

Revenue Planning During COVID-19 and Beyond

Editor & Guest Writer

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Introduction

The pandemic has brought overall economic slowdown and changes in social patterns resulting from impacts due to the SARS-CoV-2 virus (COVID-19). This is making it more difficult for electric cooperatives to project future revenue patterns, and challenging to forecast future financial outcomes. This article discusses trends in revenue forecasting for the electric utility industry, and offers some guidance in revenue projection and planning.

National Trends

The National Rural Electric Cooperative Association (NRECA) has earlier this year estimated the following:

Economic disruptions related to the pandemic will drive electric co-op sales down by 6.1% in 2020, 6% in 2021, and 3% in 2022, for an average loss of 5% over the period when compared to pre-COVID-19 projections, according to NRECA estimates. This loss of electric load will slash co-op sales revenue by \$7.4 billion, while a surge in unemployment, combined

with a moratorium on disconnections, will drive up unpaid electric bills to \$2.6 billion through 2022, ... (para. 2-3)

These NRECA estimates were based on forecasts from *Moody's Analytics*, which showed a decline in gross domestic product (GDP) and a lengthy recovery through mid-2023. Other publicly available information was used additionally in their analysis.

The U.S. Energy Information Administration (EIA) has published forecasts, in November, 2020, for U.S. electricity consumption and components of annual change in kilowatt hours consumed. Below are two graphs depicting these forecasts, "U.S. electricity consumption (billion kilowatt hours) and "Components of annual change (billion kilowatt hours)". Along with forecasts for 2020 and 2021, historical data is shown for comparison purposes for actual results in 2018 and 2019. From this data, one can see that 2020 consumption is projected to be historically under that of 2018 and 2019's consumption. This decline in consumption is due to pandemic impacts. While 2021

