

# Shave the Peak

A New Way to Green the Grid

August 7, 2018



You're on mute!

Send webinar questions to us over GoToMeeting chat

It's not just how much electricity we use.  
It's *when* we use it.

1% of hours in a year account for 8% of costs.

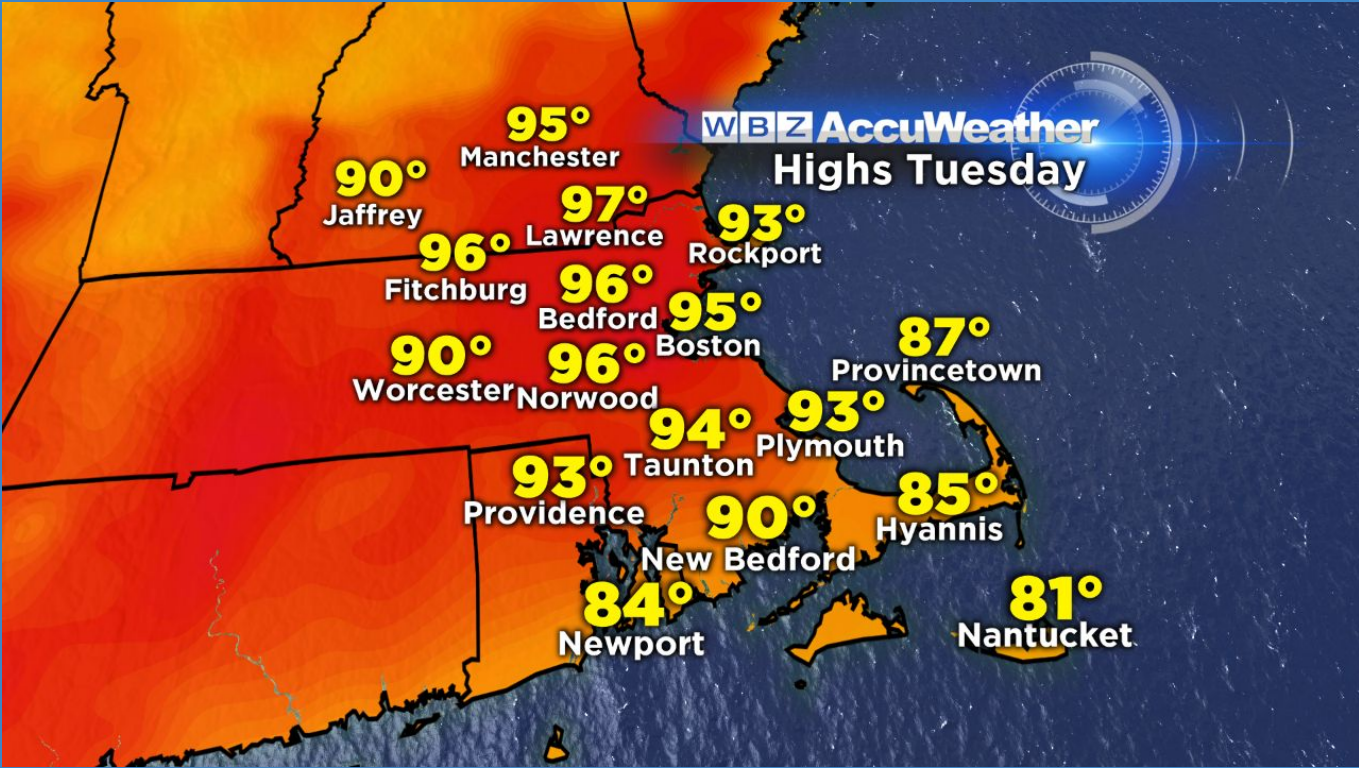
10% of hours account for 40% of costs.

