The Honorable Robert S. Lasnik

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
AT SEATTLE

KING COUNTY,

Plaintiff,

v.

BP P.L.C., a public limited company of England and Wales; CHEVRON CORPORATION, a Delaware corporation; CONOCOPHILLIPS, a Delaware corporation; EXXONMOBIL CORPORATION, a New Jersey corporation; ROYAL DUTCH SHELL PLC, a public limited company of England and Wales; and DOES 1 through 10,

Defendants.

No. 2:18-cv-00758-RSL

DEFENDANT BP P.L.C.'S REQUEST FOR JUDICIAL NOTICE ACCOMPANYING ITS MOTION TO DISMISS FIRST AMENDED COMPLAINT FOR LACK OF PERSONAL JURISDICTION

NOTE ON MOTION CALENDAR:
November 1, 2018

Pursuant to Federal Rule of Evidence 201, defendant BP p.l.c. hereby requests that the Court, in its consideration of BP p.l.c.'s Motion to Dismiss First Amended Complaint for Lack of Personal Jurisdiction filed August 31, 2018 (the "Motion"), take judicial notice of the following documents that are cited in the Motion. True and correct copies of these documents are attached hereto as Exhibits A and B:

YARMUTH WILSDON PLLC
1420 FIFTH AVENUE, SUITE 1400
SEATTLE WASHINGTON 98101
T 206.516.3800 F 206.516.3888

Exhibit A	U.S. Energy Information Administration (EIA), Washington State Energy Profile
Exhibit B	Washington State Department of Natural Resources, Oil and Gas Resources, Oil and Gas in Washington

These documents are properly considered in connection with the Motion because they are public records the contents of which can be "accurately and readily determined from sources whose accuracy cannot reasonably be questioned." Fed. R. Evid. 201(b)(2).

ARGUMENT

A district court "'may take judicial notice of matters of public record' and consider them without converting a Rule 12 motion into one for summary judgment." *U.S. v. 14.02 Acres of Land More or Less in Fresno Cty.*, 547 F.3d 943, 955 (9th Cir. 2008) (quoting *Lee v. City of Los Angeles*, 250 F.3d 668, 688 (9th Cir. 2001)); *accord Intri-Plex Tech., Inc. v. Crest Grp., Inc.*, 499 F.3d 1048, 1052 (9th Cir. 2007) ("'[A] court may take judicial notice of "matters of public record" without converting a motion to dismiss into a motion for summary judgment' as long as the facts noticed are not 'subject to reasonable dispute'"); *Casterlow-Bey v. Barnes & Nobel.com*, 3:17-cv-05834-RJB, 2018 WL 1382566 at *3 (W.D. Wash. Mar. 19, 2018) (judicially noticing records from the U.S. Copyright Office where no reasonable dispute existed as to authenticity). Public records and official reports of administrative agencies are thus proper subjects for judicial notice. *See 14.02 Acres*, 547 F.3d at 955 (finding no abuse of discretion in taking judicial notice of the Department of Energy National Transmission Grid Study); *Interstate Nat. Gas Co. v. S. Cal. Gas Co.*, 209 F.2d 380, 385 (9th Cir. 1953) ("We may take judicial notice of records and reports of administrative bodies").

The two records for which BP p.l.c. seeks judicial notice are administrative records that are publicly available on government agency Web sites. Specifically:

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- Exhibit A is the U.S. Energy Information Administration's State Energy Profile for Washington State. This document is maintained as part of EIA's interactive database relating to energy production and consumption in the United States and is available on the EIA's Web site at https://www.eia.gov/state/analysis.php?sid=WA#18.
- Exhibit B is the short summary of Washington State's current and historical oil and gas production in-state. This information is published and maintained by the Washington State Department of Natural Resources and is made public on its Web site at https://www.dnr.wa.gov/programs-and-services/geology/energy-mining-and-minerals/oil-and-gas-resources#oil-and-gas-in-washington.

Because these exhibits are public records, the authenticity of which is not subject to reasonable dispute and the contents of which can be "accurately and readily determined from sources whose accuracy cannot reasonably be questioned" (Fed. R. Evid. 201(b)(2)), each is the proper subject of judicial notice by the Court.

CONCLUSION

For the foregoing reasons, BP p.l.c. requests that the Court take judicial notice of Exhibits A and B, attached hereto, in connection with its consideration of the Motion.

Dated: September 11, 2018.

YARMUTH WILSDON PLLC

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CERTIFICATE OF SERVICE

I hereby certify that on this date, I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system, which will send notification of such filing to the following:

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Dated: September 11, 2018 at Seattle, Washington.

