



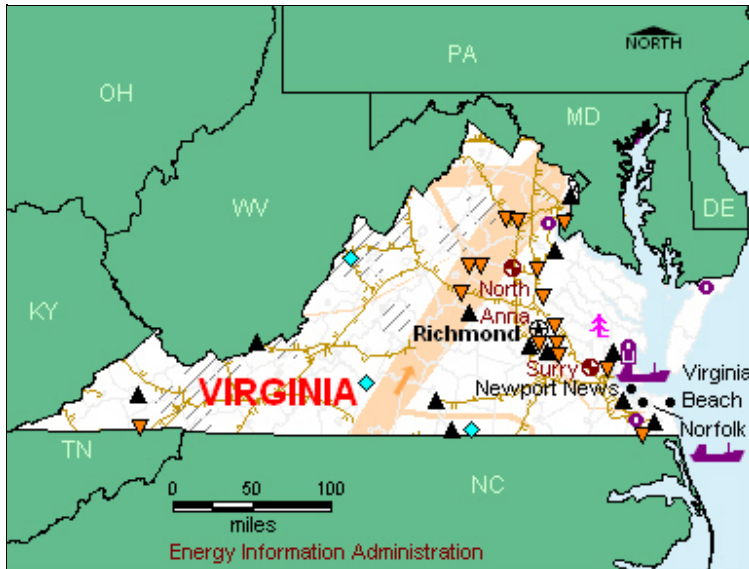
Virginia

STATE ENERGY PROFILES

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Last Update: October 22, 2009

Next Update: October 29, 2009

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Virginia Quick Facts

- Virginia accounts for more than 5 percent of U.S. coal production east of the Mississippi River.
- Virginia's only petroleum refinery, in Yorktown, processes foreign crude oil delivered by barge via the Chesapeake Bay.
- Virginia has two nuclear power plants, which typically provide about one-third of the electricity generated within the State.
- Two of Virginia's coalbed methane fields are among the top 100 natural gas fields in the United States.

Mouse over symbols for more details.

Major Electric Power Plants (>=100 MW)		Renewable Energy Potential
Electricity Transmission Line (>= 345 kV)	Nuclear	Solar - (>= 6.0 kWh/m ² /day)
Oil Seaport	Petroleum	Wind - (>= 4 Power Class)
Petroleum Refinery	Coal	Geo. - (>= 80 milliwatts/m ²)
Coal Mine, Surface	Natural Gas	
Coal Mine, Underground	Geothermal	
Natural Gas Flow (1 mile band width = 100 million cubic feet/day)		
Oil and Gas Active Leases		

Overview

Resources and Consumption

Virginia has minor natural gas and coal reserves, nearly all of which are found in the Central Appalachian Basin in the southwestern part of the State. In addition, resource assessments show that substantial oil and gas reserves could underlie the land beneath Virginia's offshore waters, which are part of the federally administered Mid-Atlantic Outer Continental Shelf (OCS). However, congressional and Presidential moratoria have prohibited energy development in that offshore area since 1990. Virginia's offshore Atlantic waters also have high wind power potential, as do the waters of the Chesapeake Bay. Virginia's energy demand is distributed among the sectors of the economy, with transportation leading the others by a small margin.

Petroleum

Virginia's only petroleum refinery, in Yorktown, processes foreign crude oil delivered by barge via the Chesapeake Bay. The Yorktown refinery primarily supplies regional markets. Petroleum products are also delivered to Virginia at the Port of Norfolk and via the Colonial and Plantation pipelines from the Gulf Coast. Virginia's total petroleum consumption is high. Reformulated motor gasoline blended with ethanol is required in the northern Virginia suburbs of Washington, D.C., and in the metropolitan areas of Richmond and

Norfolk-Hampton Roads.

Natural Gas

Virginia's natural gas production is minor but enough to supply a substantial share of State demand. Virginia produces both conventional natural gas and coalbed methane in the Central Appalachian Basin, which covers the State's western panhandle. Most of Virginia's natural gas production comes from coalbed methane fields, two of which are among the 100 largest natural gas fields in the United States. As with most States on the East Coast, most of Virginia's natural gas supply is delivered from the Gulf Coast region via several major interstate natural gas pipelines. Virginia's natural gas consumption is distributed relatively evenly among the residential, commercial, industrial, and electricity generation sectors. About one-third of households in Virginia use natural gas as their primary energy source for home heating.

Coal, Electricity, and Renewables

Virginia accounts for more than 5 percent of U.S. coal production east of the Mississippi River. Production takes place at surface and underground mines in the Central Appalachian Basin. Large volumes of coal move through Virginia by rail. Virginia coal is shipped to about one-half of the continental United States. The primary recipients are Georgia and Tennessee. Virginia receives large coal shipments from Kentucky and West Virginia. Most coal consumed in Virginia is used for electricity generation.

