

Electric Power

American Electric Power (AEP) provides electricity to the majority of the New River Valley. AEP owns and operates more than 42,000 megawatts of generating capacity and is the largest electricity generator in the United States. AEP produces approximately 750,000 kilowatts of power at the Claytor Lake Dam. In addition, the City of Radford operates its own power distribution system, supplied by AEP and a 1,000 kilowatt dam on the Little River, and parts of Blacksburg are served through the Virginia Tech Electric Service.

Industrial electrical service is available throughout the New River Valley. An extensive system of 138 kV transmission lines connect Claytor Dam, a 750,000 kilowatt transformer station at Jackson's Ferry and a 330,000 kilowatt coal-fired generating plant in Glen Lyn. Initial costs for obtaining electric service depend on projected electric demands and improvements needed to accommodate those demands. Generally AEP applies the gross revenue generated during a one-year period towards the cost of providing service.

As indicated in Table 40 on the following page, the cost of electric service in the New River Valley is the lowest in Virginia and the second lowest in the United States.

Table 40
National Comparison of Electric Rates

Kw Demand Kwh Per Month	75 30,000	1,000 400,000	50,000 25,000,000		Cents Kwh	
				¢	¢	¢
Atlanta, GA	\$1,945	\$25,659	\$1,245,654	6.5	6.4	5.0
Birmingham, AL	2,062	19,988	1,093,635	6.9	5.0	4.4
Boston, MA	3,310	43,555	2,577,487	11.0	10.9	10.3
Cambridge, MA	3,247	38,423	2,292,881	10.8	9.6	9.2
Charlotte, NC	1,487	19,384	978,568	5.0	4.8	3.9
Chicago, IL	2,181	27,573	1,185,309	7.3	6.9	4.7
Cincinnati, OH	2,059	27,216	1,329,256	6.9	6.8	5.3
Columbia, SC	2,158	22,878	1,213,450	7.2	5.7	4.9
Covington, KY	1,727	20,942	1,075,125	5.8	5.2	4.3
Detroit, MI	2,376	28,283	1,379,160	5.8	7.1	5.5
Evansville, IN	1,866	22,333	1,185,496	6.2	5.6	4.7
Greenville, SC	1,382	18,015	850,673	4.6	4.5	3.4
Johnstown, PA	2,056	24,895	1,289,572	6.9	6.2	5.2
Louisville, KY	1,445	17,978	939,403	4.8	4.5	3.8
Marietta, OH	1,619	18,926	934,202	5.4	4.7	3.7
Martinsburg, WV	1,657	19,807	974,771	5.5	5.0	3.9
New York, NY	4,379	58,287	3,591,852	14.6	14.6	14.4
Parkersburg, WV	1,657	19,807	974,771	5.5	5.0	3.9
Philadelphia, PA	2,056	24,895	1,289,572	6.9	6.2	5.2
Pontiac, MI	1,900	24,104	1,388,375	6.3	6.0	5.6
Providence, RI	3,022	39,106	2,202,164	10.1	9.8	8.8
Raleigh, NC	1,658	27,166	1,526,500	5.5	6.8	6.1
Reading, PA	2,150	26,152	1,380,025	7.2	6.5	5.5
Richmond, VA	1,842	21,834	1,187,012	6.1	5.5	4.7
San Francisco, CA	3,353	41,915	1,985,337	11.2	10.5	7.9
Washington, DC	2,184	23,879	1,386,769	7.3	6.0	5.5
Winchester, VA	1,518	18,623	948,032	5.1	4.7	3.8
US Average	2,236	27,544	1,477,737	7.5	6.9	5.9
New River Valley, VA	\$1,307	\$15,640	\$761,520	4.4	3.9	3.0

Source: Typical residential, commercial and industrial bills, investor-owned utilities, January 1, 2005.
Edison Electric Institute, Washington D.C. (For Appalachian Power's served industrial locations in Virginia.)

Natural Gas

Natural gas is provided to Pulaski and Montgomery Counties and the City of Radford by ATMOS Energy, while Columbia Gas of Virginia serves Giles County. Bottled gas is the only type of gas service available in Floyd County.

Telephone

Telephone service is provided by AT&T. Service is available to residential and business customers throughout the area. Telecommunications, Watts lines, and long distance services are offered by Citizens, AT&T, Verizon, MCI, NTelos, and Sprint.

