

## Natural Gas Reached a New High in the 2023 Electric Cooperative Fuel Mix

### Key Findings

- In 2023, electric cooperative retail sales grew by just 0.1%, while national sales declined by 1.4%.
- Co-ops reached new highs for natural gas and non-hydro renewables as a share of supply.
- A poll of G&T resource planners indicates an expectation that energy and demand growth will accelerate in the coming years, driven in part by large users like data centers and manufacturers.

### National Demand and Generation Trends

National retail electricity (MWh) sales declined by 1.4% in 2023, down from the significant 3.1% growth in 2022. Natural gas generation set a record in 2023, supplying over 42% of electric-sector generation, driven by the return to lower natural gas prices after the price spike of 2022. Coal generation was below 17% of supply for the first time, crowded out by natural gas. Renewable generation was nearly flat for the year, with increased solar production just about offsetting declines in hydroelectric and wind generation for a combined share of about 21%. Nuclear generation increased very slightly to over 16%, due in part to Unit 3 at Plant Vogtle in Georgia coming online in July.<sup>1</sup>

### What is the impact on electric cooperatives?

Electric cooperative<sup>2</sup> retail sales growth remained in the black in 2023, rising by just 0.1% after very high 4.8% growth in 2022.<sup>3</sup> About 8 in 10 distribution cooperatives are members of a generation and transmission (G&T) cooperative, and co-op owned plants supply approximately 40% of the electricity sold at retail. The remainder is purchased through bilateral and organized wholesale markets, exposing co-ops to the same broad trends affecting the larger electric utility industry. NRECA's analysis of the 2023 electric cooperative retail fuel mix, a blended estimate of co-op owned generation and power purchases, shows that the co-op power supply mix continued to follow national trends. See Figure 1.

Natural gas was the largest source of power for co-ops in 2023, rising by more than 4% to over 36%, its highest level ever. Coal generation fell significantly, to just over 25%, driven in part by the 2022-2023 retirement, sale, or conversion of 10 coal units wholly or partially owned by G&T cooperatives, with a combined capacity of more than 3 gigawatts. Natural gas and coal are often directly competing resources, so the decline in natural gas prices in 2023 also put pressure on coal generation more generally. Hydroelectric generation was up slightly in 2023, while non-hydro renewables showed significant growth. Non-hydro

<sup>1</sup> Oglethorpe power is a 30% owner of Plant Vogtle. Unit 4 came online in April 2024. PowerSouth Energy Cooperative also purchases the output from 5% share of the new units owned by the Municipal Electric Authority of Georgia.

<sup>2</sup> Including public power districts and other distribution utilities that are members of NRECA.

<sup>3</sup> NRECA members can access NRECA's [Vital Signs](#) report for more information on energy sales and other performance statistics.

renewables are expected to grow rapidly in coming years due to an acceleration in new and planned co-op projects, especially new solar projects.<sup>4</sup>

