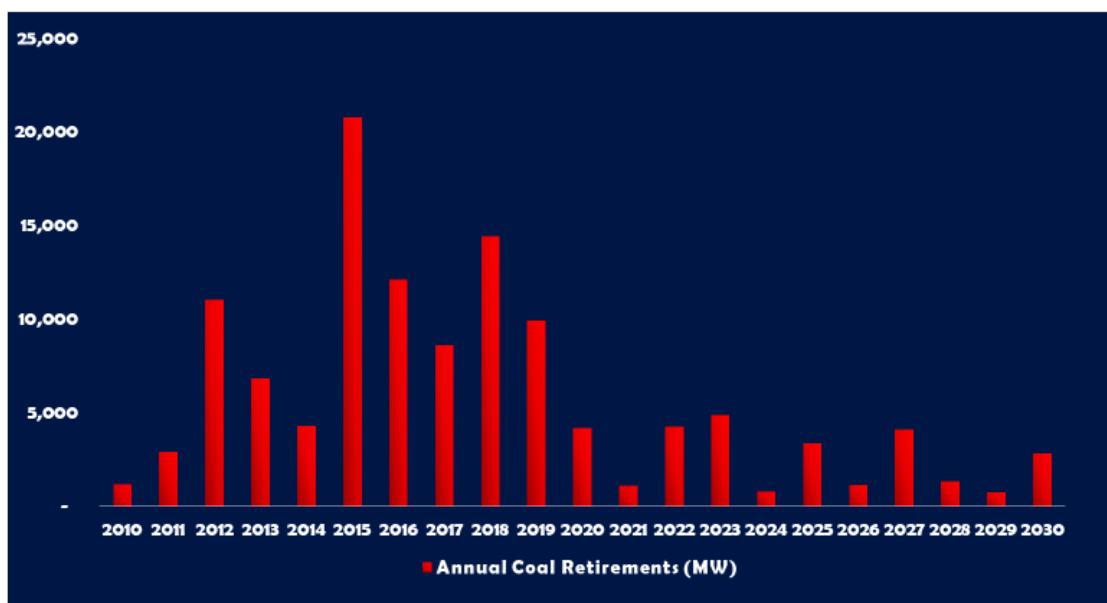


RETIREMENT OF COAL-FIRED ELECTRIC GENERATING UNITS¹ As of February 7, 2019

All Retirements

Since 2010, U.S. power plant owners have announced the retirement or conversion to other fuels of a large number of coal-fired electric generating units.² The table on the following pages summarizes all publicly announced retirements through 2030. The table shows that **654** coal-fired generating units in 43 states—totaling nearly **121,000** megawatts (MW) of generating capacity—have retired or announced plans to retire through 2030. Retirements are approaching **40 percent** of the coal fleet that was operating in 2010. Through the end of 2018, approximately 82,000 MW of coal-fired generating capacity had retired. In 2019 and 2020, an additional 14,000 MW are expected to retire, bringing total retirements to 96,000 MW by the end of 2020. The chart below shows these coal retirements over the period 2010-2030.



EPA-Attributed Retirements

The table also includes retirements that have been explicitly attributed to EPA regulations and policies. These EPA-caused retirements through 2030 total **464** units in 37 states and represent over **78,000 MW** of coal-fired generating

¹ Retirements and conversions are based primarily on public announcements by the owners of the coal units. We also use other information sources that are reliable. These retirements and conversions are *not* based on modeling projections. We do not include small (less than 25 MW) cogeneration units. Since most of these units are retiring, not converting to another fuel, we use the term “retirements” in this paper to characterize units that may be *either* retiring or converting.

² In 2010, according to EIA, the U.S. coal fleet was comprised of 1,396 electric generating units located at 580 power plants for a total electric generating capacity of approximately 317,000 MW.

capacity. Of the total, nearly 60,000 MW had already retired by the end of 2018.

ISO/RTO Retirements

There are seven ISO/RTO regions in the U.S.: California ISO (CAISO), Texas ISO (ERCOT), Midcontinent ISO (MISO), ISO New England (ISONE), New York ISO (NYISO), PJM Interconnection (PJM) and Southwest Power Pool (SPP). Over **56,600 MW** of coal-fired generating capacity in these regions had retired by the end of 2018. An additional **9,200 MW** are expected to retire in these regions in 2019 and 2020, 7,400 MW of which are due to wholesale electricity market conditions. The result is that a total of over **66,000 MW** will have retired in these regions between 2010 and the end of 2020. The regions with the most retirements from 2010 through 2020 are PJM (35,000 MW), MISO (14,800 MW), ERCOT (5,800 MW) and SPP (5,000 MW).

	MW Retiring	# of Units Retiring
Ohio	13,565³ / 6,390⁴	62 / 40
Pennsylvania	8,501 / 5,504	42 / 30
Indiana	6,532 / 6,092	39 / 34
Texas	6,291 / 1,368	11 / 3
Alabama	5,166 / 5,166	26 / 26
Illinois	5,065 / 3,091	20 / 14
Michigan	5,054 / 4,046	46 / 31
Florida	4,649 / 1,465	14 / 7
North Carolina	4,519 / 2,713	37 / 20
Kentucky	4,453 / 3,741	22 / 18
West Virginia	4,063 / 2,737	21 / 18
Georgia	3,730 / 3,228	17 / 15
Virginia	3,367 / 2,349	31 / 16
Arkansas	3,293 / 3,293	4 / 4
Arizona	3,277 / 3,277	7 / 7
Wisconsin	2,836 / 1,222	27 / 16
Nevada	2,657 / 0	8 / 0
Tennessee	2,651 / 2,651	17 / 17

³ Total coal retirements.

⁴ Coal retirements attributed to EPA regulations and policies.

Oklahoma	2,401 / 2,401	5 / 5
Colorado	2,393 / 1,687	19 / 16
Missouri	2,339 / 2,324	24 / 23
Minnesota	2,291 / 2,153	17 / 15
New Mexico	2,244 / 2,244	7 / 7
Montana	2,224 / 130	5 / 1
Utah	2,072 / 272	7 / 5
Iowa	1,823 / 1,571	33 / 29
South Carolina	1,759 / 1,759	14 / 14
New York	1,708 / 475	14 / 3
Massachusetts	1,598 / 1,346	8 / 6
New Jersey	1,479 / 259	6 / 2
Washington	1,340 / 0	2 / 0
Mississippi	1,066 / 706	4 / 2
Nebraska	726 / 611	6 / 5
Maryland	618 / 115	5 / 2
Oregon	585 / 585	1 / 1
Louisiana	575 / 575	1 / 1
Connecticut	564 / 0	2 / 0
Kansas	538 / 477	7 / 6
Delaware	359 / 0	4 / 0
California	317 / 0	6 / 0
North Dakota	187 / 0	1 / 0
Wyoming	45 / 45	4 / 4
South Dakota	22 / 22	1 / 1
43 / 37 States	120,939 / 78,088 MW	654 / 464 Units