

# Plugged In: Advanced analytics for sustaining cash flow and customers through COVID-19

## Predictive models inform regulatory and customer strategies

In this edition of Plugged In, KPMG's Adam Levy and Alex Smith combine their predictive analytics and modeling experience with Tom Peterson's regulatory and Jeff Mango's customer experience knowledge for insights on how utilities can use data analysis to improve liquidity and help customers impacted by COVID-19, as well as proactively work with regulators to anticipate and recover costs.

Before COVID-19 began to spread across the United States and governments and businesses instituted social-distancing measures, utility revenue cycles had been quite stable for a number of years. The economy was strong, and unemployment low.

Fast forward to mid-April, when jobless claims reached a total of 22 million in just one month "since the coronavirus pandemic throttled the U.S. economy... effectively erasing a decade worth of job creation."<sup>1</sup> As stay-at-home orders continue, the economy slows, and more businesses lay off or furlough employees, some estimates suggest the unemployment level in the second quarter could surpass even that of the Great Depression.<sup>2</sup>



### Question 1:

#### How is the economic fallout from COVID-19 disrupting utility billing and collection cycles?

Utilities in the vast majority of states, in coordination with regulators, have reduced or issued moratoriums on service disconnections and collections to support customers who have lost wages due to unemployment, sickness, or time off to care for others. At the same time, dramatically lower energy demand from businesses nationwide has greatly reduced commercial and industrial (C&I) revenue streams, some of which may never return.

In the near term, electric, gas, water, and waste water utilities are challenged to keep cash flow steady as they tend to their most at-risk customers and struggling businesses. And once the country moves beyond the immediate impact of COVID-19, utilities face a hard climb to recoup costs so that they can continue to provide services and invest in assets without significant rate increases.

As fewer customers can pay their bills, utilities need to assess if and when those revenues can be fully recovered. Looking back at the 2008 financial crisis for clues, one analysis shows that peak delinquent balances (90-plus days) coincided with significant increases in the unemployment rate, and that the reduction in the delinquency rate followed the same, long recovery path as unemployment for next 10 years. But that data still can't provide the full picture. There hasn't been a similar global pandemic with related economic devastation in modern times; there's a lot we simply don't know.

However, advanced analytics and modeling can play a critical role helping individual utilities by predicting impacts of COVID-19 to better inform their strategies for helping at-risk customers, working proactively with public utility commissions (PUCs) on rate filings, and managing cash flow through the current challenges.

<sup>1</sup> Bloomberg. "U.S. Jobless Claims Top 5.2 Million, Erasing Decade of Job Gains." April 16, 2020.

<sup>2</sup> USA Today. "Unemployment could top 32% as 47M workers are laid off amid coronavirus: St. Louis Fed." March 30, 2020.

<sup>3</sup> KPMG analysis shows the change in unemployment rate against 90 days-past-due rates at two utilities from January 2007 to June 2019.



## Question 2:

### What are some specific applications of data-driven models that utilities can use in communications with regulators?

While it is always incumbent on the utility to make the best rate case possible to regulators, the extreme situation created by COVID-19 requires even greater focus on the analysis and comprehensive record-keeping necessary to build a strong position for cost recovery that can withstand regulatory scrutiny.

With advanced analytics, utilities can begin to quantify for the regulators the impact of COVID-19, including bad debt driven by the growing inability for many residential customers to pay their bills, and revenue reduction due to C&I load loss, offset by payroll tax credits or any other benefits from stimulus packages.<sup>4</sup>

By using an integrated forecasting approach, utilities can then model a range of potential outcomes, including the following:

- Balance growth from advanced metering infrastructure measures of consumption
- Payment behavior from economic data and customer payment trends
- Potential delinquency from balance growth and past payment behavior
- Charge-off levels from the delinquency balance based on projections of the length of the COVID-19 emergency.

A utility can use this analysis to show to regulators that it developed a plan to mitigate costs and adjust payment and collection processes based on the current circumstances. The utility also can demonstrate how that plan helped at-risk customers and improved payment patterns, as well as show how it continues to monitor customer accounts.

Assuming utilities have met their regulatory commitments, they can request to be paid. But given these extraordinary circumstances, utilities expect an unusual level of bad debts and write-offs due to carrying nonpaying customers. Data analysis can be used here to work with regulators to establish the basis for either a future rate case for recovery, or establish disaster riders or surcharges to address short-term costs and revenue anomalies.

