

## Fuel Supply

The following table shows the owned and leased generation sources by type (including wind purchase agreements), on an actual net generation (MWhs) basis, used by the Vertically Integrated Utilities:

	2019	2018	2017
Coal and Lignite	54%	58%	61%
Nuclear	19%	18%	18%
Natural Gas	16%	14%	11%
Renewables	11%	10%	10%

A price increase/decrease in one or more fuel sources relative to other fuels, as well as the addition of renewable resources, may result in the decreased/increased use of other fuels. AEP's overall 2019 fossil fuel costs for the Vertically Integrated Utilities increased 2.4% on a dollar per MMBtu basis from 2018.

### Coal and Lignite

AEP's Vertically Integrated Utilities procure coal and lignite under a combination of purchasing arrangements including long-term contracts, affiliate operations and spot agreements with various producers, marketers and coal trading firms. Coal consumption in 2019 decreased approximately 18% from 2018 mainly due to lower dispatching of coal generation from weaker power market prices.

Management believes that the Vertically Integrated Utilities will be able to secure and transport coal and lignite of adequate quality and in adequate quantities to operate their coal and lignite-fired units. Through subsidiaries, AEP owns, leases or controls more than 4,004 railcars, 468 barges, 8 towboats and a coal handling terminal with approximately 18 million tons of annual capacity to move and store coal for use in AEP generating facilities.

Spot market prices for coal started to weaken in the second half of 2019. The decreased spot coal prices reflect lower demand for domestic and export coal. AEP's strategy for purchasing coal includes layering in supplies over time. The price impact of this process is reflected in subsequent periods and can occasionally cause current spot market prices to be trending opposite to the price of coal delivered. The price paid for coal delivered in 2019 increased approximately 6% from 2018.

The following table shows the amount of coal and lignite delivered to the Vertically Integrated Utilities' plants during the past three years and the average delivered price of coal purchased by the Vertically Integrated Utilities:

	2019	2018	2017
Total coal delivered to the plants (millions of tons)	30.4	29.0	29.3
Average cost per ton of coal delivered	\$ 45.85	\$ 43.21	\$ 44.24

The coal supplies at the Vertically Integrated Utilities plants vary from time to time depending on various factors, including, but not limited to, demand for electric power, unit outages, transportation infrastructure limitations, space limitations, plant coal consumption rates, availability of acceptable coals, labor issues and weather conditions, which may interrupt production or deliveries. As of December 31, 2019, the Vertically Integrated Utilities' coal inventory was approximately 54 days of full load burn. While inventory targets vary by plant and are changed as necessary, the current coal inventory target for the Vertically Integrated Utilities is approximately 30 days of full load burn.

### Natural Gas

The Vertically Integrated Utilities consumed approximately 117 billion cubic feet of natural gas during 2019 for generating power. This represents an increase of 5% from 2018. Total gas consumption for the Vertically Integrated Utilities was higher year over year primarily due to lower natural gas prices. Several of AEP's natural gas-fired power plants are connected to at least two pipelines which allow greater access to competitive supplies and improve delivery reliability. A portfolio of term, monthly, seasonal and daily supply and transportation agreements provide natural gas