginia Electric & Power Co	1,631	
5. Surry	Nuclear	Virginia Electric & Power Co	1,598	
6. Yorktown	Coal	Virginia Electric & Power Co	1,141	
7. Tenaska Virginia Generating Station	Gas	Tenaska Virginia Partners LP	904	
8. Clover	Coal	Virginia Electric & Power Co	865	
9. Doswell Energy Center	Gas	Doswell Ltd Partnership	820	
10. Chesapeake	Coal	Virginia Electric & Power Co	710	

Table 3. Top Five Retailers of Electricity, with End Use Sectors, 2006 (Megawatthours)

Entity	Type of Provider	All Sectors	Residential	Commercial	Industrial	Transportation
Virginia						
1. Virginia Electric & Power Co	Investor-Owned	71,976,937	27,049,584	36,350,223	8,413,847	163,283
2. Appalachian Power Co	Investor-Owned	15,953,130	6,336,229	3,947,029	5,669,872	-
3. The Potomac Edison Co	Investor-Owned	2,988,107	1,244,383	680,853	1,062,871	-
4. Northern Virginia Elec Coop	Cooperative	2,977,640	1,812,479	780,932	384,229	-
5. Rappahannock Electric Coop	Cooperative	2,437,276	1,360,079	122,106	955,091	-
Total Sales, Top Five Providers		96,333,090	37,802,754	41,881,143	16,485,910	163,283
Percent of Total State Sales		90	88	94	87	100

Table 4. Electric Power Net Summer Capacity by Primary Energy Source and Industry Sector, 1990, 1995, and 2001 Through 2006

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F	1000	1005	2001	2002	2002	2004	2005	2006	Percentag	ge Share
Energy Source	1990	1995	2001	2002	2003	2004	2005	2006	1990	2006
Virginia										
Electric Utilities	13,661	14,342	15,761	15,818	17,128	17,567	18,091 ^R	18,166	90.7	80.2
Coal	4,225	5,451	4,784	4,789	4,468	4,468	4,586 ^R	4,586	28.0	20.2
Petroleum	2,753 ^R	1,374 ^R	2,180	2,083	2,081	2,098	2,031	2,027	18.3	8.9
Natural Gas	192 ^R	995 ^R	2,248	2,097	3,714	4,101	4,395 ^R	4,395	1.3	19.4
Nuclear	3,382	3,392	3,467	3,467	3,467	3,440	3,432	3,432	22.4	15.2
Hydroelectric	764	786	738	738	759	760	650	650	5.1	2.9
Other Renewables	*	*	-	-	-	-	80 ^R	80	*	0.4
Pumped Storage	2,345	2,345	2,345	2,645	2,638	2,700	2,917	2,997	15.6	13.2
Independent Power Producers and Combined Heat and	1,404	3,328	4,325	4,387	4,130	4,939	4,509 ^R	4,482	9.3	19.8
Power	373	925	1.353	1,328	1.328	1.329	1,197 ^R	1.188	2.5	5.2
Coal	3/3		361	361	,	359	359	359		1.6
Petroleum	531	12			361		2.433 ^R		- 2.5	1.6
Natural Gas	13	1,808	2,021	2,094	1,844	2,654	,	2,414	3.5	0.1
Hydroelectric	487	21	20	20	21	22	22	21 501	0.1	
Other Renewables		562	570	584	576	575	498 ^R		3.2	2.2
Total Electric Industry	15,065	17,670	20,086	20,205	21,258	22,506	22,599	22,648	100.0	100.0
Coal	4,598	6,376	6,137	6,117	5,796	5,797	5,783	5,774	30.5	25.5
Petroleum	2,753 ^R	1,386 ^R	2,541	2,444	2,442	2,457	2,390	2,386	18.3	10.5
Natural Gas	723 ^R	2,802 ^R	4,268	4,191	5,558	6,754	6,828	6,809	4.8	30.1
Nuclear	3,382	3,392	3,467	3,467	3,467	3,440	3,432	3,432	22.4	15.2
Hydroelectric	778	807	758	757	780	782	672	671	5.2	3.0
Other Renewables	487	562	570	584	576	575	577	580	3.2	2.6
Pumped Storage	2,345	2,345	2,345	2,645	2,638	2,700	2,917	2,997	15.6	13.2

Table 5. Electric Power Net Generation by Primary Energy Source and Industry Sector, 1990, 1995, and 2001 Through 2006 (Megawatthours)

