



MMWEC Weathers Load Anomalies During Pandemic

The effects of the COVID-19 pandemic, and its resulting changes in behavior regarding energy usage, have MMWEC taking a strategic approach to predicting electric load during these uncertain times.

Energy demand in New England was 3% to 5% lower than normal from March through early May, according to ISO New England.

However, that's not the whole story. MMWEC Member utilities with more commercial and industrial customers have seen more dramatic drops overall, while some members with a largely residential customer base have actually seen an increase in load at certain times of day.

The so-called load "curve" looks much different than normal as well, according to Matthew Ide, MMWEC's Executive Director of Energy and Financial Markets.

"You're losing commercial load, and you have more people at home," Ide said. "But the load is flattening; you're not seeing the morning spike when people get up and start their day, with another peak when they get home from work. You're seeing steadier electric demand throughout the day."

The weather in late winter and early spring also comes into play. This shoulder period, as it is known, typically includes lots of weather fluctuations, and weather and demand don't differentiate themselves as clearly as they do in summer and winter. This year's shoulder period has been colder than historical trends. The resulting weather uncertainty, coupled

with the behavioral changes caused by the pandemic, have caused some challenges in predicting load.

"Forecasting consumer demand has been challenging as residents and businesses across New England have quickly and significantly changed their behavior in response to the pandemic," said Matt Kakley, a spokesman for ISO New England.

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"Our forecasters are adapting to these changing dynamics, and using what they're learning to ensure grid operations remain reliable."

MMWEC's Peak Load Forecasting program typically uses models based on correlations of historical load

usage, weather, and other factors.

"While MMWEC has still been able to accurately forecast its peaks, it has created more of a challenge because we can't rely solely on statistical modeling," Ide said. "Because of the breakdown of the statistical correlation, the MMWEC analyst team has really increased its reliance on fundamental analysis, as well as statistical modeling."

Even with the pandemic and MMWEC's administrative staff working remotely, MMWEC's strong record of predicting the peak continues despite the COVID-19 anomalies.

"We are proud to be able to seamlessly transition our employees to remote work and continue to provide our core services to our Members," said MMWEC CEO Ron DeCurzio. "That's a testament to our business continuity planning, which includes ensuring we have the proper IT infrastructure and operating procedures in place for resiliency." ∞

New MLP Program Engages Smart Devices for Environmental and Cost Benefits

MMWEC has launched its "Connected Homes" program to engage smart devices in the home, resulting in environmental and cost-saving benefits.

MMWEC's residential energy conservation service, the Home Energy Loss Prevention Services (HELPS) program, has teamed up with the company Virtual Peaker, an energy efficiency software platform, to offer Connected Homes. The program allows residential customers of participating municipal light plants (MLPs) to leverage the technology of smart appliances and devices into cost savings for the light department and its customers, while reducing their carbon footprint. At the same time, MLPs can use the program to better manage their electric load, resulting in reduced costs and lower rates for customers.

Participating customers can use the Connected Homes program to easily and conveniently manage their home's energy use, by setting automatic schedules for certain devices or by adjusting

the device's energy usage remotely.

Customers enrolling a device in the Connected Homes program agree to allow their light department to make brief, limited adjustments to their devices during times of peak electric demand, such as temporarily reducing the charging rate of an electric vehicle during peak hours. Customers are informed in advance of possible adjustments, and have the option to opt out of each adjustment.

Twelve MMWEC members are participating in Connected Homes, including those in Groton, Holden, Holyoke, Ipswich, Mansfield, Marblehead, Paxton, Princeton, South Hadley, Sterling, Wakefield and West Boylston. Potential devices which may be enrolled, depending on the MLP, include home batteries, electric vehicle chargers, electric hot water heaters and mini-split controllers. Additional devices or appliances may be added in the future. For more information, visit munihelps.org. ∞

ISO-NE Files Energy Security Improvements Plan, Alternative NEPOOL Proposal with FERC

ISO New England (ISO-NE) has filed its Energy Security Improvements (ESI) proposal with the Federal Energy Regulatory Commission (FERC), wrapping up a years-long stakeholder process to address fuel security concerns in the region. MMWEC, and other public power advocates in the New England Power Pool (NEPOOL), say the proposal will result in unnecessary costs to consumers, and MMWEC has positioned itself to protest the filing at FERC.