At the same time, more accurate estimates can help build regulator confidence in the utility's ability to size and manage the situation, and prevent the utility from having to return time and again to the regulators with revised figures and additional requests for assistance.



## Question 3:

### How can utilities use analytics to further help and communicate with customers on the edge of delinquency?

Sophisticated predictive models can determine which customers are at the greatest risk right now, so that utilities can offer assistance as soon as possible.

State-run Low Income Heat and Energy Assistance Programs (LIHEAP) and utility-specific assistance programs are already set up to help. Given that more people will need these programs in the coming months, with the approval of the PUC there could be an opportunity to boost enrollment now, rather than wait until customers are in more dire circumstances and more accounts become delinquent.

To help identify customers, utilities can use the internal data previously discussed, including customer balance and payment history, risk ratings, and deposits, and then supplement that with external data from the census, credit bureaus and economic reports.

Analysis of these inputs can help identify with some degree of accuracy who may be at risk or need help immediately—including those who are not currently enrolled in a program—and those who may need only a short-term solution. Analysis also can help determine emerging delinquency trends, the timing to charge-off, and how to prioritize collections given the current circumstances and moratoriums.

Finally, utilities can use this data analysis to help build customized payment programs to fit different customer profiles, and to tailor proactive and positive outreach. For utilities to be empathetic to their customers, they need to understand how to appropriately engage with them.

In helping customers this way, utilities also are helping stabilize their own operations so that they continue to provide vital services to homes and businesses over the long run. Leveraging existing LIHEAP and other resources on the front end of the economic slowdown could help utilities increase near-term cash flow, with the hope that they can keep rates down or reduce the level of rate increases on the back end. Additionally, data-driven customer insights contribute to an open dialog with regulators not only about how big the anticipated impact on the utility will be, but how the utility and the regulators can work together to mitigate the impact on customers.

<sup>4</sup> Note that utilities can consider adapting data analytics used to prepare for the new current expected credit losses accounting standards to inform expected bad debt and load losses.



## Question 4:

### When utilities reach out to regulators to discuss the data, what else do they need to consider right now?

It's important to understand the precedent in the jurisdiction for how delinquent accounts were recovered in order to plan ongoing communications and develop the rate request for the COVID-19 recovery. In particular, how did the PUC handle prior utility requests to help manage and recover the costs of unusual events and the impacts to cash flow and working capital?

Also keep in mind the typical 12- to 24-month lag between the start of the rate case review and the approval to change rates, and the depth of the anticipated challenge U.S. utilities are currently facing. Rate increase requests usually look forward, reflecting estimated future expenses including expected bad debt for future utility sales, rather than requests to recover past debt. Since retroactive ratemaking is not allowed, using data analytics to create the best estimate and seeking regulatory approval to defer these unusual costs will be critical to their eventual recovery.

However, note that while many states ordered a COVID-19 moratorium on disconnects, the regulatory construct for recovery of increased bad debt due to the moratoriums has yet to be defined in most jurisdictions. Accordingly, it's important to develop a plan and timeframe to begin

the communications process with regulators and other stakeholders about customer assistance and the recovery of the regulatory asset. For example, utilities should proactively communicate to their regulators about their plans to leverage existing and new proposed customer assistance programs to improve the ability for at-risk customers to pay.

Additionally, most jurisdictions require utilities to ask for regulatory asset treatment for unusual items, even if the total amount is unknown at the time, so that they can defer unusual costs not covered by current rates and place it on the balance sheet. If approved, the regulated asset can later be considered for recovery over a future period as part of the rate-making process. "Tracking" the dollar impact of COVID-19 helps the utility, the commission, and other stakeholders understand the magnitude of the impacts of COVID-19.

U.S. utilities are responding with strength, empathy, and integrity to the challenges posed by COVID-19 as they have for so many crises, keeping the lights on and necessary life-saving operations going. Unfortunately, growing uncollectable balances and reduced C&I demand are putting extreme pressure on utility cash flows.

Data analysis and predictive models can help utilities better quantify the potential impact of the current challenges, create plans for near-term cash flow needs, and execute on a post-COVID-19 recovery strategy that leads to better outcomes for their customers—and for their own organizations.

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