

Electric Power Sector Use of Water: U.S. Energy Information Administration Report Notes Downward Trend



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The United States Energy Information Administration (“EIA”) issued a December 17th report titled:

U.S. Electric Power Sector’s Use of Water Continued its Downward Trend in 2020 (“Report”)

EIA states that U.S. electric power sector’s cooling water withdrawals decreased from 53.1 trillion gallons in 2019 to 47.5 trillion gallons in 2020.

This 10.5% reduction is stated to be due to a continuing downward trend in withdrawals because of increased use of renewable and natural gas-fired generation. These two energy sources are stated to have replaced some coal-fired generation. An additional cited factor is the reduction in use of once-through cooling technologies.

Electric power sector use involves:

- Coal
- Nuclear
- Natural gas plants

These facilities:

- Boil water to create steam
- Subsequently spin a turbine to generate electricity

The *Report* notes that:

. . . cooling water is passed through the steam leaving the turbine to cool and condense the steam.

The steam’s exit pressure is reduced, recapturing heat which is used to preheat fluid entering the boiler.

The EIA *Report* also makes the following points:

- Natural gas-fired generation had an average water withdrawal intensity of 2,793 gal/MWh in 2020
- Coal-fired generation had an average water withdrawal intensity of 21,406 gal/MWh for coal in 2020

A copy of the EIA *Report* can be downloaded [here](#).