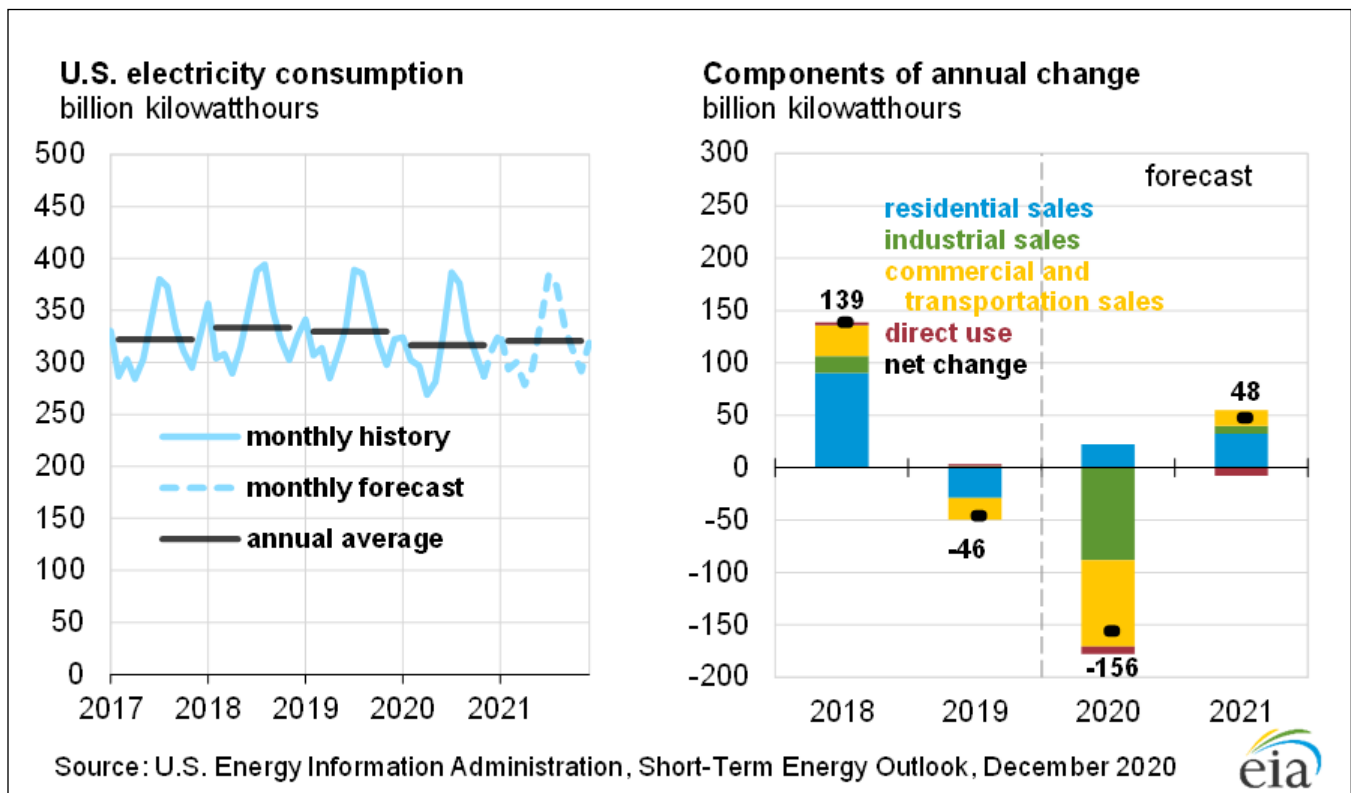


is expected to show some rebound, consumption is still projected to be under 2018 levels.

Consumption by component, or revenue class, is expected to behave differently by class. Residential consumption is expected to remain higher in 2020 than in 2019, but lower than in 2018. It was noted that residential consumption has increased in 2020 due to social distancing leading much of the population to spend more time at home. Additionally, many office workers are now working from home, contributing to more residential consumption. Commercial and industrial consumption sees its most dramatic dip in 2020, lower than in both 2018 and 2019, with some rebounding in 2021. But, projected 2021 trends also show consumption still not back to 2018 levels. Commercial and industrial consumption has been impacted by lockdowns and economic downturns to many businesses and sectors or our economy. The commercial sector

is impacted by weather and economic conditions. This sector includes (among other businesses) restaurants, hotels, and entertainment venues, which are sectors that have been hit hard by the economic downturn. High unemployment levels continue to indicate that many commercial establishments are not operating or not operating to capacity, and as a result are not consuming electricity at levels prior to the pandemic. The industrial sector uses electricity for manufacturing processes. While some energy used is self-generated, a substantial amount is purchased on a retail market from electric companies. The industrial sector has experienced supply chain issues and has been somewhat impacted by the economic downturn, but not as directly impacted by social distancing as the commercial sector.

The EIA published forecasts in June, 2020, for U.S. retail sales of electricity by sector for the summer months. These forecasts



(EIA, November 2020, Short-Term Energy Outlook, Figure 32, website <https://www.eia.gov/outlooks/steo/images/fig32.png>)



are depicted in the chart below titled “Figure 1. U.S. retail sales of electricity by sector, summer (June–August) 1990–2020”. Estimates showed that electricity demand in the summer of 2020 would be the lowest since 2009 recession levels, which is 5.2% lower than the summer of 2019. Estimates also showed that commercial and industrial sector sales were estimated to be down 12% and 9% respectively, yet residential sales were estimated to be up 3% in 2020.

Conrad (2020), with *Forbes*, notes that “the US power industry is absorbing the blow of reduced demand, just as it’s done in previous crises” (para. 21). While electric companies are notoriously well prepared at responding to crisis, the pandemic has brought an unusual set of circumstances. Kimbrough and McKaughan (2020), with Holland & Knight legal services, have highlighted the specific challenges to electric cooperatives:

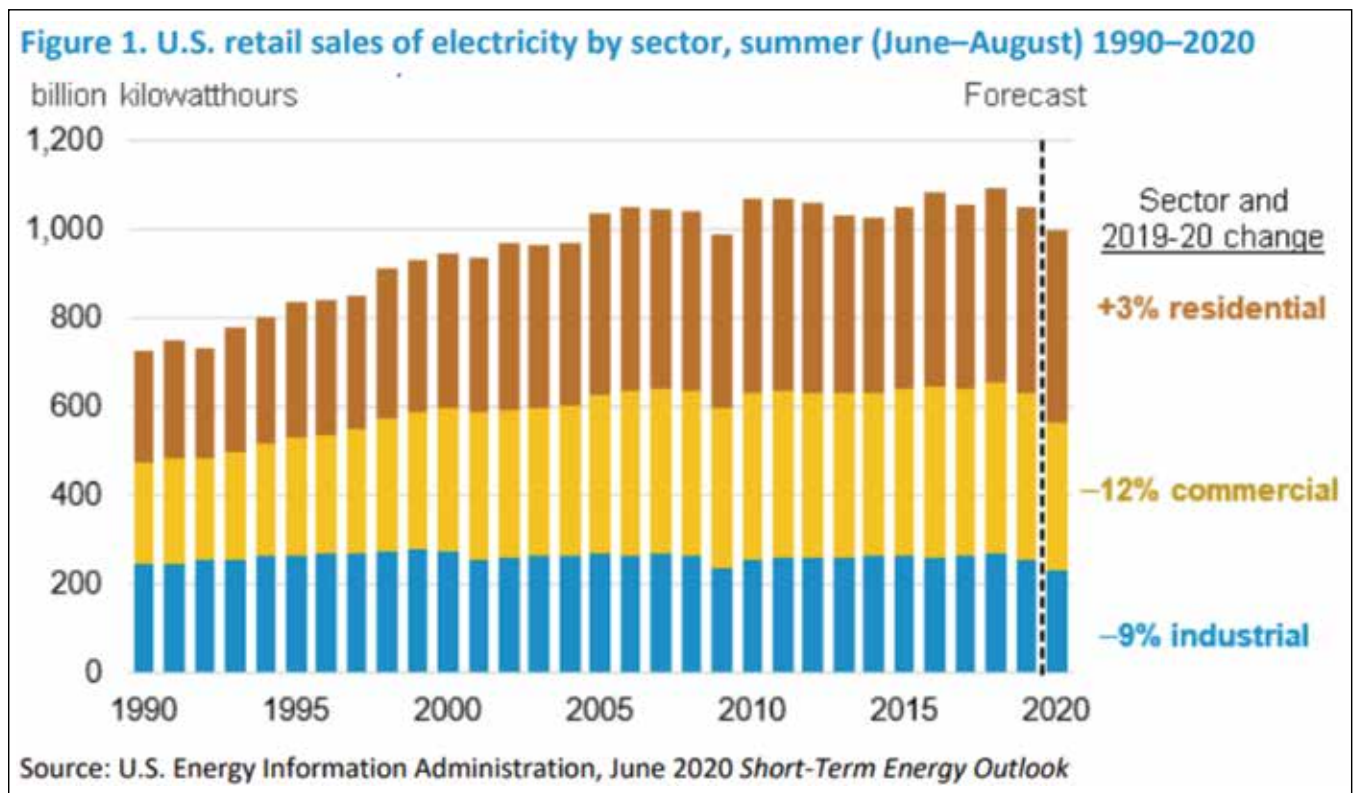
- COVID-19 has created unforeseeable challenges for electric utilities regarding

their ability to recover authorized revenue requirements because of nationwide closures of nonessential businesses, schools, and government agencies.

- Because regulated utilities often set rates and budgets based on a typical operating year, 2020 has the potential to create under-recovery and rate design challenges that no one could have reasonably anticipated.
- Potential solutions may address these challenges, but each comes with its own pros and cons. Holland & Knight attorneys recommend that regulators and utilities address such issues proactively. (Highlights section, para. 1)

Kaushik, Kimbrough, & McKaughan (2020) note:

Most regulated utilities rely, at least in part, on volumetric rates, i.e., the utility charges more as the customer uses more service, to recover the revenue authorized by the regulator. If usage falls below what



(EIA, June 2020, *Short-Term Energy Outlook Supplement: Summer 2020 Electricity Industry Outlook*, p. 2)



is anticipated, the utility does not receive as much revenue from the volumetric rate as it and its regulator projected, leaving it short of the amount of revenue authorized by the regulator to operate its business and earn a return on its investment. (para. 6)

Some electric companies have attempted to obtain relief from lost revenues from their regulators. One example was that of a request from ten Indiana utility companies to charge customers for electricity that they did not use during the pandemic. These utilities wanted to recover revenues that did not occur, even though available electricity generation, transmission, and distribution capacity was there for use. The utilities contended that the costs to have the electricity available, even though not used, should be recovered in rates. The Indiana Utility Regulatory Commission unanimously voted to deny that request, noting that “asking customers to go beyond their obligation and pay for service they did not receive is beyond reasonable utility relief based on the facts before us” (Bradley, 2020, para. 4). While this example is notable, most other electric companies are working with their regulators to arrive at amicable solutions, with as many varying solutions as there are companies.

As a further potential reduction of revenue, some manufacturers have petitioned the North Carolina Utilities Commission to suspend minimum demand charges in electric utility rates because those charges are in excess of the actual usage by large commercial and industrial customers during the pandemic. Demand charges are charges paid by customers that are meant to cover fixed costs of building plants and infrastructure to generate and deliver power used by commercial and industrial customers. This is unlike residential rates where fixed costs are built into the charge per

kilowatt hour for actual use. Manufacturing companies in several other states are also petitioning regulators to reduce demand fees paid to electric utilities.