s/Kelly M. Kennedy
Kelly M. Kennedy, Legal Assistant

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EXHIBIT A

U.S. Energy Information Administration

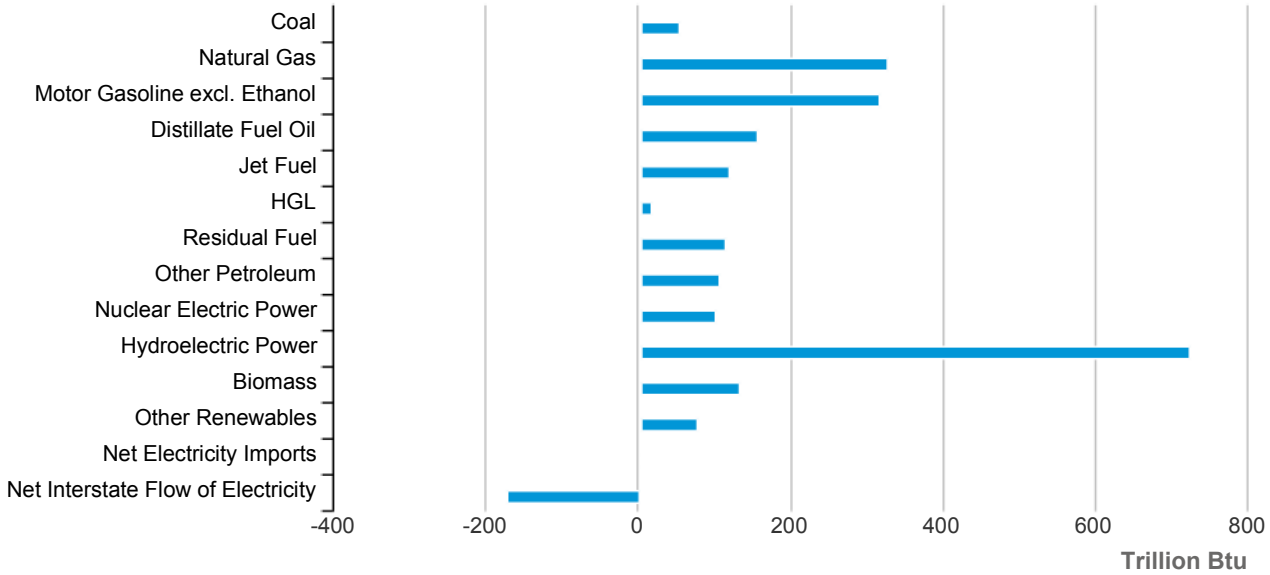
Washington State Energy Profile

Washington Quick Facts

- The Grand Coulee Dam on Washington's Columbia River is the largest hydroelectric power producer in the United States, and can provide electricity to 2.3 million households a year.
- Washington is the leading producer of electricity from hydroelectric sources and routinely accounts for 25% of the nation's utility-scale net hydroelectricity generation.
- Although not a crude oil producing state, Washington ranks fifth in the nation in crude oil refining capacity for making gasoline and other petroleum products.
- Washington's only natural gas storage field, the Jackson Prairie facility, can hold up to 44 billion cubic feet of gas and ranks among the top 20 U.S. gas storage reservoirs.
- Washington produces more electricity than it consumes, and exports its surplus power to Canada and 13 other western states.
- Washington is home to more than 100,000 Native Americans and their tribal lands are located in areas with substantial renewable energy resources.

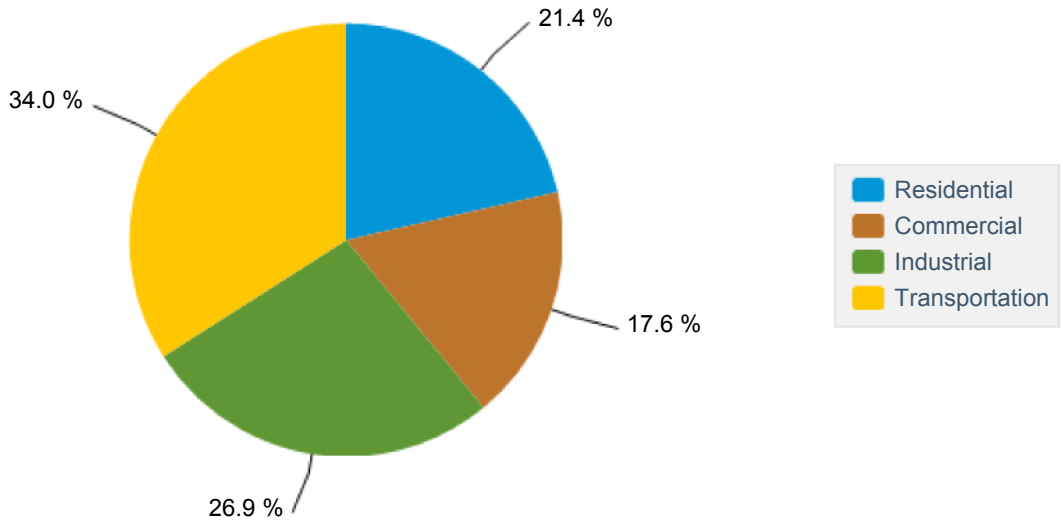
Last Updated: November 16, 2017

Washington Energy Consumption Estimates, 2016



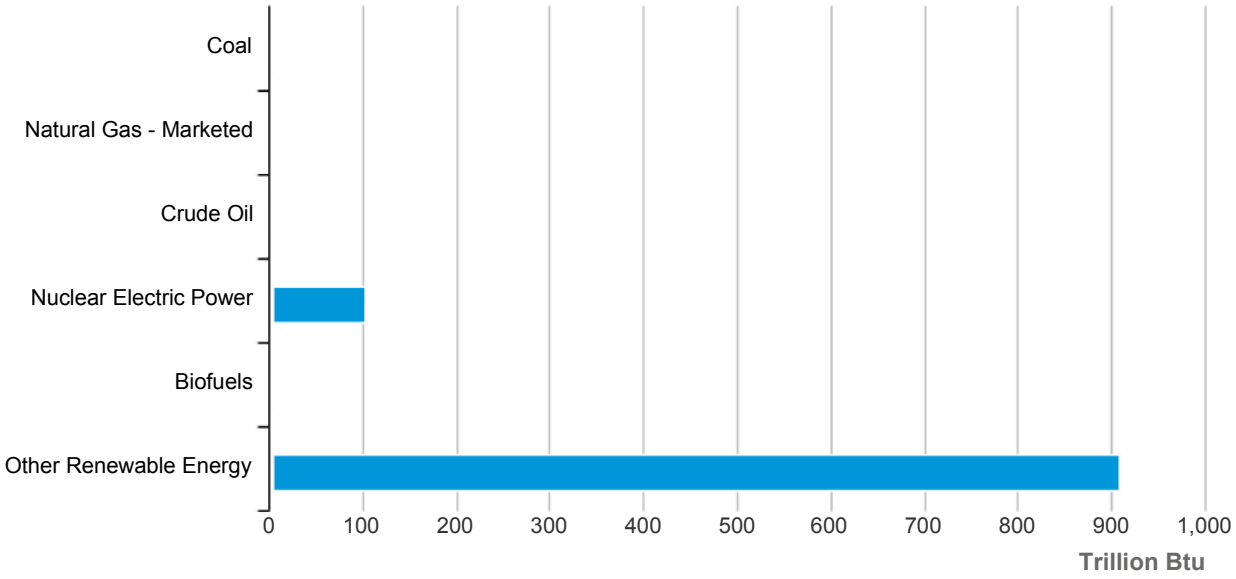
Source: Energy Information Administration, State Energy Data System