Energy Source	1990	1995	2001	2002	2003	2004	2005	2006	Percei Sha	_
									1990	2006
Virginia		•		1						
Electric Utilities	47,200,499	52,727,470	62,135,492	62,880,125	61,806,347	65,103,653	65,456,080	61,176,351	89.8	83.7
Coal	21,000,180	24,442,870	30,657,436	31,099,307	29,145,703	27,772,985	28,803,324	28,553,670	40.0	39.1
Petroleum	1,194,150	1,119,524	4,854,800	3,454,714	4,982,314	4,664,410	3,809,135	662,100	2.3	0.9
Natural Gas	758,289	1,880,982	2,130,640	2,128,402	2,690,674	3,976,271	4,414,479	3,781,091	1.4	5.2
Nuclear	23,820,152	25,134,831	25,759,130	27,346,163	24,816,022	28,315,294	27,918,481	27,593,516	45.3	37.8
Hydroelectric	1,261,363	917,654	973,563	840,374	1,669,793	1,490,114	1,391,152	1,270,707	2.4	1.7
Other Renewables	34	3	-	-	-	50,690	540,332	482,711	*	0.7
Pumped Storage	-833,669	-768,394	-2,240,077	-1,988,835	-1,498,159	-1,166,111	-1,420,823	-1,167,444	-1.6	-1.6
Independent Power Producers and Combined Heat and Power	5,363,959	10,268,551	11,969,258	12,125,527	13,503,073	13,796,387	13,486,965	11,893,186	10.2	16.3
Coal	2,899,722	4,054,195	7,112,475	6,983,074	7,947,628	7,885,708	6,647,051	5,751,501	5.5	7.9
Petroleum	244,114	481,155	606,813	337,891	798,022	473,080	467,133 ^R	152,681	0.5	0.2
Natural Gas	376,520	3,550,863	2,065,431	2,258,525	1,928,391	2,441,158	3,841,305	3,419,621	0.7	4.7
Other Gases	-	-	-	-	2,959	-	-	-	-	-
Hydroelectric	48,136	77,372	40,661	27,842	111,776	92,936	93,201	80,487	0.1	0.1
Other Renewables	1,795,467	2,099,600	1,747,072	2,071,272	2,261,359	2,414,483	1,957,093 ^R	1,998,787	3.4	2.7
Other	-	5,366	396,806	446,923	452,936	489,023	481,182	490,108	-	0.7
Total Electric Industry	52,564,458	62,996,021	74,104,750	75,005,652	75,309,420	78,900,040	78,943,045	73,069,537	100.0	100.0
Coal	23,899,902	28,497,065	37,769,911	38,082,381	37,093,331	35,658,693	35,450,375	34,305,171	45.5	46.9
Petroleum	1,438,264	1,600,679	5,461,613	3,792,605	5,780,336	5,137,490	4,276,268 ^R	814,781	2.7	1.1
Natural Gas	1,134,809	5,431,845	4,196,071	4,386,927	4,619,065	6,417,429	8,255,784	7,200,712	2.2	9.9
Other Gases	-	-	-	-	2,959	-	-	-	-	-
Nuclear	23,820,152	25,134,831	25,759,130	27,346,163	24,816,022	28,315,294	27,918,481	27,593,516	45.3	37.8
Hydroelectric	1,309,499	995,026	1,014,224	868,216	1,781,569	1,583,050	1,484,353	1,351,194	2.5	1.8
Other Renewables	1,795,501	2,099,603	1,747,072	2,071,272	2,261,359	2,465,173	2,497,425 ^R	2,481,498	3.4	3.4
Pumped Storage	-833,669	-768,394	-2,240,077	-1,988,835	-1,498,159	-1,166,111	-1,420,823	-1,167,444	-1.6	-1.6
Other	-	5,366	396,806	446,923	452,936	489,023	481,182	490,108	-	0.7

Table 6. Electric Power Delivered Fuel Prices and Quality for Coal, Petroleum, and Natural Gas, 1990, 1995, and 2001 Through 2006

Fuel, Quality	1990	1995	2001	2002	2003	2004	2005	2006
Virginia								
Coal (cents per million Btu)	155	145	159	169	167	195	233	245
Average heat value (Btu per pound)	12,714	12,743	12,730	12,845	12,826	12,713	12,650	12,592
Average sulfur Content (percent)	0.96	1.03	1.02	1.16	0.97	0.94	1.00	1.04
Petroleum (cents per million Btu)	384	251	357	380	499	497	761	875
Average heat value (Btu per gallon)	146,360	146,179	148,810	149,779	149,367	150,757	149,019	150,090
Average sulfur Content (percent)	0.89	0.89	1.04	0.99	0.64	0.78	0.65	0.48
Natural Gas (cents per million Btu)	258	259	440	413	618	665	934	751
Average heat value (Btu per cubic foot)	1,041	1,031	1,020	1,035	1,035	1,032	1,034	1,035

Table 7. Electric Power Industry Emissions Estimates, 1990, 1995, and 2001 Through 2006 (Thousand Metric Tons)

