

COVID-19 Pandemic Implications for Generation and Transmission (G&T) Cooperatives

Key Findings

- The COVID-19 pandemic is reshaping the demand curve for electricity, impacting the U.S. generation mix and depressing wholesale prices.
- Nearly 80 percent of NRECA's distribution cooperatives are members of a generation and transmission cooperative (G&T), and any revenue challenges from reduced demand and non-payment of bills will flow up to their G&T.
- Each G&T family will face its own unique circumstances, making communications with distribution members more important than ever.
- While the COVID-19 pandemic impacts have so far been effectively managed by the U.S. grid operators, according to NERC there may be potential reliability issues if impacts extend beyond the summer peak demand season.

What has changed?

The COVID-19 pandemic and the associated national, state, and local responses have led to a decline in demand for electricity as many commercial and industrial (C&I) users of electricity have closed down or curtailed operation. While there has been some offsetting increase in residential usage as Americans stay home, nationwide electric demand was 8 to 9 percent lower than expected in weather-adjusted terms by the second half of April.¹ The U.S. Energy Information Administration (EIA) forecasts that overall U.S. electric sector generation will be 5 percent lower in 2020 compared to 2019.²

EIA expects natural gas generation to remain near record 2019 levels, due to low fuel prices, large domestic supply and newly built generating capacity. The output from renewables is projected to grow 11 percent over the previous year, driven primarily by additional wind and solar capacity. With lower overall demand, EIA forecasts that coal generation, which hit a 42-year low in 2019,³ will decline by another 25 percent in 2020, and be surpassed by renewable generation on an annual basis for the first time.⁴ The additional pressure on

¹ Watson, Mark. "Pandemic causing 8%-9% power demand decrease nationwide: Platts Analytics." S&P Global Platts, April 22, 2020. Available at: <https://www.spglobal.com/platts/en/market-insights/latest-news/electric-power/042220-pandemic-causing-8-9-power-demand-decrease-nationwide-platts-analytics>.

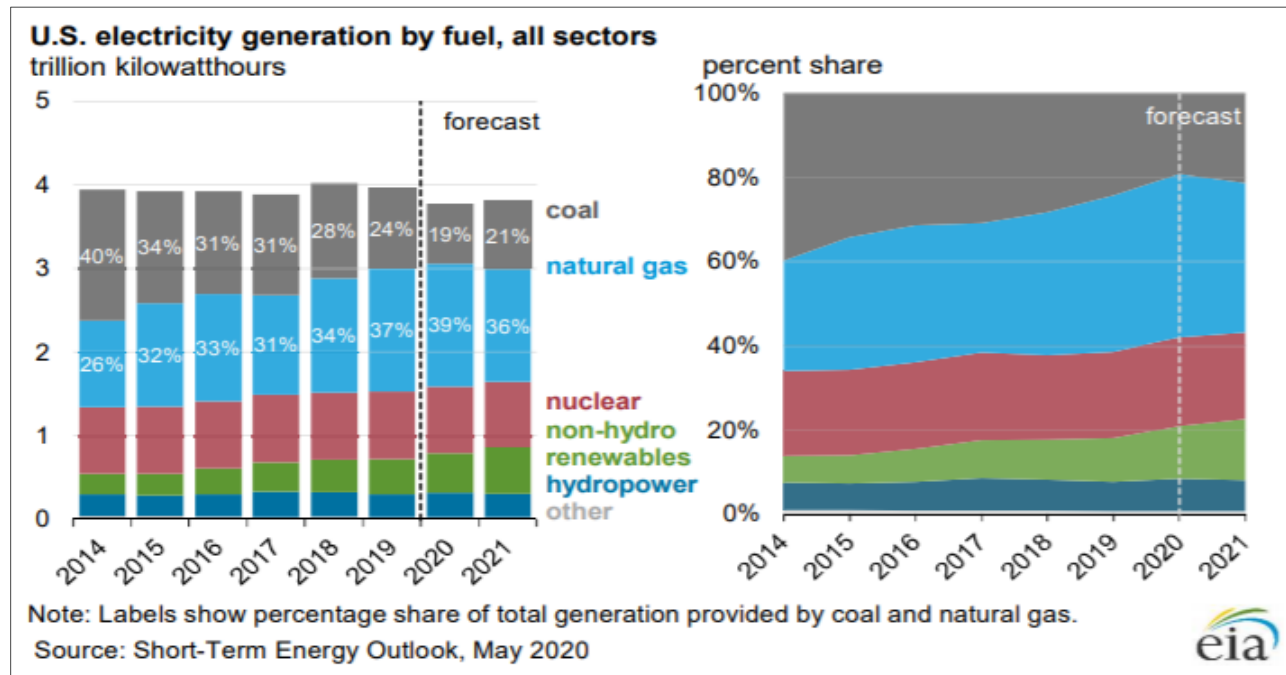
² EIA Short Term Energy Outlook (STEO), May 2020. Available at <https://www.eia.gov/outlooks/steo/outlook.php>.

³ EIA. "U.S. coal-fired electricity generation in 2019 falls to 42-year low." May 11, 2020. Available at <https://www.eia.gov/todayinenergy/detail.php?id=43675>.