Water and Sewer

Public water in the New River Valley is plentiful, of good quality, and available for residential, commercial, and industrial use. Several public service authorities serve the area. Sewer service is provided by the localities, except where public service authorities are established. Water and sewer rates are exhibited in Tables 41 and 42 (page 62 and page 63).

Waste Management

There are four jurisdictions and three regional authorities within the New River Valley providing solid waste disposal services.

Floyd County is operating a greenbox collection system for household waste, a network of recycling drop-off bins throughout the County, a main recycling center, and a solid waste transfer station. The solid waste is currently being shipped out of state via a private hauler. The Town of Floyd provides weekly residential curbside recycling and solid waste pickup, and commercial solid waste and corrugated cardboard pickup.

The New River Resource Authority (NRRA) has opened its new solid waste management area that is projected to accept the solid waste generated in this region for the next 100 years. The NRRA member jurisdictions are Pulaski County, Giles County, the Town of Dublin, the City of Radford, and the Montgomery Regional Solid Waste Authority. NRRA services include: the main solid waste disposal site, a debris fill, a wood waste operation, and recycling options, including tires, at the waste management area. NRRA members are responsible for their own collection and transportation systems.

The Giles County Public Service Authority is responsible for coordinating the solid waste and recycling services in Giles County. There are a variety of systems in place within each of the towns and the County for solid waste and recycling, including greenbox sites, consolidation centers, a recycling center, curbside pick up, and a business corrugated collection program. Most of the recycled materials are taken to the Montgomery Regional Solid Waste Authority's Recycling Processing Facility. Except for the Town of Glen Lyn, the solid waste is currently being shipped from the County to the NRRA. Glen Lyn is shipping their solid waste out of state to Mercer County, West Virginia.

Pulaski County is a member of the NRRA, and provides curbside pickup throughout the County. In addition to weekly curbside pickup, the City of Radford operates a curbside leaf collection system, a Christmas tree pickup service, a recycling drop-off center, and a special household items pickup for residential customers. Radford also handles solid waste collection from greenboxes for commercial customers.

The Montgomery Regional Solid Waste Authority (MRSWA) was formed to represent the Towns of Christiansburg and Blacksburg, Montgomery County, and Virginia Tech in solid waste and recycling issues. The MRSWA has been accepted as a member of the NRRA facility and started bringing their solid waste to the new NRRA facility in 1998. The MRSWA operates a substantial recycling processing facility which handles several grades of paper, glass bottles and jars, HDPE and PETE plastic containers, aluminum and steel food and beverage cans, non-ferrous and ferrous metal, and automotive batteries, tires, oil, and antifreeze. The MRSWA members are responsible for their own collection and transportation systems. Private haulers provide much of this service.

There are no hazardous waste disposal sites in the New River Valley. Commercial recycling and disposal firms are readily available to remove and dispose of this type of waste. Table 43 (page 64) lists hazardous waste disposal vendors.

Surface Water

The abundance of ground and surface water is one of the New River Valley's significant resources. The New River, a tributary of the Kanawa and Ohio rivers, is located in the Gulf of Mexico drainage basin. Thus, the development of property and the use of surface water does not affect water quality in the Chesapeake Bay and is not controlled by water quality standards specific to the Bay.

As reported in the New River Water Supply Plan prepared by the State Water Control Board "*it is noteworthy that the New River in Virginia has the highest base flow per unit of drainage area to be found in any major tributary in the Ohio River Basin and the highest in Virginia. Most of the factors affecting movement of water in the hydraulic cycle have some influence upon base flow of a stream, but the ground water phase of the cycle is the predominant factor*" (page 1-5). The study notes that most wells in the New River Valley produce 30 gallons per minute with some wells yielding as much as 100 gallons per minute. The New River is capable of supplying 3.2 billion gallons per day during an average flow and 467 million gallons per day during drought flow. Claytor Lake and several small reservoirs provide over 5,000 acres of surface water.

