United States Electric Power Sector: U.S. Energy Information Administration Report Notes Water Efficiency Gains

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The United States Energy Information Administration ("EIA") issued a June 14th report titled:

U.S. Electric Power Sector Continues Water Efficiency Gains ("Report")

The Report's relevance is the fact that water is involved at many points in the process of producing electricity which include:

- Electricity comes from power generators that need cooling (i.e., thermal plants that boil water to produce steam for generating electricity)
- Use in the drilling and mining of natural gas, coal, oil, and uranium
- Oil, uranium, and natural gas require refining before they can be utilized as fuels which requires certain amounts of water
- Utilization in certain power plants
- Pollution control technologies

The EIA Report states that the United States' generation mix is moving "away from the most water-intensive sources of generation." As a result, the United States electric power sector water withdrawals for power plant colling is stated to have remained relatively constant in 2021. Data cited is an increase by 0.3% from 2020 to 47.7 trillion gallons of water. This increase is stated to compare to a 2.5% rise in U.S. electricity generation in 2021.

The Report also notes that the electric power sector's water-withdrawal intensity (i.e., amount of water withdrawn per unit of electricity generated) declined 2.1% from 11,849 gallons pers megawatthour in 2020 to 11,595 gallons per megawatthour in 2021.

The water-withdrawal intensity is stated to have declined over the past decade as the electricity generation mix has increasingly transitioned from coal toward natural gas and renewables. Natural gas plants utilize more water-efficient technology and as a result are less water intensive.

A copy of the Report can be downloaded here.