



CAPACITY, DEMAND, AND ENERGY



Kenneth Ceaglske, President/CEO

here are three distinct components of electricity.

Each has an important role in keeping the lights on, delivering energy, and determining how we pay the bill for it, both at the utility level and sometimes at the member level.

Capacity looks at the available resources—how many power plants, renewable generators, batteries, etc., could be called on at any given moment. The "given moment" part of that is critical. Electricity is the only commodity that lacks storage of much duration or size. There are two levels of capacity, in-use or available. In-use is what is actively generating, and available is any excess that is there for demand to grow or units to go off-line.

Demand is the instantaneous request for the delivery of electricity. However, it seems a little strange to use the words request and deliver. In reality, when you flip the switch on an electrical device, that is a request for the electricity to be delivered at that moment and the moments that follow.

Energy is what happens over time, or what you get done with the electricity that was delivered over time. For example, a request for delivery of 100 watts of demand to power a light bulb for 10 hours results in an energy consumption of 1,000 watthours (Wh) (100 W x 10 h = 1,000 Wh) or 1 kilowatt hour (1,000 wh = 1k Wh). That energy accomplished lighting whatever it was that you wanted to see during that time.

In-use capacity and demand are balanced like a teeter-totter. If they match, the system works. If demand drops, something on the in-use capacity side needs to decrease as well. If demand increases, in-use capacity must follow as well. On very hot days or very cold days, the demand on the system gets high, sometimes reaching very close to the available capacity limit. If at some point demand exceeds available capacity, this is when brownouts/blackouts happen. These situations have happened in many areas of the country

at different times. Sometimes the lack of capacity was due to a grid failure, like a major power line that delivers power across regions or a generator that goes down, forcing it off-line.

The other situation that has caused issues, particularly in California, is a multi-part situation. Solar output (capacity) drops in the evening and people are coming home, which increases demand on the system. The power plants that are

In-use capacity and demand are balanced like a teeter-totter. If they match, the system works. left are unable to keep up with the need to generate more energy. These generators are something like a semi starting off at a traffic light—sure, they can carry a lot of load, but it takes time to get there. If that demand exceeds the capacity level of the generator, there will be problems on the system. As a result, California has

installed many short-duration (four hour) batteries to assist with this issue.

One of the largest expenses is maintaining sufficient generation resources to meet peak demand but not using those resources for much of the year when demand is lower.

At the utility level, we are charged for both energy usage and demand. In the end, each component makes up about half of our bill. With the evolution of our metering and billing systems, we are now able to monitor the demand on all meters in the system. This potentially allows us to separate the billing of energy usage and demand. Up until now, an estimated demand component was included in the energy charge. You may have noticed a demand reading on your monthly statement without a billing charge. This was for reference only. If we do separate the components and demand becomes a billable unit, we would remove that estimated demand portion from the energy rate. The goal of any restructuring is to be neutral to the average member.

CAPACITY

DEMAND





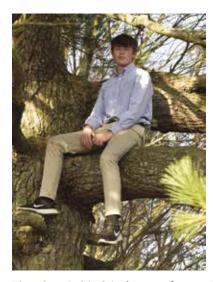
Each of these area students received a \$500 scholarship from Taylor Electric Cooperative.



Hunter Daniels is the son of Andrew and Melinda Daniels, Athens. He will be attending Northcentral Technical College in Wausau where he has been accepted into the Diesel Technician Program. Hunter has worked at Miltrim Farms in Athens for the past three years. He enjoys hunting, fishing, and riding motorcycles.



Zain Schreffler is the son of Sarah and the late Robert Schreffler, Medford. He will be attending Fox Valley Technical College in Appleton and will study to be an agricultural equipment service technician. He enjoys riding his four-wheeler, reading, playing the piano, and driving tractors.



Theodore Robisch is the son of Matthew and Sara Robisch, Rib Lake. He will be attending UW-Madison for mechanical engineering. He enjoys snowboarding, listening to music, and going on 4-wheeler rides.



Brooke Rudolph is the daughter of Robert and Wendy Rudolph, Medford. She will be attending UW-Stout, majoring in special education. Brooke will also be a member of the Stout track team. In her free time, she enjoys basketball, track, hanging out with friends, and supporting and working with special education students.



Christine Czeshinski is the daughter of Craig and Linda Czeshinski, Medford. She plans to attend Northeast Wisconsin Technical College in Green Bay and will study nursing. She enjoys reading and being outdoors.

PLAYGROUNDS JUST GOT A WHOLE LOT MORE FUN



Smooth Sailing into Summer

aylor Electric Cooperative recently contributed a \$1,000 donation to Medford Area for Tomorrow, Inc (MATI) for the installation of new playground equipment at Sackett Lake, Medford. MATI is a tax-exempt foundation dedicated to improving the Medford area.

The project was an idea amongst friends Kathy Hemer and Kate Metz, both of whom have cabins on the lake and also grandchildren who play in the area. After noticing the growing popularity of the lake, Hemer and Metz thought it would be a great opportunity to make some improvements. The idea for the pirate-ship-themed playground came after they saw one displayed on Highway 29. They got busy and started fundraising and getting estimates. They also applied for grants to help fund the project.





Pictured above, before installation of the new equipment, are Taylor Electric Cooperative President and CEO Kenny Ceaglske and Project Coordinator Kathy Hemer, accepting the check on behalf of MATI.



Who Wants a Longer Recess?

