



#### MMWEC CONTACT INFORMATION

Massachusetts Municipal Wholesale  
Electric Company

327 Moody St.

Ludlow, MA 01056

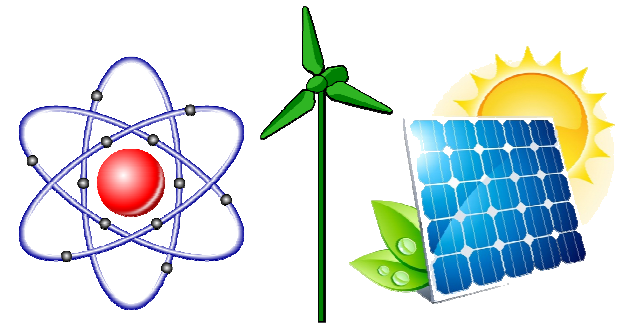
413-589-0141

Email: [mmwec@mmwec.org](mailto:mmwec@mmwec.org)

Visit us at [www.mmwec.org](http://www.mmwec.org)



# The ABCs of Energy and Capacity



MASSACHUSETTS MUNICIPAL WHOLESALE  
ELECTRIC COMPANY

## Why Capacity and Why Energy?

The independent system operator for the New England power grid is ISO New England (ISO-NE).

- By law, ISO-NE is charged with ensuring there is enough capacity/generation and enough energy/electricity.
- This means anyone who must provide energy/electricity must make capacity available to ISO-NE.

ISO-NE requires that each municipal light department must provide:

- both capacity/generation and energy/electricity to meet their customers' electricity usage.

## Electricity - Why Distinguish Between Capacity and Energy?

Capacity and energy are both components of the power grid, but function differently.

What is Capacity?

- Capacity is the ability to generate energy/electricity.
- Capacity is measured in kilowatts.
- The ability to generate energy/electricity must be available at all times, yet not all of that capacity/generation is needed at all times.

What is Energy?

- Energy is the amount of electricity used by the customers of a Municipal Light Department.
- Energy is measured in kilowatt hours.
- Energy usage varies throughout the year and the day.

## Varying Usage

Energy usage changes every day and throughout the year.

- In the spring and fall when temperatures are mild, energy/electricity usage is low.
- In the summer on days of extreme heat, energy/electricity usage is at its highest.
- Each day, energy/electricity usage is at its highest in the afternoon and evening and lowest at night while people are sleeping.
- While energy/electricity usage varies seasonally and daily, there must be enough capacity (the ability to provide generation) during any of those periods.
- This means that not all capacity (the ability to provide generation) is used all the time. Therefore some generating plants run very infrequently (those that might be needed to provide generation on hot and very cold days).