Washington Energy Consumption by End-Use Sector, 2016



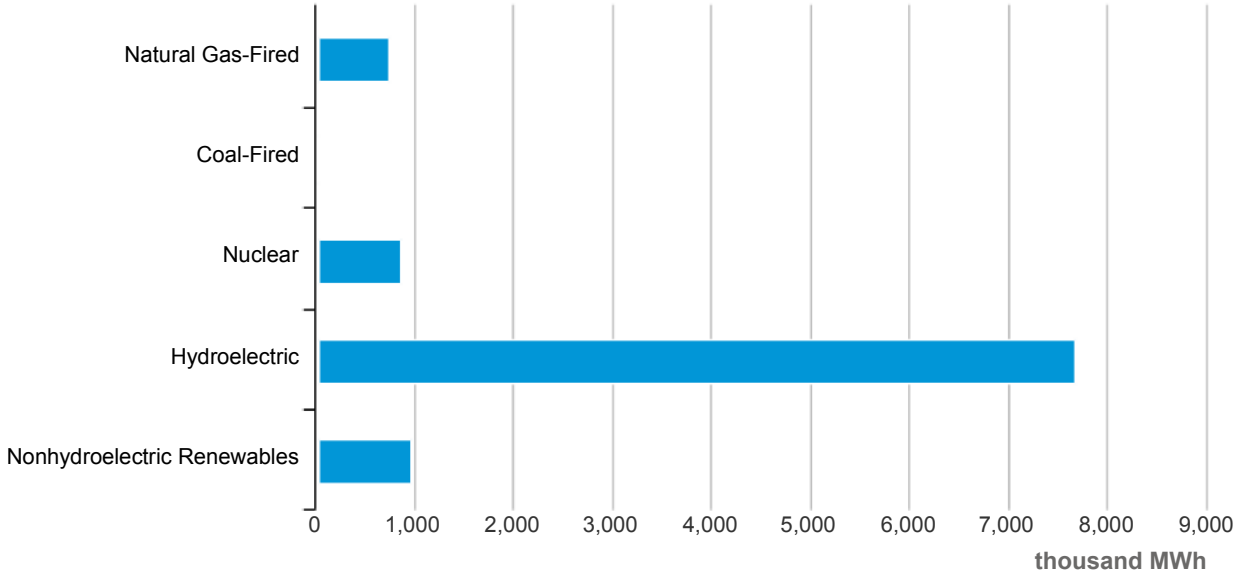
Source: Energy Information Administration, State Energy Data System

Washington Energy Production Estimates, 2016



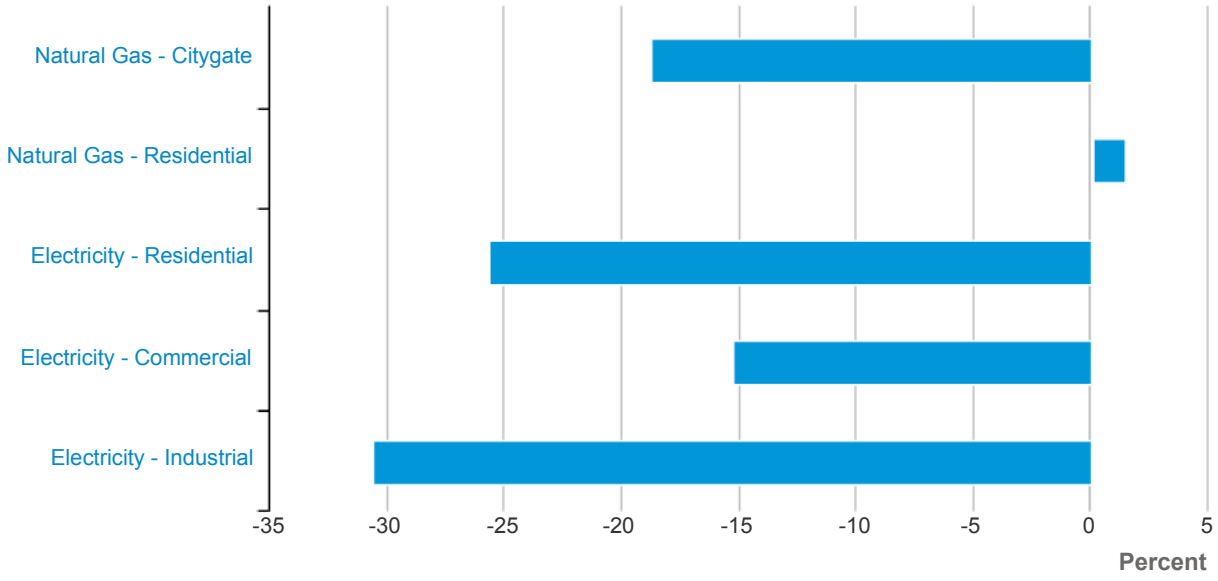
Source: Energy Information Administration, State Energy Data System

Washington Net Electricity Generation by Source, Mar. 2018



Source: Energy Information Administration, Electric Power Monthly

Washington Price Differences from U.S. Average, Most Recent Monthly



Source: Energy Information Administration, Petroleum Marketing Monthly; Natural Gas Monthly; Electric Power Monthly