Interestingly, there is a percentage of electric companies that are actually seeing overall revenues increase because they have limited exposure to commercial or industrial customers, who are the customers that have had the most reduction in electricity usage. In some of these instances, the growth in residential revenue has been greater than the lost revenue from large commercial or industrial customers.

Revenue Planning Guidance

The EIA information provided in this article represents national consumption levels, for the entire U.S., and trends within a specific region or geographical location may differ due to differing local and regional circumstances. Individual state information is also available on the EIA website, which can be used to understand both recent past historical trends and future projected trends in revenue consumption for the state in which an organization operates. Additionally, local data from governmental or chamber of commerce organizations could be helpful places to turn for demographic data regarding trends in residential, commercial and industrial activity in any specific geographical area. Understanding this activity and estimating how that activity might impact future consumption for one’s specific organization will assist in determining underlying assumptions surrounding revenue projections and developing revenue forecasts.

Increased numbers of revenue projection scenarios may be required. Due to the uncertainty of future trends in retail electricity sales, and both their magnitude and duration, it is recommended that multiple scenarios of revenue projections be modeled. These could include a “best



case”, “worst case”, and “most likely” case scenario. Multiple scenarios for sectors or revenue classes should also be considered. These revenue classes include residential, commercial, and industrial revenue classes. Projection to a more detailed level may be warranted, depending upon the makeup of the revenue classes and their level of electricity consumption within an organization’s serving territory. For example, if a territory includes a high number of commercial or governmental buildings, and these are impacted by extended lockdowns, electricity consumption would decrease in the commercial class but potentially increase in the residential class as people are spending more time at home. Additionally, understanding key customer account expected consumption activity will provide better visibility into revenue projections for larger customer accounts on the electricity distribution system and will further refine revenue projections. Just remember, after modeling multiple scenarios, it will be key to monitor these projections and alter them as emerging trend information presents itself.

Besides understanding anticipated consumption levels, it is important for cooperatives to review their customer rate structures. Revisiting existing rate structures should be done with an eye towards addressing the changing economic and social conditions caused by the pandemic. Due to changing conditions in how electricity consumption occurs, changes to rate structures may be warranted. And, due to the continuing changing environment dealing with the pandemic and pandemic aftermath, emerging consumption trends should be monitored and revenue projections altered to reflect these emerging or dynamically changing trends. This should be done to ensure continued financial stability and to protect the interests of the cooperative stakeholders. Because of the impacts of rate changes to customers, and regulation required to change rates,

changing rate structures may be a more longer-term solution to lost revenues. Shorter term solutions could lie in the implementation of rate riders or one-time disaster relief measures, as may be approved by regulators. Kaushik, Kimbrough, & McKaughan note that the “loss in revenues due to COVID-19 are hopefully nonrecurring, but could greatly affect the financial health of electric utilities if they are left unrecovered” (para. 18). Any attempts to recover lost revenues would need to be done in compliance with local, state, and federal rate regulations. Circumstances surrounding each cooperative would need to be considered to determine what options, if any, might be available.

Girvan (2020), of Energy Central, offers specific guidance on producing accurate revenue forecasts for utilities:

- Measure what has happened in just the last 6 to 8 weeks and be able to compare it to previous periods and most recent expectations;
- Develop a range of load forecasts based on best case and worst-case scenarios for projected end of stay-at-home orders;
- Reclassify C&I [Commercial and Industrial] customers as essential or nonessential businesses to accurately forecast load and ability to pay;
- Modify residential historical load forecast assumptions based on shelter-in-place.

(para. 4)

Bansal et al. (2020), consultants with a national consulting firm for utilities, recommend that revenue projections take into account:

- Changing customer load profiles, and
- Delays that may occur in the execution of capital projects, including IT and new construction program, which could inhibit previously planned revenue growth.

They advise that there could be an opportunity for utilities to shift some capital projects to those that could be started in the COVID-19 environment. They note



that it would be a good time to invest in capital projects that enable future growth such as “transportation electrification, and fiber telecommunications deployment” (3. Other Revenue Enhancement Opportunities section, para. 1). Other opportunities for further revenue growth might include

“exploring the feasibility of developing wholesale fiber, colocation of infrastructure with local ISP and 5G companies, commercial security lighting, and other non-commodity revenue opportunities” (3. Other Revenue Enhancement Opportunities section, para. 2).

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