Along with its ESI filing, ISO-NE filed a competing proposal offered by NEPOOL participants, which the NEPOOL Participants Committee passed with the required majority. ISO-NE has asked FERC to respond to the filing by November 1, 2020, and requested that ESI take effect in June 2024.

The regional grid operator says that ESI will ensure a reliable supply of electricity during periods when supply and production is limited, such as during a prolonged cold snap. They also indicated that it is needed as New England transitions to a system dominated by resources reliant on just-in-time delivery of fuels, such as natural gas and renewables.

ESI is ISO-NE's solution to a growing inability to rely on resources in real-time that were not committed in the day-ahead market. These resources have a low probability of running and therefore would likely lose money if they incur the cost of procuring fuel. This was not a problem when the system was dominated by resources with onsite storage, but today's fleet of just in-time-resources might not be able to get the fuel to run in real time if needed to address an energy shortage.

To address these concerns, ESI is intended to create market-based incentives to encourage resources that don't typically get an award in the day ahead market, to make fuel arrangements in order to ensure availability. The NEPOOL-supported

proposal amended the ISO proposal in three ways. It will reduce cost to load by decreasing the amount of fuel security reserves needed in the non-winter months, reduce option prices by lessening risk to those who offer them, and reduce consumer payments when ISO-NE makes load forecasting errors. The NEPOOL proposal is expected to save tens of millions of dollars off the projected ESI price tag of \$155 million. ESI does not include a forward seasonal procurement component, which MMWEC supports, but ISO-NE has agreed to hold discussions on such a component. MMWEC abstained from voting on the NEPOOL proposal, effectively securing its ability to protest against ESI at FERC.

In 2018, ISO-NE was ordered by FERC to devise a long-term fuel security solution after it temporarily prevented Mystic Station from retiring by using what is known as a reliability must run (RMR) agreement. There has been concern in the public power sector that Mystic Station could continue to be retained for transmission security concerns in the future.

ISO-NE received 36 proposals for its competitive transmission solution, which was issued in compliance with FERC Order 1000, to address the transmission need caused by the Mystic retirements. Even though a winning proposal will not be selected until 2021, after many of the milestones for ISO-NE's Forward Capacity Auction (FCA) 15 have already passed, the ISO has made assurances that at least one of the proposals will have an in-service date prior to the FCA 15 capacity commitment period. This makes the likelihood of further retention of the Mystic units for transmission security unlikely. ∞



TMLWP Electrifies Town with New EV Charging Station

Electric vehicle (EV) owners in and around Templeton now have the option to charge their cars outside of their homes.

This summer, the city's first electric vehicle charging station will open at the Templeton Municipal Light and Water Plant (TMLWP) headquarters at 86 Bridge Street in Baldwinville.

Light Superintendent Tom Berry led the charge of researching funding opportunities when the TMLWP Board of Commissioners expressed interest in installing a charging station and identified one from the Massachusetts Electric Vehicle Incentive Program (MassEVIP). The program awards grants to public entities to help with the purchase of electric vehicles and charging stations.

After the Board of Commissioners voted to move forward with the purchase of a charger, Berry applied for the grant in February, learned of its approval in March, and the charging station was delivered in April. The grant covered 60% of the cost of the charging station and the remaining amount was funded through the light department.

The department purchased a Chargepoint Level 2 charger, which is a dual point model that has the ability to charge two

vehicles at once. EVs will take an average of 5-10 hours to fully charge based on the battery size of the car. The charger will operate at 25 miles of range per hour (RPH) and drivers will pay to use the charger via a phone app.