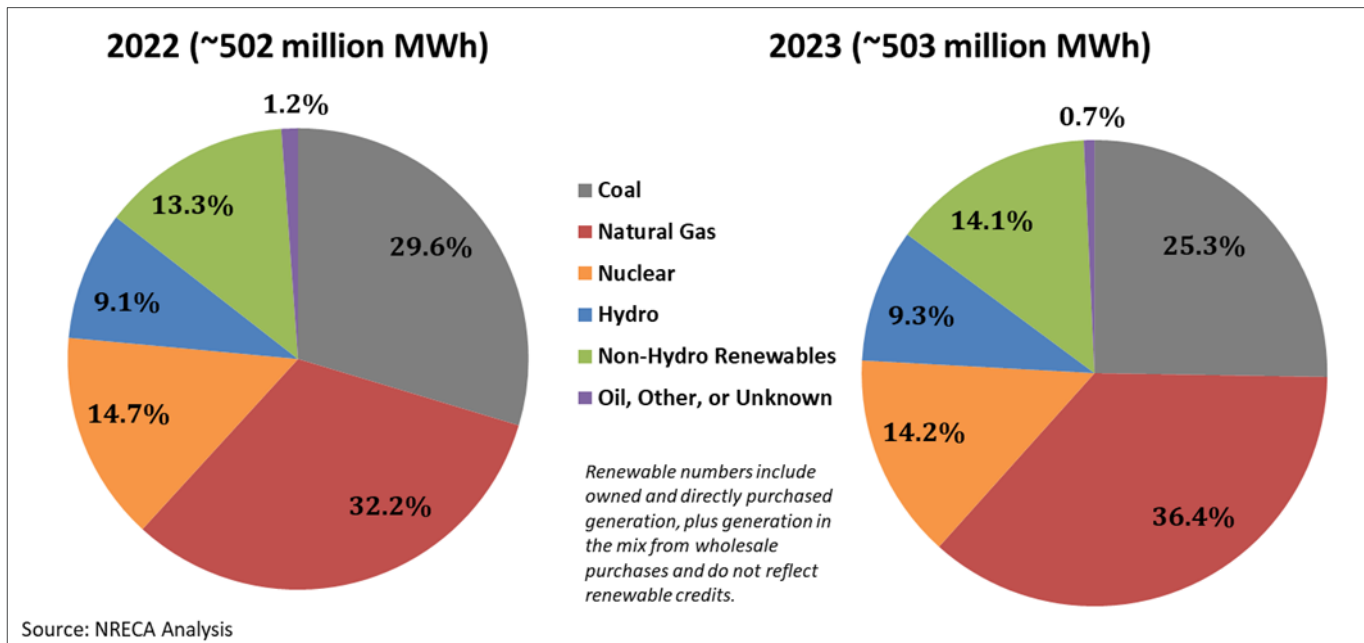


Figure 1: Cooperative Retail Electric Fuel Mix, 2022 and 2023

## Accelerating Demand Growth

The United States is experiencing a surge in demand for electricity, driven by increased electrification, and the increase in electricity demand from factories and data centers. In December of each year, the North American Electric Reliability Corporation (NERC) publishes its *Long-Term Reliability Assessment (LTRA)*, which includes a 10-year projection of load (energy) growth for the North American grid. In their 2022 issue, NERC projected compound annual growth rates of 0.5% over the coming decade. NERC's projection more than doubled to 1.24% in the 2023 *LTRA*, increasing again to 1.67% in their most recent 2024 *LTRA*. Besides energy demand, NERC projects similar growth in Summer and Winter peak demand (capacity).<sup>5</sup>

In December 2024, NRECA polled G&T resource planners to gather insights into energy for load and peak demand growth. Those responding included 30 G&T cooperatives serving cooperatives with territory in 33 states. Half of the respondents foresee faster energy and capacity growth within the next five years, while 20% do not. The expected surge in demand is driven mostly by large loads like data centers, as well as growth in the residential sector.

In 2024, 57% of the respondents had an increased number of interconnection requests from new large loads ( $\geq 25$  MW). State tax incentives for data center developers had a major impact. Respondents serving in states offering incentives fielded as many as 55 interconnection requests during the year. There are also some G&T cooperatives that received large load interconnection requests totaling as much as 4.6 gigawatts, even in

<sup>4</sup> For more information on co-ops' growing renewable portfolio, see this advisory: <https://www.cooperative.com/renewable-growth>

<sup>5</sup> NERC's 2024 LTRA report, infographics, and supplemental charts and graphs are available at: <https://www.nerc.com/pa/RAPA/ra/Pages/default.aspx>.

states without tax incentives.<sup>6</sup> This can be attributed to factors in those states including land availability and favorable climate factors (e.g., low annual precipitation, and low risk for natural disasters) which improve electric reliability and reduce risk for data center location.<sup>7</sup>

## Looking Forward

According to the U.S. Energy Information Administration (EIA),<sup>8</sup> natural gas prices for electric generation, which had averaged \$3.36/MMBtu in 2023, fell to an average of \$2.75/MMBtu in 2024. Combined with an increase in electricity demand and ongoing coal retirements, this led to natural gas generation setting new records in both total output and percentage terms.

Looking forward, EIA expects the rapid growth of U.S. liquified natural gas (LNG) exports, which surged after the Russian invasion of Ukraine in 2022, to continue as new terminals have further increased export capacity. LNG sells at a premium on global markets, so increased exports are expected to put upward pressure on domestic natural gas prices, with the price of natural gas for electric generation projected to be \$4.60/MMBtu in 2025 and \$4.79/MMBtu in 2026, despite increasing domestic production.

Non-hydro renewable generation is also set to expand in the coming years, driven primarily by the continuation of rapid solar expansion. Coal, nuclear, and hydroelectric generation are projected to remain near 2024 levels.

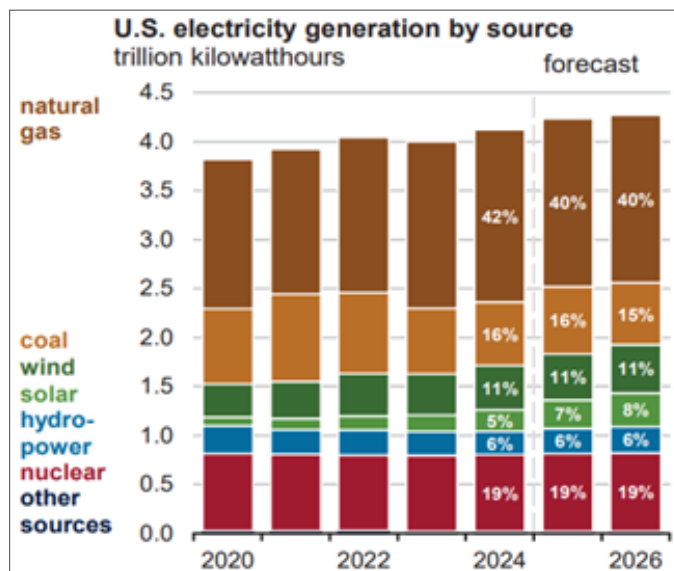


Figure 2: U.S. Electricity Generation by Source  
Source: EIA Short Term Energy Outlook, April 2025

## Contacts for Questions

### Michael Leitman

Director, Strategic Analysis

[Michael.Leitman@nreca.coop](mailto:Michael.Leitman@nreca.coop)

### Lauren Khair

Sr. Director, Energy Research & Resilience

[Lauren.Khair@nreca.coop](mailto:Lauren.Khair@nreca.coop)

<sup>6</sup> For more information on tax incentives for data centers, see: <https://www.streamdatacenters.com/resource-library/glossary/tax-incentives-for-data-centers/>.

<sup>7</sup> For more information on these non-incentive factors driving data center location, see: <https://www.bhfs.com/insights/alerts-articles/2023/considerations-for-colorado-data-centers-developers>.

<sup>8</sup> Historic and projected data from EIA's April 2025 *Short Term Energy Outlook*. This report and the accompanying detailed data tables are available at: <https://www.eia.gov/outlooks/steo/outlook.php>.