

# Executive Summary

## Thought Leadership 2020 Compendium

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The year 2020 was an interesting one for sure and will be remembered first and foremost as the year of the COVID-19 pandemic.

It turned our world upside down and, in many places, brought it to a screeching halt. Two things were true: the role energy and load management play in the economy was front and center, and, utilities are full of essential workers. During the year, load management practitioners examined several key topics during PLMA's live online conferences and Load Management Dialogues (webcasts). In the **2020 Industry Viewpoints Compendium**, you'll find transcripts of the most popular and thought-provoking of these discussions which reflected three important themes: pricing, integration, and evaluation.

### PRICING

Pricing has been shown to change behavior, but still, regulators, utilities, and customers are resistant to time-of-use rates (TOU). Even though 80 percent of U.S. electricity customers have smart meters, only four percent of them are enrolled in TOU rates. Last year in a session led by Derek Kirchner of Consumers Energy, Ahmad Faruqi from the Brattle Group shared and debunked the "five immortal objections" to TOU rates.

Here are the five immortal objections. Everyone in the energy industry has either heard or said at least one of them:

- 1 While time-of-use rates might reduce peak load, they will not lower customer bills. ([A well-designed rate just might!](#))
- 2 Lower peak demand will not lower transmission and distribution costs. ([How about reducing congestion from the emerging electric vehicle market?](#))
- 3 Ongoing pilots with time-of-use and other time-varying rates show minimal customer reaction to price signals. Their load profiles remain unaffected. ([Hard evidence suggests otherwise!](#))

- 4 Residential customers are apathetic about TOU rates. *(Because they've never tried TOU rates!)*
- 5 In the developing world, people are too poor to support TOU pricing. *(A well-designed rate is something they can't afford not to take advantage of!)*

Bill Leblanc of E Source followed with insights into developing the right price signals to create grid efficiency. He asked us to consider whether the price signals currently offered enable customer choice, encourage the right customer investments, and benefit the grid in the long term? The talk end with the trio sharing insights about messaging, rate structure, and how DERS are changing the landscape. TOU rates are definitely something utilities need to explore more and, indeed, some already have.

During a presentation at the 42<sup>nd</sup> Conference, a panel of utility and consulting representatives tackled the topic of how pricing is being used as part of grid solutions. In a panel moderated by Christine Riker of Energy Solutions, Derek Kirchner discussed how Consumers Energy is using dynamic peak pricing and peak-time rebate programs to support their clean energy plan, and Erica Keating shared how Southern California Edison is using similar programs combined with TOU rates for residential and commercial customers alike as part of their grid solution portfolio.

“Customers really need some support to help them get out of the chasm that exists between ‘understanding’ the economic opportunity and ‘realizing’ the economic opportunity inherent in their energy pricing.”

– Rich Barone, TRC Companies

This roundtable was completed by Rich Barone of TRC Companies, Ryan Hledik of the Brattle Group, and John Powers of Extensible Energy. They touched on pricing and regulatory considerations, and technology to simplify a customer's ability to take advantage of rates. This includes making rates easy to understand, drawing a clear line to the behaviors that both incentivize customers and benefit the grid, and more transparently drawing attention to usage behaviors that do not benefit the grid.

Even at the wholesale level, pricing and equitable treatment of resources is difficult to accomplish. Probably one of the most impactful occurrences for the energy industry last year was FERC Order 2222. FERC 2222 allows distributed energy resource aggregators to compete in all regional, organized wholesale electric markets. A PLMA Dialogue lead by Brett Feldman of Guidehouse Insights walked PLMA member practitioners through the order and its potential impacts.

Anja Gilbert of Pacific Gas and Electric, Marcus Hawkins of the Organization of MISO States, Jay Morrison of NRECA (but now of ElectricCities), and Matthew Sachs of CPower shared their different perspectives on the order. Like most orders from FERC, the impact will be felt throughout the entire industry, but it will take time before we fully understand exactly how. Reasons for this include multiple requests for clarification and re-hearing, and potential litigation. Once the Order is clear, wholesale market jurisdictions will have different approaches to complying with the order. Even after the plans from the markets are final, the needed investments in IT and communication infrastructure will take time.