Berry said the charging station is a way for the department to keep current with evolving transportation trends.

"TMLWP installed this charging station as a model for other businesses and establishments in order to be ready for the electrification of the transportation sector," Berry said.

Once the charging station is installed, TMLWP will work with MMWEC and Chargepoint to get it online so EV owners are able to use it. Berry said TMLWP hopes to have the station fully operational in June.

TMLWP General Manager John Driscoll feels a sense of pride in knowing that his department brought EV charging to the town.

"We're proud that the department will be responsible for the first EV charging station in town and we hope it inspires some residents to think about going electric with one or more of their everyday vehicles," Driscoll said. ∞

MMWEC Offers Virtual Audits during Pandemic

MMMWEC's energy efficiency program, Home Energy Loss Prevention Services (HELPS), has successfully been performing virtual energy efficiency residential audits for customers of 14 participating municipal light plants (MLPs) since late March.

The HELPS program launched the virtual audit program after suspending in-person audits due to the pandemic. Residents of participating MLPs have been offered the virtual audits when they request a home energy audit. They have also had the option to wait until an in-home audit is safe. It is hoped that by offering virtual audits, the backlog of residents waiting for an in-home audit will be reduced.

Thirty-one virtual audits were conducted in the month of April, which represents approximately 37% of the March in-home total. In addition, 13 virtual visits for energy efficiency rebate confirmation were conducted in April, up from 11 in-person rebate verifications in February and 6 in March.

While residential energy audits typically decline as the weather gets warmer and homeowners aren't so focused on the cold weather, the program is considered successful and is receiving positive feedback.

"The real success is that we're still engaging with the customers, we're still offering services, and we're keeping them involved with energy efficiency," said MMWEC Energy Efficiency Program Manager Joseph Coles. "The utility is doing what it takes to assist them in saving money and reducing their carbon footprints, and they are still able to apply for rebates."

Lisa Kohler, Director of Program and Technical Operations at the Center for EcoTechnology (CET), which conducts the audits, says they are receiving positive feedback from customers and are always looking to improve. Surveys are included in the home energy assessment packet each resident receives following the audit.

"We're getting a lot of good experience, and we're able to test the different types of housing stock, as far as accessibility for the virtual audits," Kohler said. "As long as the customer is willing, it's been a great experience for both the energy specialist and the customer."

Customers of participating MLPs are offered the virtual audits when they contact CET for an audit. For more information about the program, and to learn which MLPs are participating, visit www.munihelps.org. ∞

Two MMWEC Members Honored by APPA for Safe Practices

Two MMWEC Members have been honored with American Public Power Association (APPA) Safety Awards of Excellence. Boylston Municipal Light Department (BMLD) and Sterling Municipal Light Department (SMLD) have both been recognized with the award for 2019, which was recently announced.

Both MLPs are leaders when it comes to safety, which is demonstrated by the number of times each has been recognized; SMLD has earned the award seven times and BMLD has received it 18 times overall.

The Safety Awards of Excellence honor utilities with the lowest safety incidence rates within their groups. Groups are determined by worker hours of exposure. APPA looks at three years of data in determining award winners, so utilities must have previously submitted award forms for the past two consecutive years to be eligible for an award this year. In 2019, more than 335 utilities submitted documentation for the awards, the highest number of entrants in the program's history, and 125 were recognized with awards.

BMLD and SMLD both had zero safety incidents in 2019.

At BMLD, General Manager Mark Barakian prioritizes training for his team. The crew attends onsite training classes that are offered through NEPPA as well as in-house training. The onsite training is done in partnership with three other utilities, giving his linemen the opportunity to discuss and compare safety processes and procedures with other departments.

Other steps BMLD takes to ensure a safe work environment include giving detailed job briefings, having crewmen keep a

watchful eye on fellow employees, and taking their time to complete jobs safely without rushing.