Coal-fired power plants typically account for about one-half of the State's electricity generation. Two nuclear power plants account for about one-third of the State's electricity generation, and natural gas- and petroleum-fired power plants account for much of the rest. Over two-fifths of households in Virginia use electricity as their primary energy source for home heating.


Data

Economy

Population and Employment	Virginia	U.S. Rank	Period
Population	7.8 million	12	2008
Civilian Labor Force	4.1 million	11	Sep-09
Per Capita Personal Income	\$41,347	10	2007
Industry	Virginia	U.S. Rank	Period
Gross Domestic Product by State	\$397.0 billion	11	2008
Land in Farms	8.1 million acres	34	2007
Market Value of Agricultural Products Sold	\$2.9 billion	30	2007

Prices

Petroleum	Virginia	U.S. Avg.	Period
Domestic Crude Oil First Purchase	—	\$60.43/barrel	Jul-09
No. 2 Heating Oil, Residential	\$2.05/gal	\$2.25/gal	Jul-09 
Regular Motor Gasoline Sold Through Retail Outlets (Excluding Taxes)	\$1.99/gal	\$2.03/gal	Jul-09 
State Tax Rate on Motor Gasoline (other taxes may apply)	\$0.18/gal	\$0.22/gal	Aug-08
No. 2 Diesel Fuel Sold Through Retail Outlets (Excluding Taxes)	\$2.01/gal	\$2.02/gal	Jul-09 
State Tax Rate on On-Highway Diesel (other taxes may apply)	\$0.16/gal	\$0.22/gal	Aug-08
Natural Gas	Virginia	U.S. Avg.	Period
Wellhead	—	\$6.37/thousand cu ft	2007
City Gate	\$7.22/thousand cu ft	\$5.69/thousand cu ft	Jul-09
Residential	\$19.91/thousand cu ft	\$14.84/thousand cu ft	Jul-09 

Coal	Virginia	U.S. Avg.	Period
Average Open Market Sales Price	\$81.12/short ton	\$32.06/short ton	2008
Delivered to Electric Power Sector	\$ 3.10/million Btu	\$ 2.22 /million Btu	Jul-09
Electricity	Virginia	U.S. Avg.	Period
Residential	11.11 cents/kWh	11.96 cents/kWh	Jul-09 
Commercial	7.90 cents/kWh	10.72 cents/kWh	Jul-09
Industrial	6.60 cents/kWh	7.12 cents/kWh	Jul-09

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Reserves & Supply

Reserves	Virginia	Share of U.S.	Period
Crude Oil	—	—	2007
Dry Natural Gas	2,529 billion cu ft	1.1%	2007
Natural Gas Liquids	—	—	2007
Recoverable Coal at Producing Mines	217 million short tons	1.2 %	2008
Rotary Rigs & Wells	Virginia	Share of U.S.	Period
Rotary Rigs in Operation	5	0.3%	2008
Crude Oil Producing Wells	3	0.0%	2008
Natural Gas Producing Wells	5,735	1.3%	2007
Production	Virginia	Share of U.S.	Period
Total Energy	1,297 trillion Btu	1.8%	2006 
Crude Oil	0 thousand barrels	0.0%	May-09 
Natural Gas - Marketed	112,057 million cu ft	0.6%	2007 
Coal	24,712 thousand short tons	NA	2008 
Capacity	Virginia	Share of U.S.	Period
Crude Oil Refinery Capacity (as of Jan. 1)	64,500 barrels/calendar day	0.4%	2009
Electric Power Industry Net Summer Capability	22,992 MW	2.3%	2007
Net Electricity Generation	Virginia	Share of U.S.	Period
Total Net Electricity Generation	6,570 thousand MWh	1.8%	Jul-09 
Petroleum-Fired	48 thousand MWh	2.3%	Jul-09
Natural Gas-Fired	1,427 thousand MWh	1.4%	Jul-09
Coal-Fired	2,321 thousand MWh	1.5%	Jul-09
Nuclear	2,542 thousand MWh	3.5%	Jul-09
Hydroelectric	98 thousand MWh	0.4%	Jul-09
Other Renewables	223 thousand MWh	2.1%	Jul-09
Stocks	Virginia	Share of U.S.	Period
Motor Gasoline (Excludes Pipelines)	856 thousand barrels	1.6%	Jul-09
Distillate Fuel Oil (Excludes Pipelines)	3,681 thousand barrels	2.9%	Jul-09
Natural Gas in Underground Storage	8,005 million cu ft	0.1%	Jul-09
Petroleum Stocks at Electric Power Producers	2,586 thousand barrels	6.0 %	Jul-09
Coal Stocks at Electric Power Producers	2,573 thousand tons	1.3 %	Jul-09
Production Facilities	Virginia		
Major Coal Mines	None		
Petroleum Refineries	Western Refining Yorktown Inc (Yorktown)		
Major Non-Nuclear Electricity Generating	Bath County (Virginia Electric & Power Co) • Possum Point		