Data

Last Update: June 21, 2018 | **Next Update:** July 19, 2018

Energy Indicators

Energy Indicators

Demography	Washington	Share of U.S.	Period
Population	7.3 million	2.3%	2016
Civilian Labor Force	3.7 million	2.3%	Apr-18
Economy	**Washington**	**U.S. Rank**	**Period**
Gross Domestic Product	$ 469.7 billion	14	2016
Gross Domestic Product for the Manufacturing Sector	$ 58,430 million	10	2016
Per Capita Personal Income	$ 53,493	13	2016
Vehicle Miles Traveled	61,018 million miles	20	2016
Land in Farms	14.7 million acres	18	2012
Climate	**Washington**	**U.S. Rank**	**Period**
Average Temperature	46.8 degrees Fahrenheit	38	2017
Precipitation	48.6 inches	11	2017

Prices

Petroleum	Washington	U.S. Average	Period	find more
Domestic Crude Oil First Purchase	--	$ 60.68 /barrel	Mar-18	
Natural Gas	**Washington**	**U.S. Average**	**Period**	find more
City Gate	$ 3.01 /thousand cu ft	$ 3.71 /thousand cu ft	Mar-18	find more
Residential	$ 9.93 /thousand cu ft	$ 9.79 /thousand cu ft	Mar-18	find more
Coal	**Washington**	**U.S. Average**	**Period**	find more
Average Sales Price	--	$ 30.57 /short ton	2016	
Delivered to Electric Power Sector	W	$ 2.04 /million Btu	Mar-18	
Electricity	**Washington**	**U.S. Average**	**Period**	find more
Residential	9.65 cents/kWh	12.99 cents/kWh	Mar-18	find more
Commercial	8.86 cents/kWh	10.47 cents/kWh	Mar-18	find more
Industrial	4.60 cents/kWh	6.64 cents/kWh	Mar-18	find more

Reserves

Reserves	Washington	Share of U.S.	Period	find more
Crude Oil (as of Dec. 31)	--	--	2016	find more
Expected Future Production of Dry Natural Gas (as of Dec. 31)	--	--	2016	find more
Expected Future Production of Natural Gas Plant Liquids	--	--	2016	find more
Recoverable Coal at Producing Mines	--	--	2016	find more
Rotary Rigs & Wells	**Washington**	**Share of U.S.**	**Period**	find more
Rotary Rigs in Operation	0 rigs	0.0%	2016	
Natural Gas Producing Wells	--	--	2016	find more
Capacity	**Washington**	**Share of U.S.**	**Period**	
Crude Oil Refinery Capacity (as of Jan. 1)	633,700 barrels/calendar day	3.4%	2017	
Electric Power Industry Net Summer Capacity	30,969 MW	2.9%	Mar-18	

Supply & Distribution

Production	Washington	Share of U.S.	Period	find more
Total Energy	935 trillion Btu	1.1%	2015	find more
Crude Oil	--	--	Mar-18	find more
Natural Gas - Marketed	--	--	2016	find more
Coal	--	--	2016	find more
Total Utility-Scale Net Electricity Generation	**Washington**	**Share of U.S.**	**Period**	find more
Total Net Electricity Generation	10,278 thousand MWh	3.2%	Mar-18	
Utility-Scale Net Electricity Generation (share of total)	**Washington**	**U.S. Average**	**Period**	
Petroleum-Fired	NM	0.3 %	Mar-18	find more

Supply & Distribution

Natural Gas-Fired	7.2 %	32.5 %	Mar-18	find more
Coal-Fired	*	25.2 %	Mar-18	find more
Nuclear	8.4 %	21.0 %	Mar-18	find more
Renewables	83.9 %	20.3 %	Mar-18	
Stocks	**Washington**	**Share of U.S.**	**Period**	find more
Motor Gasoline (Excludes Pipelines)	420 thousand barrels	2.5%	Mar-18	
Distillate Fuel Oil (Excludes Pipelines)	1,978 thousand barrels	2.0%	Mar-18	find more
Natural Gas in Underground Storage	28,661 million cu ft	0.5%	Mar-18	find more
Petroleum Stocks at Electric Power Producers	W	W	Mar-18	find more
Coal Stocks at Electric Power Producers	W	W	Mar-18	find more
Fueling Stations	**Washington**	**Share of U.S.**	**Period**	
Motor Gasoline	1,862 stations	1.7%	2016	
Liquefied Petroleum Gases	90 stations	2.8%	2017	
Electricity	675 stations	4.3%	2017	
Ethanol	4 stations	0.1%	2017	
Compressed Natural Gas and Other Alternative Fuels	18 stations	1.4%	2017	

Consumption & Expenditures

Summary	**Washington**	**U.S. Rank**	**Period**	
Total Consumption	2,058 trillion Btu	16	2016	find more
Total Consumption per Capita	278 million Btu	33	2015	find more
Total Expenditures	$ 21,276 million	17	2016	find more
Total Expenditures per Capita	$ 3,044	46	2015	find more
by End-Use Sector	**Washington**	**Share of U.S.**	**Period**	
Consumption				

Consumption & Expenditures

» Residential	441 trillion Btu	2.2%	2016	find more
» Commercial	363 trillion Btu	2.0%	2016	find more
» Industrial	554 trillion Btu	1.8%	2016	find more
» Transportation	700 trillion Btu	2.5%	2016	find more
Expenditures				
» Residential	$ 4,335 million	1.8%	2016	find more
» Commercial	$ 3,218 million	1.8%	2016	find more
» Industrial	$ 2,364 million	1.4%	2016	find more
» Transportation	$ 11,358 million	2.5%	2016	find more

by Source	**Washington**	**Share of U.S.**	**Period**	
Consumption				
» Petroleum	154.7 million barrels	2.1%	2016	find more
» Natural Gas	301.4 billion cu ft	1.1%	2016	find more
» Coal	3.2 million short tons	0.4%	2016	find more
Expenditures				
» Petroleum	$ 12,645 million	2.3%	2016	find more
» Natural Gas	$ 1,904 million	1.5%	2016	find more
» Coal	$ 126 million	0.4%	2016	find more