"Being able to present the award to the employees and Light Board members is a great feeling and sense of accomplishment for BMLD," said Barakian. He added that the best result of encouraging safe work practices is "having everyone go home safe to their families."

At SMLD, General Manager Sean Hamilton stays diligent when ordering protective equipment for his crew, constantly researching if there are new, safer options. Hamilton also ensures his linemen have highly visible workwear so they are easily seen at job sites. Recently, his commissioners also examined the tools the crew was using and began replacing them with new options with a focus on ergonomics.

Hamilton also said it's important that his crew has access to safety information.

"Any incident is one too many," Hamilton said. "Keeping safety procedures and awareness in the forefront is key."

Hamilton said he'd advise other MLPs that are looking to improve their safety procedures to begin with keeping a track record of incidents.

"I think the public really appreciates the work of the lineman and staff, especially when the lights go out or during a storm, and do not realize the danger they face," Hamilton said. "The lines are energized, the dangers exist, and keeping our crew safe is critical."

Both Barakian and Hamilton plan to continue applying for the safety award each year. ∞

Mansfield Light Department to Reduce Rates

Mansfield Municipal Electric Department (MMED), an MMWEC Member, has announced an across-the-board rate reduction for its customers.

At its April meeting, the MMED Board of Light Commissioners voted to approve a 5% rate reduction for all customer classes, beginning July 1, 2020. The new rates are made possible by adjusted purchase power charges that reflect projected decreases in power costs for the light department.

MMED offers some of the lowest electric rates in the state. The new residential rates that will go into effect this summer prospectively rank the utility second lowest in Massachusetts, compared to current rates of other state utilities.

The residential energy charge will drop from 11.65 cents per kilowatt hour to 10.97 cents per kilowatt hour. The commercial energy charge will be reduced from 14.59 cents to

13.86 cents. The new residential rate and commercial rate are 45% and 30% lower than current National Grid rates, respectively. Other rate classes will see reductions as well.

The light department is pleased to be able to provide this rate reduction during these challenging economic times.

"I would like to thank our staff and Board of Light Commissioners for their commitment to providing superior service to our customers at the lowest cost," said Joe Sollecito, General Manager of MMED. "These are challenging times for many people, and we hope this rate reduction helps." ∞



State Monitors Female Bear With Den on MMWEC Property

Anyone who has visited the MMWEC property in Ludlow, comprised of the Stony Brook Energy Center, the Administrative Office Building and acres of open space, knows that wildlife often make their homes on the site. Visitors and staff commonly see deer, bears, bobcats and birds of prey, among other critters.

Wildlife researchers have also taken an interest in the local wildlife. In early March, staff from the Massachusetts Division of Fisheries and Wildlife visited the site to check out one of 38



The female bear being checked out by Mass Division of Fisheries and Wildlife staff in March 2020

female bears the agency has radio-collared across the state.

The bear was captured by researchers last spring in South Hadley while trying to recapture a different radio-collared bear. During this winter's visit to the MMWEC site, they put a new and improved radio collar on the MMWEC bear, who had made a den on MMWEC property. During their visit, they checked her vitals to make sure she was healthy. They also wanted to check her reproductive success, and they were happy to see two newborn cubs with her. The male and female cubs weighed about four pounds each. The female bear weighed 191 pounds.

"The new collar she has allows us to track her via satellites and collect a location on her every 45 minutes," said David P. Fuller, wildlife biologist at the Division of Fisheries and Wildlife, based in Belchertown. "One aspect of this research is to see how bears move across the heavily developed landscape of Massachusetts, and this bear will be a good example of that."

Fuller said he would be continuing to check the bear's whereabouts after her collar replacement and check-up. ∞



Massachusetts Municipal Wholesale Electric Company

MMWEC

A non-profit, public corporation and political subdivision of the Commonwealth
Joint Action and economies of scale for Massachusetts municipal utilities

327 Moody Street, Ludlow, MA 01056

(413) 308-1392

mmwec@mmwec.org

www.mmwec.org