

COVID Drove Major Shifts in Cooperative 2020 Retail Fuel Mix

Key Findings

- While U.S. retail electric sales declined in 2020 due to COVID-19, electric cooperatives' sales did not decline as significantly as the rest of the industry.
- Natural gas surpassed coal as the largest source of power for co-ops for the first time, while the share of power from renewables hit record levels in 2020.
- Coal is expected to rebound somewhat in the 2021 co-op retail mix due to higher gas prices and increased electricity demand, while renewable growth is expected to continue to accelerate.

What has changed?

According to the U.S. Energy Information Administration (EIA), national retail electricity (MWh) sales declined by 2.5% in 2020, due primarily to the COVID-19 pandemic and social distancing measures. There was also a shift in load patterns; national residential sales rose by 1.7%, while national commercial and industrial sales plummeted by 5.4% and 4.3%, respectively. By comparison, electric cooperative¹ retail sales declined by 1.2% overall, including a 3.9% drop in commercial, 0.9% in industrial, and 0.2% in residential sales.² While co-ops saw a smaller total decline, impacts varied significantly across the country. Reduced demand, shifting load patterns, and a drop in the already historically low price of natural gas led to significant shifts in the U.S. generation mix in 2020, and this impact was seen in the co-op retail mix as well. There was a significant decline (-3.7%) in the share of co-op electricity from coal. All other generation types increased, including a notable growth (+2.3%) in the share from non-hydro renewables. See Figure 1.





¹ Including public power districts and other distribution utilities that are members of NRECA.

² National sales numbers are from EIA *Electric Power Annual 2020*; Co-op sales from EIA Form 861 (2020).

What is the impact on electric cooperatives?

While coal remains the largest source of co-op electricity, its share has been diminishing since 2014, when it made up more than half (54%) of the co-op retail fuel mix. In 2020, coal's share was 28.5%; the first time it has fallen below 30% of the total annual mix based on NRECA's analysis. The share of the co-op fuel mix from natural gas hit a new high at 32.4%, exceeding coal for the first time on an annual basis (as it did nationwide in 2016). Renewables also set a new record in 2020, with 22% of co-op power supply estimated to have come from hydro and non-hydro renewable sources. Non-hydro renewables are expected to grow more rapidly in coming years due to an acceleration in new and planned solar and wind projects by co-ops, primarily through power purchase agreements.³

What do cooperatives need to know or do about it?

In 2021, a return to more regular demand conditions and a sharp increase in natural gas prices from their depressed 2020 levels has led to a small rebound in coal generation and a reduction in natural gas generation, as natural gas became relatively more expensive.

In the coming years, EIA forecasts the share of both coal and natural gas in the U.S. generation mix will decline as the rapid growth of non-hydro renewables continues and the price of natural gas remains somewhat elevated in 2022-23.⁴ These trends will impact both the utilization of co-op owned generation, and the resources they purchase through bilateral and organized wholesale markets.



Figure 1: U.S. Electricity Generation by Source, All Sectors EIA Short Term Energy Outlook, Feb. 2022

Contacts for Questions

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³ For more information on co-ops' growing renewable portfolio, see this advisory: <u>https://www.cooperative.com/topics/distributed-energy-resources/Pages/Co-ops-Renewable-Capacity-2021.aspx</u>.

⁴ EIA Short-Term Energy Outlook February 2022: <u>https://www.eia.gov/outlooks/steo/</u>.