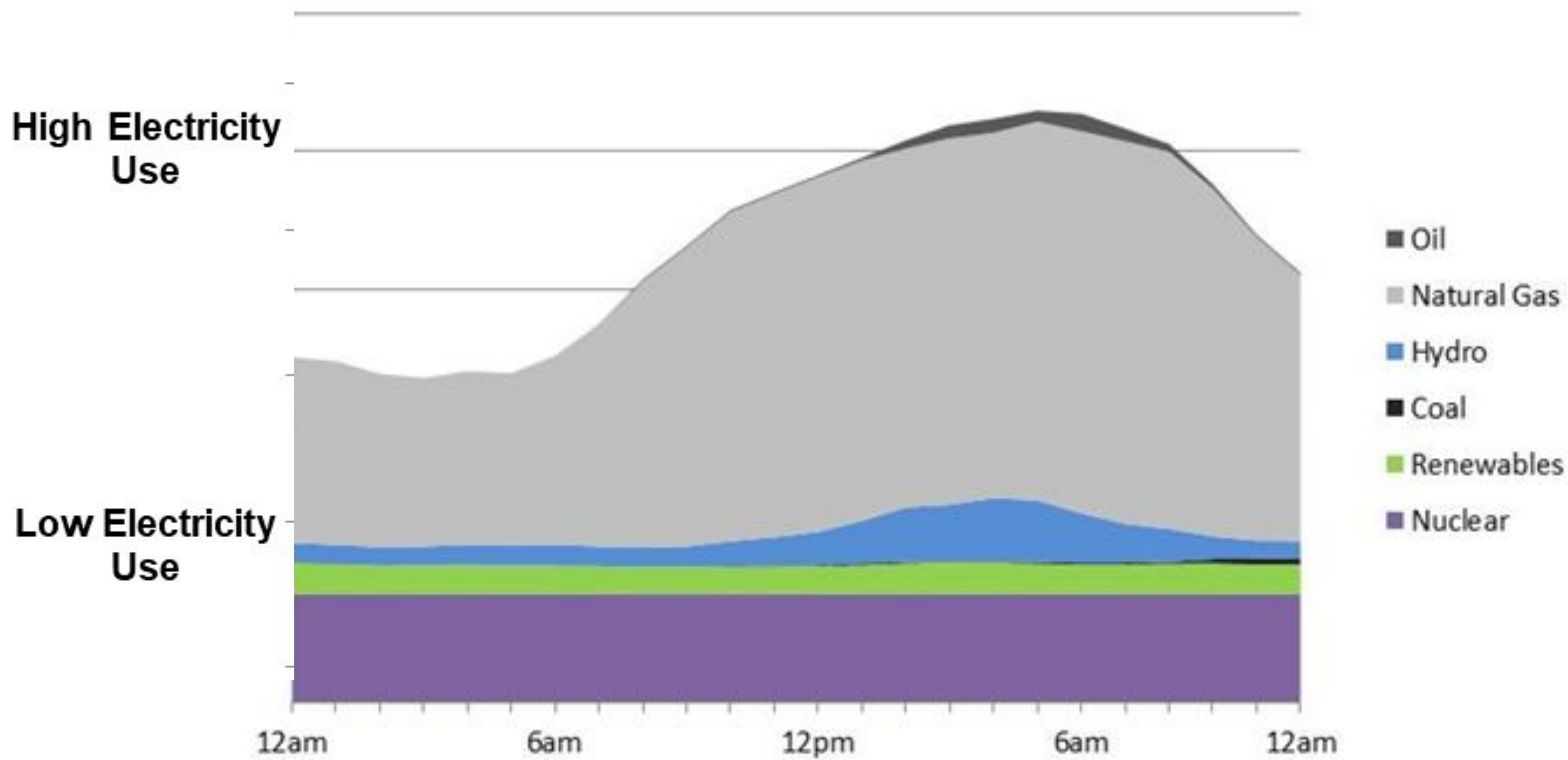
## The Basics of Peak Shaving

- What is peak demand?
- Why do grid costs and emissions spike on peak days?
- How does Shave the Peak address peaks?