Consumption for Electricity Generation	**Washington**	**Share of U.S.**	**Period**	find more
Petroleum	1 thousand barrels	0.1%	Mar-18	find more
Natural Gas	5,628 million cu ft	0.7%	Mar-18	find more
Coal	1 thousand short tons	*	Mar-18	find more

Energy Source Used for Home Heating (share of households)	**Washington**	**U.S. Average**	**Period**
Natural Gas	34.7 %	48.4 %	2016
Fuel Oil	2.1 %	5.3 %	2016
Electricity	54.8 %	37.7 %	2016
Liquefied Petroleum Gases	3.0 %	4.8 %	2016
Other/None	5.3 %	3.8 %	2016

Environment

Renewable Energy Capacity	Washington	Share of U.S.	Period	find more
Total Renewable Energy Electricity Net Summer Capacity	24,711 MW	11.6%	Mar-18	
Ethanol Plant Operating Capacity	0 million gal/year	0.0%	2018	
Renewable Energy Production	**Washington**	**Share of U.S.**	**Period**	find more
Utility-Scale Hydroelectric Net Electricity Generation	7,667 thousand MWh	29.6%	Mar-18	
Utility-Scale Solar, Wind, and Geothermal Net Electricity Generation	780 thousand MWh	2.3%	Mar-18	
Utility-Scale Biomass Net Electricity Generation	177 thousand MWh	3.3%	Mar-18	
Distributed (Small-Scale) Solar Photovoltaic Generation	11 thousand MWh	0.4%	Mar-18	
Ethanol Production	0 Thousand Barrels	0.0%	2015	
Renewable Energy Consumption	**Washington**	**U.S. Rank**	**Period**	find more
Renewable Energy Consumption as a Share of State Total	43.9 %	2	2015	
Ethanol Consumption	6,881 thousand barrels	19	2016	
Total Emissions	**Washington**	**Share of U.S.**	**Period**	find more
Carbon Dioxide	76.0 million metric tons	1.4%	2015	
Electric Power Industry Emissions	**Washington**	**Share of U.S.**	**Period**	find more
Carbon Dioxide	10,229 thousand metric tons	0.5%	2016	
Sulfur Dioxide	11 thousand metric tons	0.6%	2016	
Nitrogen Oxide	13 thousand metric tons	0.8%	2016	

Analysis

Last Updated: November 16, 2017

Overview

Washington's economy developed around the fishing and logging industries during the 19th century.[1] The state's top industries now have expanded to include finance, real estate, information, and manufacturing. The state benefits from access to abundant and affordable energy.[2,3] Washington's significant renewable energy resources, especially hydroelectric power, are a major contributor to the state's energy supply.[4] The Columbia River, second in the United States to only the Mississippi River in the volume of its water flow, enters Washington near the state's northeastern corner and flows in an arc through the eastern half of the state, before forming much of the boundary between Washington and Oregon. Draining all of eastern Washington and the western slopes of the Cascade Range south of Mt. Rainier, the river provides water for vast hydroelectric projects.[5] The Grand Coulee Dam on Washington's Columbia River is the largest hydropower producer in the United States and also the nation's largest electricity generating facility of any kind when measured by capacity.[6] Washington has produced relatively little of its limited fossil fuel resources. However, the state is the crude oil refining center for the Pacific Northwest.[7,8,9] Crop residues from Washington's agricultural areas in the east and those from the state's western forests provide ample biomass, and many areas of the state are favorable for wind power development.[10,11]

Washington is a leader in the energy-intensive forest products industry and the transportation equipment manufacturing industry, primarily aircraft.[12] The industrial sector and the transportation sector each account for almost one-third of end-use energy consumption in the state. The residential sector accounts for about one-fourth of the state's end-use energy consumption, in part because Washington's more densely populated areas are west of the Cascade Range where the summers are cool and comparatively dry, and the winters are mild.[13,14,15] Overall energy consumption in Washington is well below the national average on a per capita basis, and the state produces more electricity than it needs to meet domestic demand.[16,17]

Washington is the crude oil refining center for the Pacific Northwest.

Petroleum

Early oil exploration activity in Washington was largely unsuccessful. Only small amounts of oil reserves were found, and no oil production has been reported since the early 1960s.[18] Nonetheless, Washington is a major crude oil refining center with the fifth-largest refining capacity in the nation.[19] The five refineries in Washington receive crude oil supplies at the state's extensive port facilities, with much of the oil coming from Alaska.[20,21] However, Alaskan production is declining, and Washington's refineries have become increasingly dependent on crude oil from foreign suppliers, primarily Canada.

Refineries also receive crude oil by rail from the Bakken shale formation in North Dakota.[22,23,24,25] Changing market conditions and environmental concerns have halted some planned projects that would increase deliveries of crude oil by rail from North Dakota.[26]

Motor gasoline accounts for more than half of Washington's consumption of petroleum products, followed by distillate fuel oil, which accounts for almost one-third of consumption.[27] The use of oxygenated motor gasoline is required throughout the state.[28] Motor gasoline is produced at Washington's five oil refineries.[29,30,31,32,33] The largest oil refinery in the state can process about 227,000 barrels of crude oil per calendar day. The other four refineries each process between about 40,000 and 145,000 barrels of crude oil per day.[34] Some refineries produce CARB (California Air Resources Board) motor gasoline, as well as conventional motor gasoline.[35] Most of those refineries also produce jet fuel,

Washington's jet fuel consumption is among the highest in the nation.

and Washington is among the top 10 states in the nation in jet fuel consumption.[36,37] Several large U.S. Air Force bases and U.S. Navy installations located in the state contribute to the considerable amount of jet fuel consumed.[38]

