

What's the Outlook on Rates?

June 1, 2020

At their December 2019 Board meeting, the Northeast Power Board of Directors voted unanimously to approve a 2020 budget which includes an overall Rate Decrease for 2020. The rate decrease is to pass through savings in wholesale power costs. The rates are scheduled to go into effect June 1, 2020. The Board is also considering a new rate design for customers to be implemented in Spring 2021.

As new technologies continue to change our industry, we are focused on keeping up with these changes to provide the best value to all our customers. One of the more notable changes we see currently is the interest in renewable energy generation at the customer level. While this is not new, prices and continued improvements in products and processes are leading to more opportunities for customers to explore and possibly invest in.

Along with these opportunities comes the need for Northeast Power to make some adjustments. To maintain fairness for all customers, we need to ensure our billing structure and rates, along with our metering, infrastructure, engineering and planning also evolve with technological advancements. Northeast Power is a not-for-profit utility existing to serve our customers. It is essential Northeast Power adhere to our governing state statues which instruct us to provide fair, reasonable and non-discriminatory electric rates and services.

New Rate Structure

The new rate structure, to be implemented in Spring 2021, will include Demand (KW) as a line item on your bill, along with the minimum monthly fee (Basic Facilities Charge), and Energy (kWh).

As with any rate change, there will be various individual impacts based on weather, energy load profiles and usage patterns. Over the coming months, we will work to assist you in understanding how you use electricity and how future rate changes could impact your bills. This letter is intended to introduce some terms and concepts that are used in rate designs.

Understanding Demand (kW) and Energy (kWh)

Electricity usage is measured in two ways:

- 1) **Demand** (kW or kilowatts): the rate at which energy is used.
- 2) **Energy** (kWh or kilowatt-hours): the amount of energy used.

Demand Charge (expressed as “kW” or “kilowatts”): Demand, the rate at which a customer uses electricity during a specified time period, is measured by the highest rate in that billing period.

Energy Charge (expressed as “kWh” or “kilowatt-hours”): Energy charges are based on the amount of electricity a customer uses during the billing period which is expressed as kWh.

Think of it in terms of your car’s speedometer:

Example: Car travels at a rate of speed of 80 mph for ½ hour, the miles driven is only 40 miles. **In terms of electricity:** Customer’s rate of consumption is 80 kW for ½ hour, the kWh consumed is 40 kWh.

Understanding Demand and Consumption

The difference between Demand and Consumption is vital to your choices in reducing your energy costs. A simple way to see the difference between Demand and Consumption is by considering two examples.

One 100-watt light bulb burning for 10 hours consumes 1,000 watt-hours or 1 kWh. The entire time it is on, it requires or “Demands” 100 watts or 0.1 kW from the utility. That means the utility must have that 0.1 kW ready whenever the customer turns the light bulb on.

Similarly, ten 100-watt light bulbs burning for 1 hour consume 1,000 watt-hours or 1 kWh. Note that in both examples, the **consumption is 1 kWh**, however, look how differently the second situation impacts the utility from a Demand perspective. The utility must now be prepared to provide **ten times as much capacity** in response to the “Demand” of the 10 light bulbs operating all at once.

If both customers are billed for their consumption only, both will get the same bill for 1 kWh of energy. And that is the way most residential customers are currently billed. But the requirement for the utility to meet this energy requirement is very different. In the second case, the utility must have **10 times more generating capacity** to provide the second customer’s brief high demand for power compared to the first case.

Number of Light Bulbs	Watts per Light Bulb	Hours of Demand	Consumption	Total kWh Used
A	B	C	D	E
			A x B x C	D / 1,000
1	100	10	1,000	1
10	100	1	1,000	1

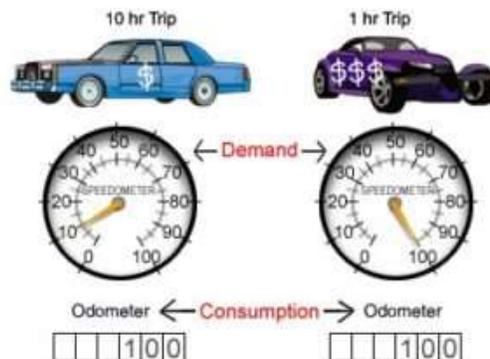
Analogies for Understanding Demand and Consumption

Another way of understanding Demand and Consumption is with a “filling the bucket” analogy. Suppose you want to fill a 5-gallon bucket with water. You can use an inexpensive hose connection to your sink providing 1 gallon per minute to do it, and it will take 5 minutes. Or you can get to a more expensive large faucet that provides 5 gallons per minute and it will fill up in just one minute. The flow rate is the equivalent to **Demand**, and the 5 gallons of water are equivalent to **Consumption**. In this example, filling both buckets has the same “Consumption” but very different “Demands.”



The same is true of electricity. While you may be able to accomplish the same thing by operating a small wattage appliance for many hours as operating something of higher wattage for just a few hours, the higher wattage piece of equipment will create a higher Demand on the utility. Using our analogy, you are asking for a larger pipe, and that costs more. If time is of the essence, it might be worth having the more expensive high flow rate or wattage. This is why utilities often charge some customers for both Demand and Consumption. A customer that sets a high Demand requires more services from the utility—additional generating plant capacity, and more expense in lines, transformers and substation equipment.

Some people like to use the car analogy to explain and understand how Demand and Consumption relate. The car’s **speedometer** is like the **Demand** meter and the **odometer** is like a **Consumption** meter. Two cars could travel the same 100-mile road, one at 10 miles per hour for 10 hours and the other at 100 miles per hour for 1 hour. **It takes a much more capable and expensive engine to power the car at 100 miles per hour than it does to power the one going only 10 miles per hour.**



Next Steps

Many Northeast commercial customers are being billed based on their demand (kW) currently. While billing demand is not a new concept, until recently, it was cost prohibitive to meter demand information for all customers. Customers were grouped into “classes” and billed a socialized rate based on that class of customers. As you know, Residential, Farm and Small Commercial customer loads are not all the same. You likely don’t use the same amount of energy in the same manner as your neighbor. With today’s technology, costs can be assigned accurately to each customer based on their actual load profile rather than on rate-class averages. Those customers placing a larger demand on the electric system will pay a larger portion than those customers imposing less of a demand on the electric system. The amount of money collected by Northeast to pay for the electric system will not change, but the allocation of who is paying may be modified. Northeast staff will be working with rate consultants over the coming months to analyze the demand information we have to set rates as fairly as possible. We will work to provide you with updates as the process moves forward.

How does this impact me?

Over the coming months, we will work to assist you in understanding and identifying how you are consuming electricity. You can review your usage history by logging into our customer portal at www.northeastpow.com. You can ask yourself questions like,

“Do I have multiple motors running at the same time?”

“Can I reduce my demand and alternate when those motors run?”

If you need assistance logging in or finding your usage information on the website, our billing staff will be happy to help. Contact them at customerservice@northeastpow.com or by calling 1-800-750-9277.

Be sure to check our website for updated rate information and follow us on Facebook. As the rate design change process moves forward, we will work to keep you updated.