Plants	(Virginia Electric & Power Co) • Chesterfield (Virginia Electric & Power Co) • Yorktown (Virginia Electric & Power Co) • Tenaska Virginia Generating Station (Tenaska Virginia Partners LP)
Nuclear Power Plants	North Anna (Virginia Electric & Power Co) • Surry (Virginia Electric & Power Co)


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Distribution & Marketing

Distribution Centers	Virginia		
Oil Seaports/Oil Import Sites	Newport News • Norfolk		
Natural Gas Market Centers	None		
Major Pipelines	Virginia		
Crude Oil	None		
Petroleum Product	Colonial • Plantation.		
Liquefied Petroleum Gases	None		
Interstate Natural Gas Pipelines	Columbia Gas Transmission Corp. • Dominion Transmission Co. • East Tennessee Natural Gas Co. • Transcontinental Gas Pipeline Co.		
Fueling Stations	Virginia	Share of U.S.	Period
Motor Gasoline	4,140	2.6%	2008
Liquefied Petroleum Gases	38	1.5%	2009
Compressed Natural Gas	11	1.4%	2009
Ethanol	8	0.4%	2009
Other Alternative Fuels	26	2.1%	2009

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Consumption

per Capita	Virginia	U.S. Rank	Period
Total Energy	339 million Btu	26	2007 
by Source	Virginia	Share of U.S.	Period
Total Energy	2,611 trillion Btu	2.6%	2007
Total Petroleum	186.8 million barrels	2.5%	2007
Motor Gasoline	99.0 million barrels	2.9%	2007
Distillate Fuel	44.6 million barrels	2.9%	2007
Liquefied Petroleum Gases	5.2 million barrels	0.7%	2007
Jet Fuel	19.0 million barrels	3.2%	2007
Natural Gas	319,935 million cu ft	1.4%	2008
Coal	W	W	2007
by End-Use Sector	Virginia	Share of U.S.	Period
Residential	628,417 billion Btu	2.9%	2007
Commercial	600,540 billion Btu	3.3%	2007
Industrial	567,402 billion Btu	1.7%	2007
Transportation	814,549 billion Btu	2.8%	2007
for Electricity Generation	Virginia	Share of U.S.	Period
Petroleum	83 thousand barrels	2.3%	Jul-09
Natural Gas	11,495 million cu ft	1.4%	Jul-09
Coal	969 thousand short tons	1.1%	Jul-09
for Home Heating (share of households)	Virginia	U.S. Avg.	Period

Natural Gas	34%	51.2%	2000
Fuel Oil	13%	9.0%	2000
Electricity	44%	30.3%	2000
Liquefied Petroleum Gases	5%	6.5%	2000
Other/None	4%	1.8%	2000


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Environment

Special Programs	Virginia		
Clean Cities Coalitions	Virginia Clean Cities		
Alternative Fuels	Virginia	Share of U.S.	Period
Alternative-Fueled Vehicles in Use	18,308	2.6%	2007
Ethanol Plants	0	0.0%	2008
Ethanol Plant Capacity	0 million gal/year	0.0%	2008
Ethanol Consumption	5,415 thousand barrels	3.3%	2007
Electric Power Industry Emissions	Virginia	Share of U.S.	Period
Carbon Dioxide	46,721,552 metric tons	1.9%	2007 
Sulfur Dioxide	197,290 metric tons	2.2%	2007
Nitrogen Oxide	63,854 metric tons	1.7%	2007

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— = No data reported. * = Number less than 0.5 rounded to zero. NA = Not available. NM = Not meaningful due to large relative standard error or excessive percentage change. W = Withheld to avoid disclosure of individual company data.

Click the icon  next to a data series to see State rankings for that series.

Update on October 22, 2009

Preliminary statistics for September 2009:

- Civilian labor force

New statistics for July 2009:

- Prices of electricity sold to the residential, commercial, and industrial sectors
- Price of coal delivered to the electric power sector
- Net electricity generation by fuel
- Fuel stocks at electric power producers
- Consumption for electricity generation by fuel

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tables that provide time series data from 1990 forward for key electricity indicators by State

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tables that provide data for the most recent year on capacity and generation of electricity from renewable sources

- [State Compendium of Nuclear Power Plants](#)

State-by-State reports on the nuclear industry

- [Natural Gas Residential Choice Programs](#)

written overviews of the status of natural gas industry restructuring in each State, focusing on the residential customer class

- [Status of Electricity Restructuring by State](#)

annotated map showing details of the status of electricity restructuring in each State

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