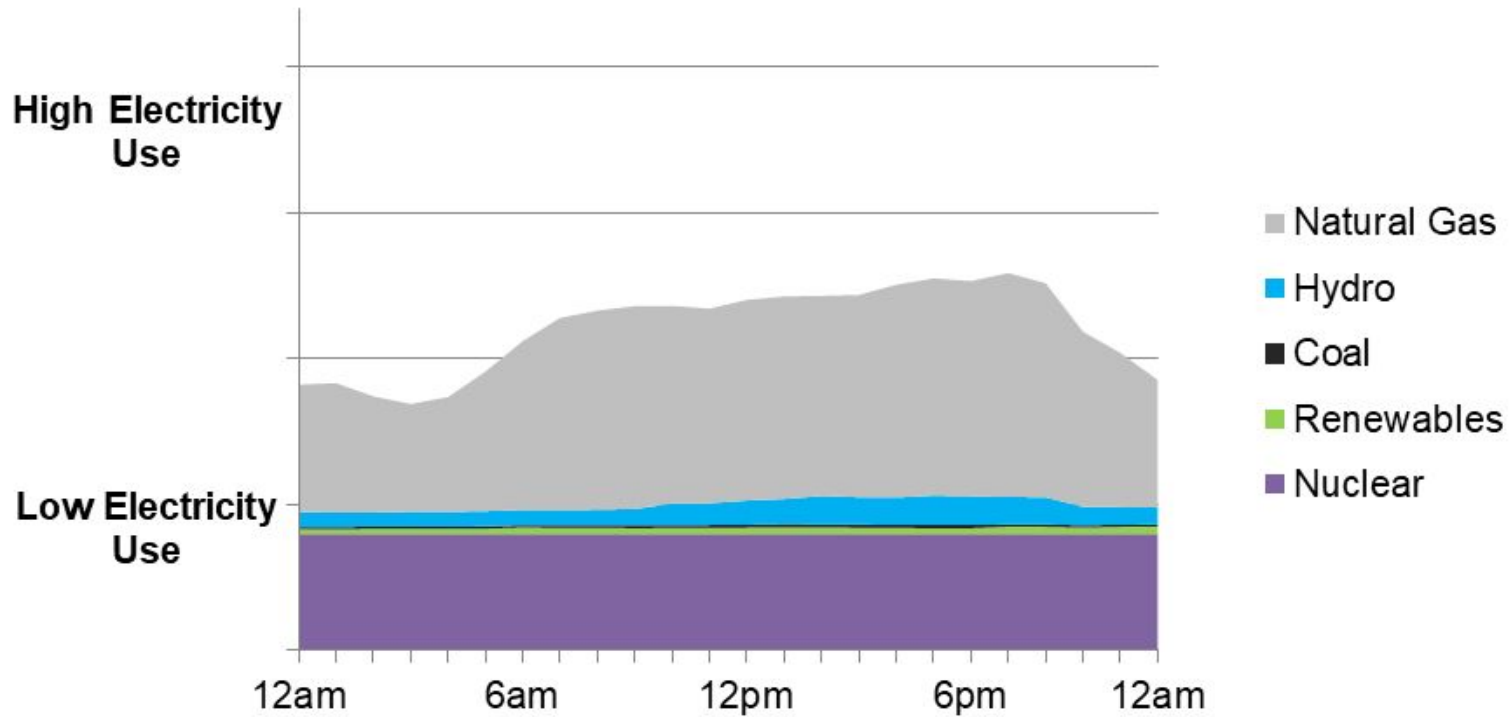
## Peak Demand Policy Solutions

- Time of use rates
- Energy Storage
- Demand response aggregation
- Policy pathways in Massachusetts and Rhode Island