Natural gas

A small amount of natural gas was produced in south-central Washington in the mid-20th century, but there has been no production in the state since then. Exploration wells drilled in Washington have resulted in the development of the state's only natural gas storage field, the Jackson Prairie facility, which ranks among the top 20 U.S. natural gas storage reservoirs.[39] Because Washington has no natural gas production, it has imported record amounts of natural gas in recent years. The state relies heavily on natural gas produced in Canada that is transported by pipeline to U.S. markets. About two-fifths of the natural gas entering the state comes from Canada.[40,41] The Sumas Center, in Canada near the border between Washington and British Columbia, is the principal natural gas trading and transportation hub for the U.S. Northwest.[42] The Northwest Pipeline bidirectional system supplies natural gas from Canada, from the Rocky Mountain region, and from the San Juan Basin in the U.S. Southwest to markets in Washington. The separate Gas Transmission Northwest Pipeline enters the state from Idaho, bringing natural gas, primarily from Canada, to the eastern part of Washington.[43,44,45] About two-thirds of the natural gas entering Washington flows south to Oregon and beyond.[46]

In the past, the residential sector—where more than one-third of Washington households use natural gas as their primary energy source for home heating—had been the state's biggest natural gas-consuming sector, followed closely by the industrial sector.[47] Since 2013, the electric power sector has consumed the largest share.[48]

Coal

While Washington's recoverable coal reserves are estimated at nearly 700 million short tons,[49] the state's last remaining coal mine closed in 2006.[50] The mine had provided most of the coal used at the large coal-fired power plant in Centralia, Washington. Coal to fuel the Centralia power plant is now delivered by train from the Powder River Basin of Wyoming and Montana.[51,52] A small amount of coal is also delivered to industrial facilities in the state.[53] Western coal is shipped by rail through Washington's Seattle Customs District, the fifth-largest coal export center in the nation and the largest on the West Coast. The coal shipments are then sent to export terminals in Canada.[54] Several proposals for the construction of coal export terminals in Washington have been made; however, the developer of the proposed Gateway Pacific deep-water coal export terminal at Cherry Point in Whatcom County withdrew its permit application in February 2017 following opposition to the project.[55] The only other coal export terminal project under consideration is the Millennium Bulk Terminals near Longview, which would be the largest coal export terminal In North America. Washington's Department of Ecology denied a key water quality permit for the terminal in September 2017, which has delayed completion of the project.[56]

Electricity

Washington is the leading U.S. producer of hydroelectric power, routinely contributing more than one-fourth of the nation's total net hydroelectric generation.[57] Eight of the state's 10 largest power plants are hydroelectric facilities, and most of them are located on the Columbia River.[58,59] One of them, the Grand Coulee Dam, is the seventh largest power plant and the sixth largest hydroelectric plant in the world.[60] The dam's generators produce enough electricity to supply power to 2.3 million households a year.[61]

Washington generates about one-fourth of the total hydroelectric power produced

The biggest hydroelectric facilities in the state were built more than 60 years ago, making them among the oldest generating facilities in the nation. The facilities were built by federal entities that continue to own or operate them.[62,63,64] The

Bonneville Power Administration, one of four federal power marketing administrations, is the marketer of electricity produced at the federal dams in Washington.[65,66] Hydroelectric power typically accounts for about two-thirds of Washington's electricity generation, providing abundant and lower-cost electricity to the region, compared to power prices in other states.[67,68,69 70]

in the United States.

Natural gas-fired power plants, the state's one nuclear power plant, wind turbines, a single coal-fired power plant, and, to a lesser extent, biomass, account for almost all of Washington's remaining net electricity generation.[71] The state's two largest nonhydroelectric power plants are the Centralia coal-fired power plant and the Columbia nuclear power plant.[72] The Centralia power plant has two coal-fired units. However, both units are scheduled to be decommissioned, one in 2020 and the other in 2025.[73] Conversion of the units to natural gas or biomass fuel is being considered.[74,75] Nuclear power provides less than one-tenth of Washington's net electricity generation, but more than wind, coal, or biomass generation.[76] The Columbia nuclear power plant has been in operation since 1984 and is the state's third largest generating facility. It is located near the Columbia River in the south-central part of the state on the U. S. Department of Energy's Hanford Site.[77]

Washington's net electricity generation exceeds the electricity demand of the state's residential, commercial, and industrial consumers.[78] Because of its significant hydroelectric generating capacity, Washington is an exporter of electricity to the Canadian power grid and supplies power to 13 other western states. Large amounts of hydroelectric power leave Washington via the Western Interconnection, which runs from British Columbia and Alberta, Canada, through Washington, Oregon, and California to the northern part of Baja California, Mexico.[79] Because of the relatively low operating costs of hydroelectric power generation, the state has the lowest average retail electricity prices in the nation.[80] More than half of all Washington households use electricity as their primary heating source.[81]

Renewable energy

Washington ranks second in the nation, after California, in the amount of electricity generated from renewable resources. More than three-fourths of the state's net electricity generation originates from renewable resources, predominantly hydroelectric power, and Washington produced more than one-seventh of the total electricity generated nationwide from renewables in 2016.[82] Some renewable resources provide energy in forms other than electricity, such as biofuels and thermal energy from the wood used in wood stoves.[83] When the production of those other types of energy are included, renewable resources account for more than nine-tenths of Washington's total overall energy production.[84]

Washington ranks second in the nation in electricity generation from renewable resources.

Hydroelectric power provides more than two-thirds of Washington's net electricity generation and almost nine-tenths of the state's renewable power generation.[85] Nonhydroelectric renewable energy sources, mainly wind and biomass, provide almost one-tenth of the state's total net electricity generation.[86] Washington is among the top 10 states in the nation in electricity generation from renewable resources other than hydropower.[87] Washington's first utility-scale wind project came online in 2001, and development of the state's wind resources, particularly along the Columbia Gorge, has continued.[88] More than 1,700 turbines with over 3,000 megawatts of capacity make wind power the second-largest contributor to the state's renewable generation. [89,90] Washington is also a substantial producer of electricity from wood and wood waste, as over half of the state's land area is forested.[91] Washington accounts for 3% of the nation's net electricity generation from biomass.[92,93] Despite its large biomass resource, Washington generates almost five times more electricity from wind than from biomass.[94,95] The state has little electricity generation from solar energy, most of it from rooftop and other small-scale solar power installations.