**Table 41
New River Valley Water Systems**

JURISDICTION	SOURCE	USAGE	CAPACITY AVAILABLE	STORAGE	RESIDENTIAL	COMMERCIAL
Floyd Town/ Floyd County	Wells	109,877 gpd	NA	400,000 gal.	3,000 gal.= \$13.50 +1,000 gal.= \$4.75	3,000 gal.= \$13.50 +1,000 gal.= \$4.75
Giles County	PSA	136,000 gpd		.45 mg	<4,500 gal.= \$24 per month Each additional 1,000 gal. = \$4.50	
Pearisburg	PSA	418,000 gpd		1.65 mg	2,500 gal. - Minimum = \$17.00 2,501 - 150,000 gal. = \$4.00/1,000 gal. 150,000 - 500,000 gal. = \$3.45/1,000 gal. >500,000 gal. = \$3.20/1,000 gal. Outside Twn > 2,500 gal. - Minimum = \$29.75 2,501 - 150,000 gal. = \$7.00 150,001 - 500,000 gal. = \$6.04 >500,000 gal. = \$5.60	
Narrows	PSA	218,000 gpd		1.5 mg	3,000 gal.= \$23.15/monthly 7,000 gal.= \$8.07/1,000 gal. Outside Town 3,000 gal.= \$32.15/monthly 7,000 gal.= \$11.07/1,000 gal.	3,000 gal.= \$23.15/monthly Each add 1,000 gal - 10,000 = \$8.07 All over 10,000 gal = \$4.32
Rich Creek	PSA	107,000 gpd		317,000 gal.	2,000 gal.= Minimum = \$12.98 2,001 - 4,000 = \$6.49 4,001 - 25,000 = 2.99 25,001 - 50,000 = \$3.24 50,001 - 51,000= \$3.29 >51,001 = \$3.29/1,000 gal.	
Glen Lyn	PSA	20,000 gpd		65,000 gal.	\$6.00+3.75/1000 gal. (metered set fee) \$7.50+4.68/1000 gal. (outside town)(meter set fee)	
Pembroke	PSA	80,600 gpd		626,000 gal.	\$25.20/3,500 gal \$3.76/1,000 gal Outside Town \$37.80/3,500 gal \$6.39/1,000 gal.	
Montgomery County	Wells, B'Burg, C'Burg, City of Radford	882,000 gpd	1.38 mgd	2,562 mg	Single rate of \$5.80/1,000 gal.	
Blacksburg	New River	3.5 mgd	12mgd	5 mg	Fixed Charge - \$2.10 \$3.06/1,000 gal. Outside Town Fixed Charge - \$3.68 \$5.36 per 1,000 gal.	
Christiansburg	New River	1.8 mgd		2.8 mg	<4,000 gal.= \$11.00 4,001 - 100,000 = \$3.25/1,000 gal. 101,000 - 6,000,000 = \$2.10/1,000 gal. Outside Town <4,000 gal.= \$16.50 4,001 - 100,000 = \$4.875/1,000 gal. 101,000 - 6,000,000 = \$3.15/1,000 gal.	
Pulaski County	Claytor Lake & New River	1.85 mgd	3 mgd	8.0 mg	<2,000 gal.= \$12.50 +1,000 gal.= \$ 2.50 > 100,000 gal. = \$2.50/1,000 gal.	<2,000 gal.= \$12.50 +1,000 gal.= \$ 2.50 > 100,000 gal. = \$2.50/1,000 gal.
Pulaski Town	Peak Creek, Gatewood & Hogan Reservoirs.	2.1 mgd	1.9 mgd	5 mg	Fixed Charge depends on meter size 1,000 - 20,000 gal.= \$1.95/1,000 gal. Next 680,000 gal.= \$1.65/1,000 gal. >700,000 gal.= \$1.23/1,000 gal. Outside Town Fixed Charge depends on meter size 1,000 - 20,000 gal.= \$3.36/1,000 gal. Next 680,000 gal.= \$2.76/1,000 gal. >700,000 gal.= \$2.46/1,000 gal.	
Dublin	Pul. Co. PSA	600,000 gpd	NA	1 mg	\$13.00 - First 2,000 gal. \$3.75/1,000 gal. Outside Town \$19.50 - First 2,000 gal. \$4.50/1,000 gal.	
City of Radford	New River	3.38 mgd	8mg	5.3 mg	0-4,000 gal.= \$12.20 4,001 - 100,000= \$3.05/1,000 gal. 100,001 - 4,000,000= \$2.75/1,000 gal. 4,000,001 - UP = \$2.14/1,000 gal. Wholesale Rate 2.24 per thousand	

Sources: Local Governments

* Reduced rates for households with one person over 65 years old or with one disabled person and a household income under \$10,000