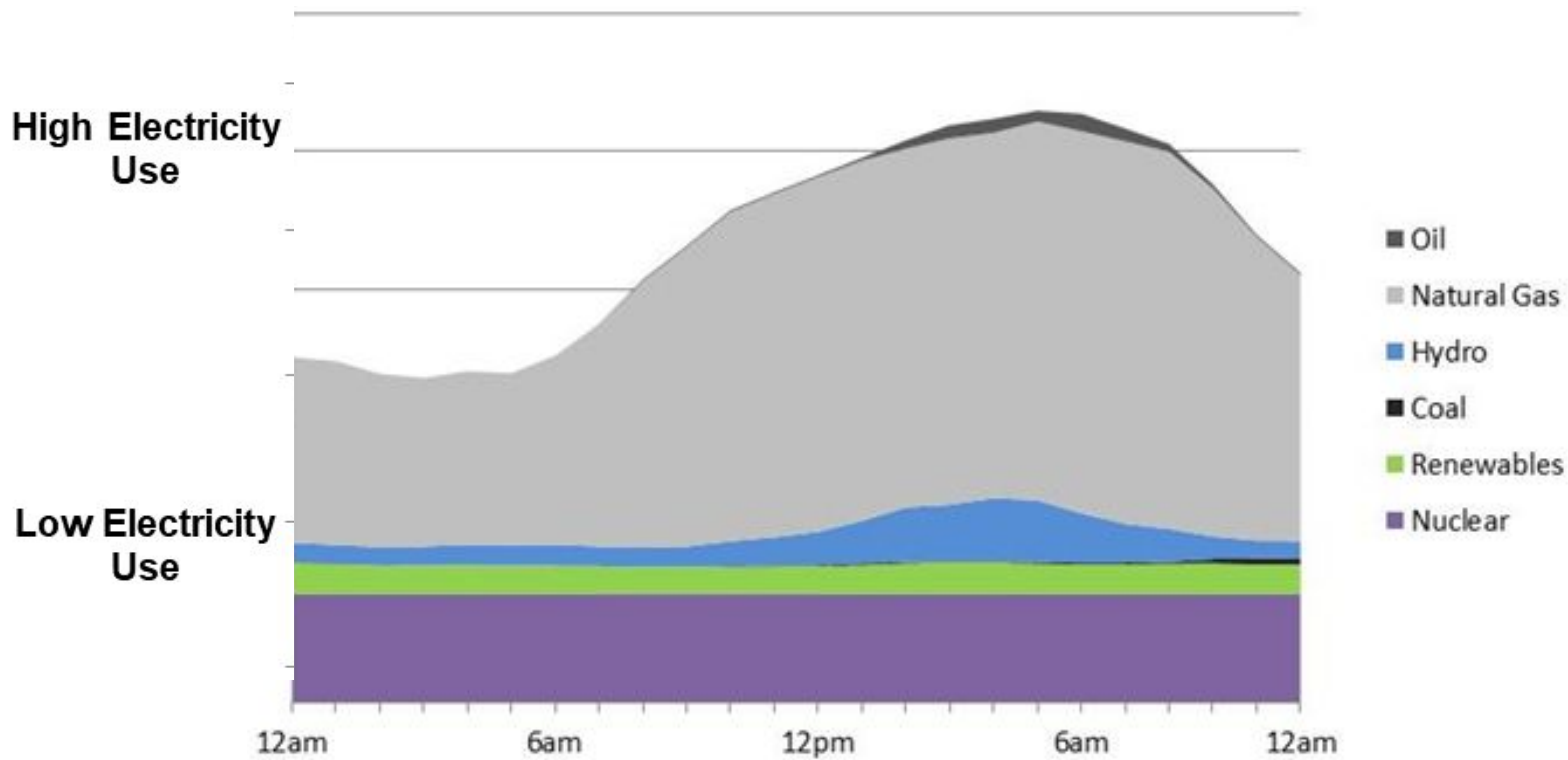


**August 6, 2018 - A Peak Day**



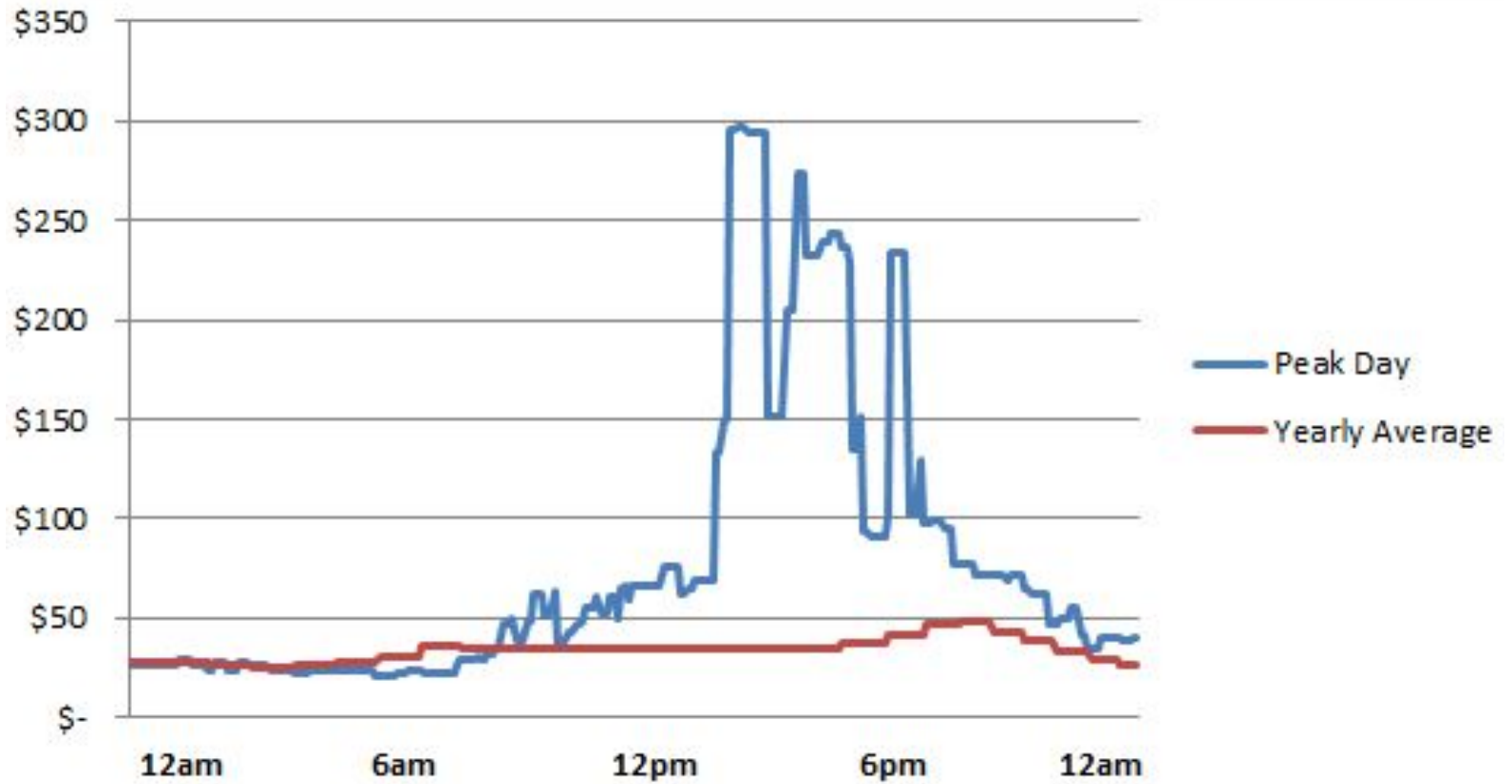
September 7, 2017 - A Representative Median Demand Day





**August 6, 2018 - A Peak Day**





August 6, 2018 - A Peak Day

1% of hours in a year account for 8% of costs.

10% of hours account for 40% of costs.

# Benefits of Peak Shaving

- Cost savings from avoiding new grid infrastructure investment