Washington has largely undeveloped low and high-temperature geothermal resources, primarily in the Columbia Basin and in the southern Cascade Range.[96] Although low-temperature geothermal resources do not have a large impact on the energy economy, they have direct-use applications, such as providing heat for buildings, greenhouses, water, and geothermal heat pumps. Some of Washington's natural hot and mineral spring spas use their hot waters to provide space heating. More than 900 low-temperature geothermal wells have been drilled in the Columbia Basin. Undeveloped high-temperature geothermal areas in Washington's volcanic Cascade Range have an estimated electric generation potential of up to 300 megawatts, which if fully developed could produce enough electricity for about 265,000 homes.[97]

Washington has abundant wave energy and other hydrokinetic resources for generating electricity, and there are ongoing efforts to develop those resources.[98] Wave energy generators have been tested off the state's coastline and in Puget Sound.[99] Oscilla Power was awarded a $1 million grant in 2017 to design, build, and test a community-scale wave energy converter.[100]

Washington has several programs focused on energy independence, energy conservation, and energy efficiency. The state provides loans for the development of production and distribution facilities for biofuels created from agricultural product wastes from Washington's nearly 15 million acres of farmland and for electricity generation fueled by methane from dairy cow waste.[101,102] Facilities in Washington have the capacity to produce 110 million gallons of biodiesel fuel per year.[103]

In 2006, Washington enacted a renewable portfolio standard (RPS) and an energy efficiency resource standard that require utilities with at least 25,000 retail customers to obtain 15% of their electricity from qualified new renewable resources by 2020 and to undertake cost-effective energy conservation. Eligible renewables that meet the RPS requirement include wind, solar, geothermal, landfill gas, wave, ocean or tidal power, methane gas from sewage treatment plants, biodiesel, biomass energy, and limited hydropower.[104]

Energy on tribal lands

Washington is 1 of 14 states with more than 100,000 Native American residents.[105] The 29 federally recognized tribes in the state control about 2.5 million acres of tribal lands.[106,107] Like much of Washington, tribal lands in the state are located in areas with substantial renewable resource potential.[108,109] The largest reservation in the state, the Colville Reservation that is home to 12 individual tribes, aims to create a tribal utility that will use distributed generation and renewable energy projects to support the tribal goals of self-reliance and environmental sustainability.[110]

Washington's tribal lands have large biomass resources.

Washington tribal lands have substantial biomass resources. The Yakama and Coeur d'Alene tribal lands of Washington are among the top five reservations in the nation for potential electricity generation from solid biomass.[111] The Quinault Indian Nation on Washington's Pacific coast has abundant woody biomass and is working toward the development of wood pellet manufacturing on the reservation.[112] The Tulalip Tribes' power company joined with an agricultural cooperative and a nonprofit organization founded to restore salmon habitat to form an electric cooperative that generates electricity from the methane produced in an anaerobic biodigester. Using the manure and agricultural waste from local farms, the project reduces farm waste runoff from entering nearby salmon streams.[113]

Land that was once part of two Washington reservations, the Confederated Tribes of the Colville Reservation and the Spokane Tribe Indian Reservation, is now the site of Grand Coulee Dam.[114] Hydropower capacity and generation potential on the Yakama reservation, the second-largest reservation in the state, is among the highest of any reservation

in the nation.[115] The Yakama tribe is developing electric generation projects that will use woody biomass resources and is looking into opportunities to develop its solar and wind resources as well.[116,117]

Other renewable resource opportunities may exist on Washington's tribal lands. The greatest potential for geothermal electricity generation on the state's tribal lands is in the south-central part of Washington, but tribal lands in the northeastern and the northwestern parts of the state may also have geothermal resources.[118]

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Other Resources

Energy-Related Regions and Organizations

- Coal Region: Western
- Petroleum Administration for Defense District (PADD): 5
- North American Electric Reliability Corporation (NERC) Regional Entity: Western Electricity Coordinating Council (WECC)

Other Websites

- Washington State Energy Office
- Washington Utilities and Transportation Commission
- State of Washington Department of Commerce - Washington Weatherization Programs
- State of Washington Department of Commerce - Low-Income Home Energy Assistance Program (LIHEAP)
- Washington State Department of Enterprise Services - Energy Program
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- EIA Washington Flickr Album
- United States Department of Energy, Indian Energy Policy and Programs