## INTEGRATION

Integration in the energy industry isn't a new topic, but last year the PLMA community tackled it from several different angles. First it examined the integration of energy efficiency and demand response programs. Utilities are examining their EE and DR program portfolios, and many are embarking on a journey of integration, from simple awareness to single fully integrated programs. Dan York of ACEEE, Craig Aubuchon of Ameren Missouri, and Olivia Patterson of Opinion Dynamics discussed how utilities have gone about integrating these programs, and the results they've achieved so far. After striving and struggling with integration issues for over a decade, it appears some are making progress. The panel showcased several utility programs at different levels of integration, as well as differences between residential and C&I program integration. There are several areas that can help facilitate better integration; no surprise that eliminating organizational silos and supporting barrier-reducing regulation are at the top of the list. Improved access to smart meter data also makes the top of the list.

The energy industry is not just looking at utility programs either! Integrated EE and DR are taking on a whole new meaning with grid-interactive buildings. The U.S. Department of Energy launched a program to validate grid integrated buildings as a resource. The end goal is using efficient components paired with controls to create systems that work together to benefit building

“We found that some programs are using creative ways to combine energy efficiency and demand response value streams.”

– Dan York, ACEEE

operations, occupants, and the grid, all at the same time. This is one we will continue to watch as the results are certain to be relevant to the future of grid management.

Grid operations and demand-side management (DSM) haven't always been closely connected but with programs getting larger and grid interactive buildings on the horizon, we can learn a lot from the conversation between Michael McMaster of Arizona Public Services (APS), Tom Hines of Tierra Resources, and Tyler Rogers of Energy Hub. At the 41<sup>st</sup> Conference they discussed how APS is working to bridge the gap between grid operations and DSM programs. APS is actively using DSM programs to influence customer behavior and address the grid impacts that are resulting from the growth of rooftop solar generation. APS is pairing solar generation with DR to mitigate the ever-deepening duck curve on its system. They are making a difference for both customers and the grid by looking at a combination of specific EE measures, rates, and connected technology.

## EVALUATION

While integrated programs and connected technology is great, no benefits will be realized unless they make financial sense. Simply charging more won't cut it! The challenge is to find waste and inefficiency, eliminate it, and bring new value to the table. Calculating the cost effectiveness of EE and DR is essentially creating an exchange rate between two resources, dollars and kilowatts, based on the value delivered in each situation.

This was done in 2017 with the **National Standard Practice Manual for Energy Efficiency**, and now in 2020 for DERs. While this is simple in principle, it is complicated in application because of the variety of factors to consider for each resource, as well as how the resources impact

one another in the real world. During a PLMA Load Management Dialogue, Julie Michals from E4TheFuture and PLMA Chair Michael Brown of NV Energy discussed how the “policy-neutral, fuel-neutral NSPM principles” offer a consistent process with which to consider the cost effectiveness of EE and DERs. Applying these principles enables utilities and regulators to identify resources whose benefits exceed their costs.

And as we said in the beginning, the COVID-19 pandemic impacted everyone. At a session hosted by Thought Leadership Co-Chair Jenny Roehm and Awards Co-Chair Brett Feldman at the 42<sup>nd</sup> PLMA Conference, panelists Peter Bergeron of CPower, Tom Hines from Tierra Resource Consultants, Laura Small of Opinion Dynamics, and Kenneth Weiland of Ameren discussed how utilities met their commitments and worked with regulators, despite COVID-19, and then evaluated the results. The bottom line, energy use definitely changed last year and DSM

“As we navigate a post-COVID-19 world, we'll need to think comprehensively about the strategies needed to engage C&I demand response customers.”

– Kenneth Weiland, Ameren

programs had to adapt quickly. Despite this, utility programs still saw results. In order to meet reduction targets, some customers were able to curtail loads they had never tried before, such as lab activities at colleges and universities which were previously precluded from participation. Creativity and consistent communication made for successful load management programs in the strangest year.