- Cost savings from reducing reliance on expensive fuel
- Education of energy consumers
- Moving towards a less centralized, lower carbon grid
- Pollutant reductions from fossil fuel peaker plants

# Shave the Peak

A New Way to Green the Grid

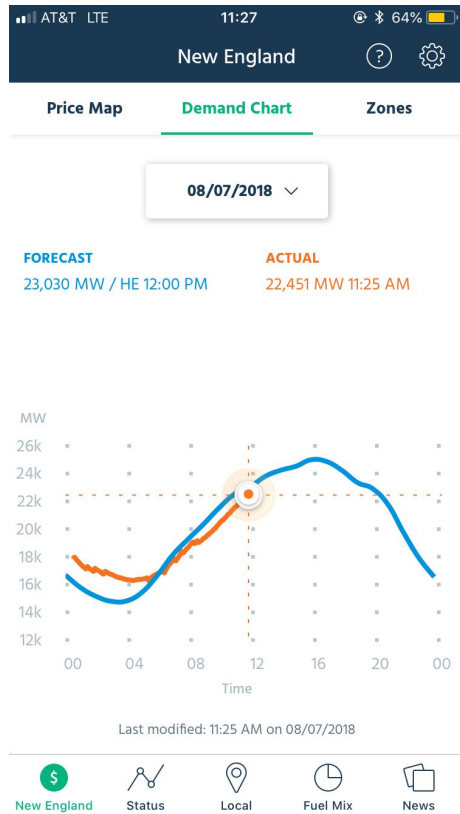
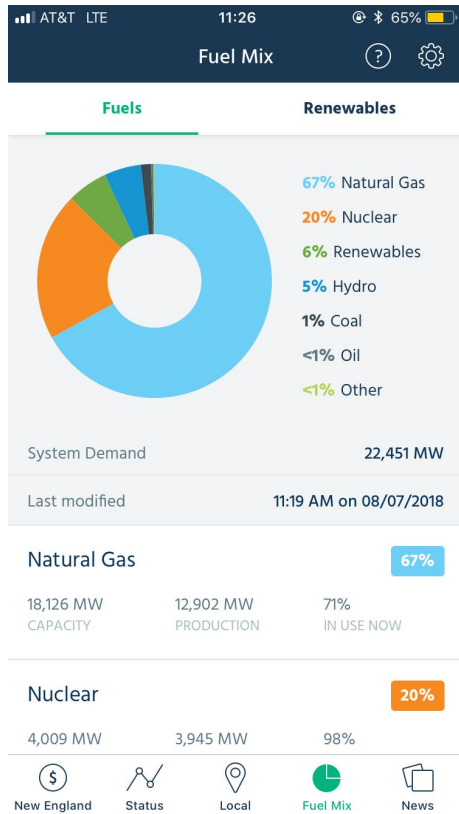
# Shaving the Peak