⁴ EIA STEO, May 2020.

the U.S. coal fleet caused by COVID-19, especially in organized markets, could drive plant retirements above the 7.6 GW already announced in 2020.⁵

Figure: EIA's Updated U.S. Generation Forecast



These trends are further depressing U.S. wholesale electricity prices, which were already down in 2019 and the first quarter of 2020, due to low natural gas prices, sluggish demand growth, and mild weather.⁶ Low wholesale market prices could make cost recovery difficult, even for resources like natural gas plants that are running more, as well as nuclear generators that generally run with very high capacity factors regardless of current prices.

In addition to COVID-19's impact on electricity demand, as of late April, all 50 states plus Washington DC had put mandatory (32) or voluntary (18) moratoriums in place on utility service terminations to protect consumers facing economic hardship.⁷ These moratoriums, combined with rising unemployment and economic dislocation, are expected to increase delinquencies or non-payment of electric bills by households and distressed businesses. Non-payment is likely to become a larger issue the longer the pandemic lasts, and its resulting economic impacts will continue even after the pandemic is over.

⁵ Binet, Tom. "Quarantines, Oil and Gas Oversupply Bring Challenges for Energy and Water Sectors." CoBank: The Quarterly, April 2020. Available at: <https://www.cobank.com/-/media/files/ked/quarterly-reports/2020/the-quarterly-apr2020.pdf?la=en&hash=89D96053593BC2BC58B8600DAB28C064BF50E6DC>.

⁶ Wallace, Joe. "Pandemic Sparks Slump in Electricity Prices." The Wall Street Journal, May 14, 2020. Available at: <https://www.wsj.com/articles/pandemic-sparks-slump-in-electricity-prices-11589186666>.

⁷ "State Response Tracker." NARUC, as of May 11, 2020. Available at: <https://www.naruc.org/compilation-of-covid-19-news-resources/state-response-tracker/>.

What is the impact on G&T cooperatives?

G&Ts are the wholesale power providers to nearly 80 percent of all electric distribution co-ops,⁸ which collectively account for about three-quarters of co-op retail sales. NRECA estimates that nationwide, the ongoing economic impact from COVID-19 will lead to a 5 percent decline in co-op retail electric sales through 2022. This decline in sales would mean co-op retail revenues will be \$7.4 billion lower than they otherwise would have been over this period.⁹ Power costs are the largest expense for distribution co-ops, accounting for two-thirds of operating costs on average. As a result, economic distress among distribution members can flow up to their G&T. Impacts will vary across the country, but of particular concern are G&Ts whose member sales (or direct sales) are weighted heavily towards the C&I sector, especially in vulnerable industries like oil and gas production, or tourism and recreation.

Declining wholesale sales and changes in usage patterns will impact G&Ts differently depending on their resource mix. Considerations might include:

- How much of a G&T's electricity is self-generated vs. how much is purchased;
- The fuel type, fixed costs, and variable costs of G&T-owned generating resources;
- The flexibility of contracts, both for power purchases and fuel (e.g. "must take" coal contracts);
- Participation in organized ISO/RTO wholesale markets, as well as bilateral purchases; and
- Potential reliability issues from delayed or cancelled planned maintenance for generators and transmission & distribution systems, and from supply chain disruptions for equipment and fuel.

As the health and economic crisis continues, NRECA estimates that rising unemployment and moratoriums on utility disconnections will lead to a spike in non-payment of electric bills, rising to 4 percent this year and then slowly declining back toward their normal, extremely low, levels (well below 1 percent) by the end of 2022. Unpaid electric bills could cost co-ops an additional \$2.4 billion through 2024.¹⁰ While wholesale power purchases will naturally decline if load is reduced due to lack of demand, non-payment presents a particular challenge. In these cases, the distribution co-op will have already purchased the wholesale power to serve those customers, but not received payment for the electricity provided. In addition, longer term impacts of COVID-19 raise reliability concerns for the bulk power system. NERC plans a special assessment to look at this reliability concern as part of its 2020 Long Term Reliability Assessment (LTRA) to be developed and released later this year.

What do G&T cooperatives need to know or do about it?

Health and safety restrictions continue to make it challenging, if not impossible, to hold in-person meetings, including board meetings. Virtual meetings and routine communications, however, have provided many G&Ts and their members with the ability to collaborate in new ways never before envisioned. In fact, this pandemic-driven open communication between G&Ts and their members has been – and will continue to be – crucial during this time to assess impacts and coordinate responses. Each G&T family is almost certainly

⁸ Includes Public Power Districts that are members of NRECA.

⁹ NRECA Fact Sheet: "Financial Impact of COVID-19 on Electric Cooperatives: \$7.4 Billion Hit on Operating Revenue and \$2.6 Billion in Unpaid Bills." April 21, 2020. Available at: <https://www.electric.coop/wp-content/uploads/2020/04/Financial-Impact-of-Load-Loss-and-Unpaid-Bills-on-Electric-Cooperatives-042120.pdf>.

¹⁰ Ibid.

facing unique challenges during this crisis. All co-ops, including G&Ts, should not hesitate to reach out to the wider Cooperative Network for ideas and best practices in weathering this crisis.

Additional Resources

- [Financial Impact of COVID-19 on Electric Cooperatives](#)
- [Jobs Most At Risk from COVID-19 Economic Impact](#)
- [COVID-19 Revelation: Broadband is an Essential Service](#)
- [Tools to Help Consumer-Members Manage Energy Expenses During COVID-19](#)
- [NRECA COVID-19 Hub](#)
- [Special Edition: *Business and Technology Update*](#)

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