Taylor Electric Cooperative recently donated \$500 to the Rib Lake School District for new playground equipment. Pictured here are Rib Lake Elementary School Principal Jon Dallmann and Taylor Electric Staff Accountant Sadie Kapusta and her daughter, Elva.

WHEN THE WEATHER IS EXTREME, USE ENERGY WISELY

hear a lot about peak energy demand, but what is it **V** and how does it impact electricity use? As the name implies, peak energy demand occurs when energy consumption is at its highest. In much of the United States, energy use spikes in summer and winter due to the need to heat and cool indoor spaces.

Although it depends on where you live, summertime energy demand increases between mid-to-late afternoon (when outdoor temperatures soar) and evening. In the winter, there are two high-use times of day: early morning and late afternoon/evening. Weekends and holidays are typically considered off peak.

Changing the time of day you use energy can help lower your energy bills and avoid interruptions or service glitches that can occur during peak demand times. To do this, consider running major appliances during off-peak times; smart devices or appliances that have delay starts can help achieve this goal.



"Set it and forget it" is the mantra of smart thermostats and appliances. Program the Summer Shift schedule into your smart thermostat, then sit back and save!

CAN YOU HELP US FIND THESE PEOPLE?

Taylor Electric Cooperative has capital credits for the following people, lacksquare who we are unable to locate. If you know the current address of someone listed here, please contact our office at 715-678-2411 or 800-862-2407. In cases where the person is deceased, please contact us with information regarding a relative or benefactor. Any unclaimed checks will revert to the Wisconsin Federated Youth Foundation, Inc., a charitable taxexempt trust established by the Wisconsin Electric Cooperative Association for educational purposes. Claims may be made at the cooperative office by the rightful owners by August 1, 2023.

AABEL, JUDITH ADAMS, DALE ALBERT DECEASED, ED ALBRECHT, THOMAS & SHERI **ALL SEASON STORAGE** ALLISON, RD ANDERSON, MICHAEL J ANDERSON, RODNEY ANGELICH DECEASED, LORNA ARTHUR, JAMES F AT&T BUILDING OPERATIONS BARKER, LLOYD BARNES, BRADLEY & CHERYL BARNICKLE, EARL BENSON, JOHN BERGESON, PAUL R BERGSTROM, TODD S BERNITT DECEASED, WILLIAM JR FOX, DANIEL & DAWN

BLEGEN, MARJORIE **BOURGERIE, JEFF BOWERS, STEVEN & TERESA BRIGGS, RICHARD** BUSCH, RICK CARR, SHAWN CATLIN, SANDRA **CEDAR LANE DAIRY** CUSHING, DAVID E DEBIE, ROBERT DEVRIES, DAVID EDELBURG DECEASED, **CLIFFORD** EDMINSTER, PEGGY J EDMUNDS, JODI EMENS, DAVID ERICKSON, PEGGY FORTNER DECEASED, GAYLE B FURSETH, ANDREW GALLAGHER, MIKE **GANE, LEONARD & VICKY** GREGG, JERRY GRUHLKE DECEASED, **DOROTHY** GTE TELEPHONE OPERATIONS GUSTUM, KIRK M HANSON, NANCY HEIN, DAWN HILDEBRANDT, CHARLES M HOEFT, DOLORES HOOVER, WILLIAM C JACKSON, GREG JOHNSON, WILLIAM A JONES, MICHAEL A KAULFUSS, ARCH KREB, KEITH H KRIESKI, LARRY

KRUEGER, LORI LANGIEWICZ, RICHARD A LARSON, CHARLES LARSON, DOUG LUCEY, JAMES LUKASZEWICZ, ANNA LYNCH, MICHAEL & BARBARA MACKIE, HELEN MALCHOW, ADAM MALDONIS, RYAN C & JULIE MARQUARDT, NANCY MARTIN, DAVID H MARX, JOSEPH P MDS ACRES PARTNERSHIP MEY-KOSBAB, CINDY MILBAUER, JIM MILES, TANA MIMS, WILLIAM MOEN, JAMES MUELLER, GERALD MYERS, DALE OLSON, ROSE PAULSON, SARA PAUTZ DECEASED, ARLYN PECHE DECEASED, RAY PENEAU, LEON PETERSEN, CAROL PETERSON, TALEE PHILLIPS, JIM POLSTER, JAMES QUIRING, BRENT

RICKER, HARVEY RINEHART, GLEN ROTHAMER, RANDALL SCHEUNEMAN, JAMES SCHRAUFNAGEL, JOYCE SCHROEDER, DALE SCHUHMACHER, BILL SCHWENKE DECEASED, **ARDRES** SEFFRON, TERRY SHERBURNE GINSENG SMITH, JEFFERY A SMITH, PAT SNELL, GREGORY A SOSSONG, JAMES SPREEN, BRYAN W STOLLFUS, GEORGE SWEETEN, JOHN THIEDE, ERWIN A THOMAS, EVERETT THOMAS DECEASED, TERRY TREFFERT, KATHRYN VERDONE, ROBERT VERDONE, TODD J VOSS, ROBERT W WEILER, GAIL WEYENBERG, GERALD WHITE, KATHY WINDLE, GERALDINE WIRT, ALLEN J

RASNER, RICHARD A

Kenneth Ceaglske, President/CEO

N1831 State Highway 13, Medford, WI 54451 715-678-2411 • 800-862-2407 email: taylrec@taylorelectric.org website: www.taylorelectric.org

Lainie Kellnhofer, Editor



RAASCH, DEAN & JANICE