Emission Type	1990	1995	2001	2002	2003	2004	2005	2006
Virginia								
Sulfur Dioxide								
Coal	194	219	210	254	200	182	203	173
Petroleum	12	5	23	21	25	23	18	10
Natural Gas	*	*	*	*	*	*	*	*
Other	10	13	14	17	12	12	13	14
Total	216	237	247	292	237	217	233	197
Nitrogen Oxide								
Coal	107	119	84	102	63	54	53	48
Petroleum	3	2	8	6	7	5	4	2
Natural Gas	1	5	5	3	3	3	3	2
Other	4	5	11	13	7	7	7	7
Total	115	132	108	125	79	68	66	59
Carbon Dioxide								
Coal	25,864	31,049	39,239	39,770	38,177	38,303	37,983	36,422
Petroleum	1,584	1,751	4,398	3,044	4,658	4,353	3,680	933
Natural Gas	637	2,853	2,260	2,916	2,344	3,138	5,010	3,662
Other Renewables	393	527	773	875	908	1,008	1,036	1,052
Total	28,478	36,181	46,670	46,605	46,087	46,802	47,709	42,068

Table 8. Retail Sales, Revenue, and Average Retail Prices by Sector, 1990, 1995, and 2001 Through 2006

Sector	1990	1995	2001	2002	2003	2004	2005	2006	Percenta	ge Share
Sector	1770	1773			2003	2004	2003	2000	1990	2006
Virginia										
Retail Sales (thousand megawatthours)										
Residential	28,130	33,472	37,325	40,358	40,877	42,503	44,662	42,906	38.7	40.2
Commercial	20,213	24,028	29,066	29,999	41,179	43,025	44,670	44,654	27.8	41.8
Industrial	16,399	18,554	19,702	19,521	19,282	19,734	19,354	18,998	22.6	17.8
Other	7,955	9,109	10,360	10,740	NA	NA	NA	NA	10.9	NA
Transportation	NA	NA	NA	NA	172	162	163	163	NA	0.2
All Sectors	72,696	85,162	96,453	100,619	101,510	105,424	108,850	106,721	100.0	100.0
Retail Revenue (million dollars)										
Residential	2,039	2,626	2,908	3,144	3,174	3,397	3,645	3,642	46.5	49.8
Commercial	1,225	1,458	1,701	1,762	2,365	2,530	2,705	2,775	27.9	37.9
Industrial	700	772	820	807	815	843	863	891	16.0	12.2
Other	422	474	535	553	NA	NA	NA	NA	9.6	NA
Transportation	NA	NA	NA	NA	9	10	11	11	NA	0.2
All Sectors	4,386	5,331	5,964	6,265	6,364	6,780	7,223	7,319	100.0	100.0
Average Retail Prices (cents/KWh)										
Residential	7.25	7.84	7.79	7.79	7.76	7.99	8.16	8.49	NA	NA
Commercial	6.06	6.07	5.85	5.87	5.74	5.88	6.05	6.21	NA	NA
Industrial	4.27	4.16	4.16	4.13	4.23	4.27	4.46	4.69	NA	NA
Other	5.31	5.21	5.16	5.14	NA	NA	NA	NA	NA	NA
Transportation	NA	NA	NA	NA	5.46	6.25	6.81	6.81	NA	NA
All Sectors	6.03	6.26	6.18	6.23	6.27	6.43	6.64	6.86	NA	NA

Table 9. Retail Electricity Sales Statistics, 2006

_		Full	Service Provid	ers		Other I		
Item	Investor- Owned	Public	Federal	Cooperative	Facility	Energy	Delivery	Total
Virginia								
Number of Entities	5	16	1	13	1	2	3	41
Number of Retail Customers	2,871,373	162,463	1	458,065	1	1,338	NA	3,493,241
Retail Sales (thousand megawatthours)	92,223	4,883	10	9,418	145	42	NA	106,721
Percentage of Retail Sales	86.42	4.58	0.01	8.82	0.14	0.04	NA	100.00
Revenue from Retail Sales (million dollars)	5,970	355	*	981	7	4	1	7,319
Percentage of Revenue	81.57	4.85	*	13.41	0.10	0.06	0.01	100.00
Average Retail Price (cents/kWh)	6.47	7.27	3.50	10.42	4.93	9.73	1.37	6.86