**Table 42
New River Valley Sewer Systems**

JURISDICTION	TREATMENT	CAPACITY AVAILABLE	EXCESS CAPACITY	RESIDENTIAL	COMMERCIAL
Floyd Town/ Floyd County	Secondary	N/A	100,648 gpd	3,000 gal.= \$16.50 +1,000 gal.= \$6.00	4,000 gal.= \$25.00 +1,000 gal.= \$7.00
Giles County Pearisburg	Secondary		100,000 gpd	2,500 gal. - Minimum = \$17.25 2,501 - 100,000 gal. = \$4.50/1,000 >100,000 gal. = \$4.10/1,000 Outside Town 2,500 gal. - Minimum = \$30.19 2,501 - 100,000 gal. = \$7.88 > 1,000,000 = \$7.18	
Narrows	Secondary		150,000 gpd	3,000 gal.= \$23.50 Minimum >3,000 gal.= \$3.00/1,000 gal. Outside Town 3,000 gal.= \$31.28 Minimum >3,000 gal.= \$6.96/1,000 gal.	\$2.90 per 1000 gal.
Rich Creek	Secondary		80,000 gpd	2,000 gal.= \$11.10 Minimum >2,000 gal.= \$5.18 Outside Town 2,000 gal. - Minimum= \$14.10 >2,000 gal.= \$7.25	
Glen Lyn	Secondary	20,000 gpd.	40,000 gpd	up to 5,000 gal.= \$14.00 >5,000 gal.= \$14.00+\$1.00/1000 gal. Outside Town up to 5,000 gal.= \$17.50 >5,000 gal.= \$17.50+\$1.25/1000 gal.	\$25.00+\$3.25/1000 gal. (flat metered rate)
Pembroke	Secondary	0.2 mgd.	0.06 mgd.	\$17.35/1,500 gal \$3.90/1,000 Outside Town \$22.75/1,500 gal \$4.50/1,000 gal	
Montgomery County Blacksburg	Secondary	555,000 gpd	300,000 gpd	\$25.00 without water meter \$6.00/1,000 gal. Fixed charge - \$2.13 \$3.48/1,000 gal. Outside Town Fixed charge - \$3.73 \$6.09/1,000 gal.	
Christiansburg	Secondary		0.7 mgd	1,000 gal.= \$4.00 Minimum= \$32.00	
Pulaski County	Secondary	NA	3.0mgd	0-2,000 gal. = \$13.50 + 1,000 gal. = \$ 3.50 > 100,000 gal. = \$3.00/1,000 gal.	0-2,000 gal. = \$13.50 + 1,000 gal. = \$ 3.50 > 100,000 gal. = \$3.00/1,000 gal.
Pulaski Town**	Secondary	1.4 mgd	1.2 mgd	Fixed charge depends on meter size 1,000-700,000 gal. = \$4.50 > 700,000 gal. = \$4.30 Outside Town Fixed charge depends on meter size 1,000-700,000 gal. = \$8.20 > 700,000 gal. = \$8.20	
Dublin	Secondary		30,000 gpd	0-1,500 gal.= \$7.28 + 1,000 gal. = \$1.96 Outside Town 0-1,500 gal.= \$8.35 + 1,000 gal. = \$2.49 Manufacturing = 0-1,500 gal.= \$65.64 +1,000 gal.= \$2.49	0-1,500 gal.= \$15.70 +1,000 gal.= \$2.49
City of Radford	Secondary	2.2mg	0.34 mgd	0-2,000 gal.= \$7.80 = Minimum Over 2,000 gallons - \$3.90 per 1,000 gallons of water metered No Sewer Rate = \$1.95 / 1,000 gal. of water metered	

Source: Local Governments.

** The Town of Pulaski has 2.6 mgd capacity in the PFRWTA.

**Table 43
Hazardous Waste Disposal Vendors**

Clean Harbors Environmental Services Companies 1104 D West Roslyn Road Colonial Heights, VA 23834 800-364-5939 (phone) 804-520-0467 (fax)	Hico, Inc. 950 Radford Street Christiansburg, VA 24073 540-382-6532 (phone) 800-763-0373 (phone) hico@usit.net
Environmental Options, Inc. 1 Energy Blvd. Rocky Mount, VA 24151 540-483-3920 (phone) 540-483-3855 (fax)	Safety Kleen Corporation Route 1 Vinton, VA 24179 540-890-4478 (phone) 540-890-1840 (fax) www.safety-kleen.com
Virginia Environmental Services Network www.vesn.org	