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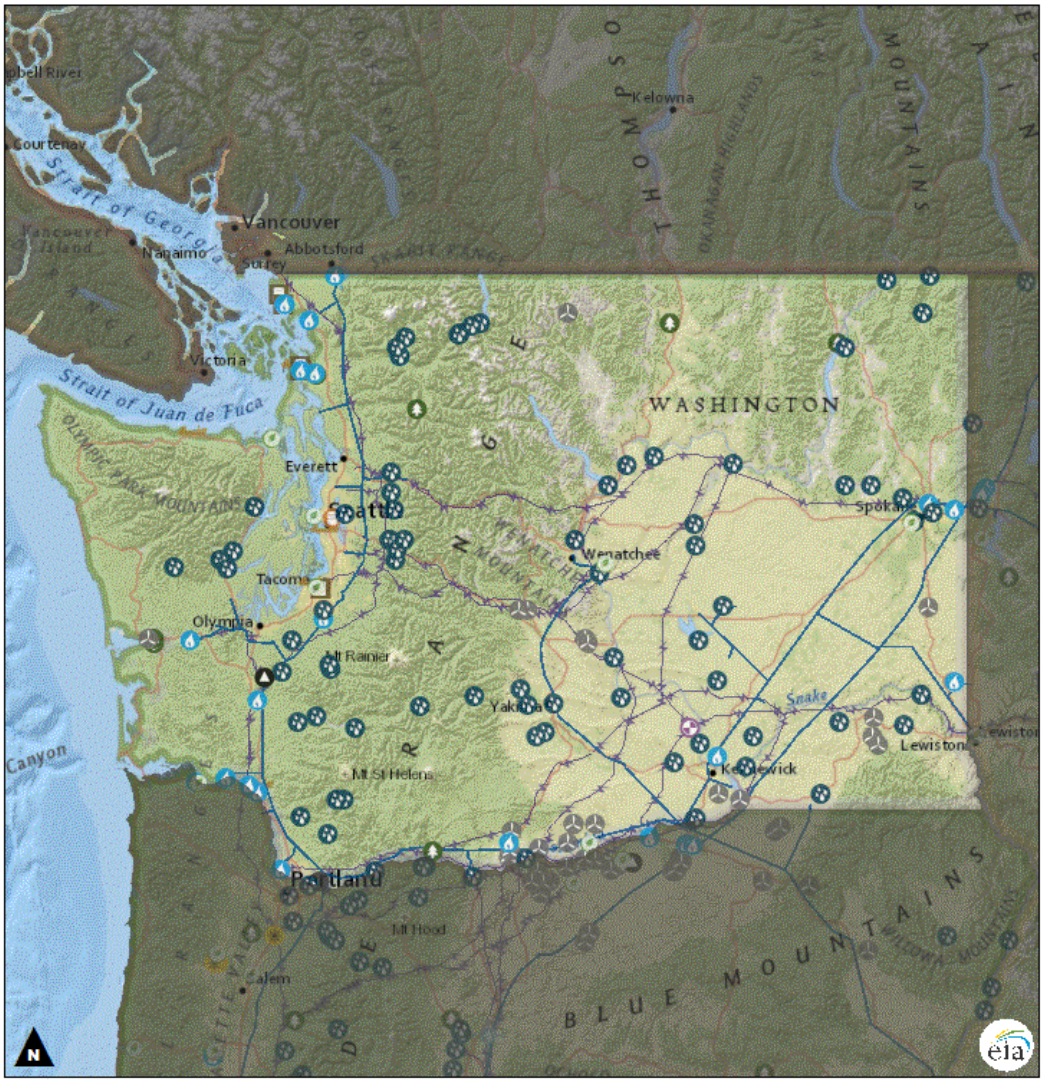

States:Electricity Transmission Lines - Ventyx, Velocity Suite;Grey Base:National

0 25 50 100 Miles

Mask	Hydroelectric Power Plant	Pumped Storage Power Plant
Surface Coal Mine	Natural Gas Power Plant	Solar Power Plant
Underground Coal Mine	Nuclear Power Plant	Wind Power Plant
Biomass Power Plant	Other Power Plant	Wood Power Plant
Coal Power Plant	Other Fossil Gases Power Plant	Petroleum Refinery
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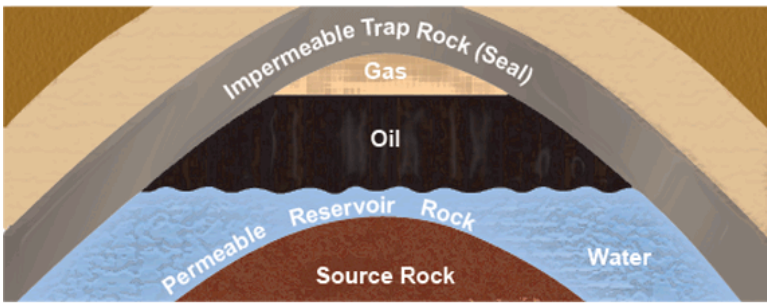

Several conditions must be met for oil or natural gas to be economical. There must be a source rock wherein petroleum is formed as a result of organic material that is buried and then subjected to heat and pressure. There must also be an overlying

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OIL AND GAS IN WASHINGTON

Currently, there is no oil and gas production in Washington. However there are many areas of the state that have attracted exploration since 1900 when the first exploration well was drilled. About 600 exploratory gas and oil wells have been drilled in Washington, but large-scale commercial production has never occurred. Small amounts of gas (1.3 billion cubic feet of gas) were produced briefly from the Rattlesnake Hills Gas Field north of Richland and a small amount (12,000 barrels) of oil in the Ocean City area from 1957-1961. The most oil and gas 'shows' in wells were found in both Bellingham basin east of Ferndale and the Ocean City area west –northwest of Hoquiam. No oil or gas have been produced in Washington State for decades.

Exploration has resulted in the successful development of a natural gas storage reservoir. The Jackson Prairie Gas Storage Facility in Lewis County is the nation's 14th largest natural gas storage reservoir, developed within sandstone layers at depths of 1,000 to 3,000 feet. Operated by Puget Sound Energy, the reservoir has a capacity of 44 billion cubic feet, and is accessed by a network of 45 wells.

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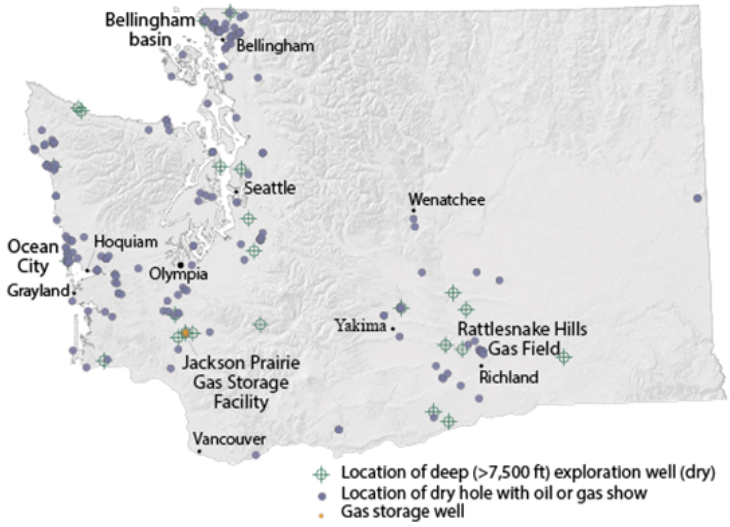

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