Table 9 Notes: Data are shown for All Sectors. Full Service Providers sell bundled electricity services (e.g., both energy and delivery) to end users. Full Service Providers may purchase electricity from others (such as independent Power Producers or other full service providers) prior to delivery. Other Providers sell either the energy or the delivery services, but not both. Sales volumes and customer counts shown for Other Providers refer to delivered electricity, which is a joint activity of both energy and delivery providers; for clarity, they are reported only in the Energy column in this table. The revenue shown under Other Providers represents the revenue realized from the sale of the energy and the delivery services distinctly. "Public" entities include municipalities, State power agencies, and municipal marketing authorities. "Federal" entities are either owned or financed by the Federal Government. "Cooperatives" are electric utilities legally established to be owned by and operated for the benefit of those using its services. The cooperative will generate, transmit and/or distribute supplies of electric energy to a specified area not being serviced by another utility. "Facility" sales represent direct electricity transactions from independent generators to end use consumers

Table 10. Supply and Disposition of Electricity, 1990, 1995, and 2001 Through 2006 (Million Kilowatthours)

Category	1990	1995	2001	2002	2003	2004	2005	2006
Virginia	•							
Supply								
Generation								
Electric Utilities	47,200	52,727	62,135	62,880	61,806	65,104	65,456	61,176
Independent Power Producers	428	3,341	4,697	4,828	6,058	6,263	5,279	4,636
Combined Heat and Power, Electric	2,162	3,856	4,593	4,074	4,368	4,509	5,251	4,409
Electric Power Sector Generation Subtotal	49,790	59,925	71,426	71,783	72,232	75,876	75,986	70,221
Combined Heat and Power, Commercial	265	554	515	456	332	361	389	347
Combined Heat and Power, Industrial	2,509	2,517	2,164	2,767	2,745	2,664	2,568	2,502
Industrial and Commercial Generation Subtotal	2,774	3,071	2,679	3,223	3,077	3,024	2,957	2,849
Total Net Generation	52,564	62,996	74,105	75,006	75,309	78,900	78,943	73,070
Total International Imports	-	-	-	*	*	-	-	-
Total Supply	52,564	62,996	74,105	75,006	75,309	78,900	78,943	73,070
Disposition								
Retail Sales								
Full Service Providers	72,696	85,162	95,844	100,305	101,324	105,237	108,676	106,534
Energy-Only Providers	-	-	609	313	31	26	22	42
Facility Direct Retail Sales	-	-	-	-	155	161	151	145
Total Electric Industry Retail Sales	72,696	85,162	96,453	100,619	101,510	105,424	108,850	106,721
Direct Use	2,627	2,699	2,895	2,958	2,995	2,999	2,577	2,618
Estimated Losses	5,451	6,465	11,059	6,819	7,432	6,184	7,107	9,026
Total Disposition	80,774	94,327	110,407	110,395	111,937	114,607	118,534	118,365
Net Interstate Trade	-28,209	-31,331	-36,302	-35,389	-36,628	-35,707	-39,591	-45,296
Net Trade Index (ratio)	0.65	0.67	0.67	0.68	0.67	0.69	0.67	0.62

R = Revised.

Totals may not equal sum of components because of independent rounding.

Table 10 Notes: Estimated Losses are reported at the utility level, and then allocated to States based on the utility's retail sales by State. Reported losses may include electricity unaccounted for by the utility. Net Interstate Trade represents the difference between the amount of electricity; produced in the State and consumed in the State. Positive values indicate a State that is a net interstate exporter of electricity; negative values indicate a State that is a net interstate importer of electricity. The Net Trade Index represents a State's electricity self-sufficiency. Values greater than 1 indicate that, on an annual net basis, the State supplied electricity consumed outside the State; values less than 1 indicate that, on an annual net basis, the State consumed electricity produced outside the State.

General Notes: Table 4 "Other Renewables" includes wood, black liquor, other wood waste, municipal solid waste, landfill gas, sludge waste, agriculture byproducts, other biomass, geothermal, solar thermal, photovoltaic energy, and wind. The "Other" category includes batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, tire-derived fuels and miscellaneous technologies. However, Table 5 "Other Renewables" includes only biogenic municipal solid waste, in addition to wood, black liquor, other wood waste, landfill gas, sludge waste, agriculture byproducts, other biomass, geothermal, solar thermal, photovoltaic energy, and wind. In Table 5 "Other" includes Non-biogenic municipal solid waste, batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, tire-derived fuels and miscellaneous technologies. In Table 7, "Other Renewables" emissions include biogenic municipal solid waste, and other renewable waste.

Direct use is commercial or industrial use of electricity that (1) is self-generated (2) is produced by either the same entity that consumes the power or an affiliate, and (3) is used in direct support of a service or industrial process located within the same facility or group of facilities that houses the generating equipment. Direct use is exclusive of station use.

NA = Not applicable; NM = Not meaningful.

W = Withheld to avoid disclosure of individual company data.

 [–] Data not available.

^{* =} Value is less than half of the smallest unit of measure (e.g., for values with no decimals, the smallest unit is 1 and values under 0.5 are shown as *.)