- We can anticipate when peak events will happen!
- Shave the Peak with efficiency, conservation, and load shifting:
  - **Conservation:** Turn off lights and \*turn AC down or off\*
  - **Efficiency:** Invest in efficient appliances to reduce usage year-round
  - **Load shifting:** Shift your electricity use to lower-demand parts of the day--e.g. charge EVs overnight, pre-cool your home, run laundry after 8pm
  - **Technology:** ConnectedSolutions smart thermostat program, timed EV charging, timed AC units

# Our Alert Program

- **Alerts and notifications:** we monitor the demand forecast and send you alerts immediately before and on peak days with reminders to cut down on electricity use and suggestions for reduction
- **Anyone in New England can participate:** we're all on one grid
- **Targeting residential consumers:** Shave the Peak is the first peak shaving program available to all New England residential consumers at no cost
- **Includes winter peaks:** electricity peaks occur in the winter, too--and they can be just as dirty and expensive as summer peaks





ISO to Go App and iso-ne.com/isoexpress

# The Future of Peak Shaving

Where can new policies and technologies take us?

# Shaving the Peak: Bigger & Better

- Compensate peak shavers
- Accurately measure, report, and aggregate residential peak shaving
- Encourage price signals to incentivize peak shaving
- Educate and involve more residential users in peak shaving
- Make it easier to Shave the Peak with smart technology

**This is where policy and technological solutions come in!**

# Policy Solutions

1. **Measure** peak shaving with smart meters
2. **Incentivize and compensate** energy consumers:
  - a. Time-varying electric rates
  - b. Peak time rebates
3. **Enable peak shaving technology**
  - a. Smart thermostats
  - b. Home energy monitoring systems
  - c. Timed electric vehicle chargers
  - d. Behind-the-meter battery storage

# Demand Response Aggregation

- An innovative model for compensating peak shavers
- Aggregate small peak reductions to participate in energy markets
- Programs—OhmConnect, Stem
  - Third party organizations connect with residential users' meters, send out alerts, and “bid into” energy markets as if their users are a power plant
  - Proceeds from energy markets are returned to users

# Peak Shaving in RI: Next Steps

- Advocate for ambitious demand response goals in energy efficiency planning
- Power Sector Transformation:
  - Support smart meter roll-out (3 – 5 years before we see this materialize)
  - Support strong time of use rates
- Invest in battery storage

# Peak Shaving in MA: Next Steps

- Advocate for ambitious demand response goals in energy efficiency planning
  - Energy efficiency plans come out this month: will they have strong targets for active demand management programs?
- Policy opens opportunity for energy storage, demand response
  - 1000 MWh battery storage goal
  - Clean Peak Standard
  - SMART solar/storage adder
- Support time of use rates and advanced meter infrastructure

# Take Action with Shave the Peak

- **Sign up and share** with friends and family:
  - [massenergy.org/shavethepeak](https://massenergy.org/shavethepeak) (MA)
  - [ripower.org/shavethepeak](https://ripower.org/shavethepeak) (RI)
- Help us **advocate** for more smart meters, demand response, battery storage opportunities in Massachusetts and Rhode Island
- If you are a **utility or municipal light plant**: contact us—we can find ways to work together to support peak demand reduction throughout New England



# Questions?

Send further questions to  
[shavethepeak@massenergy.org](mailto:shavethepeak@massenergy.org) or [kai@ripower.org](mailto:kai@ripower.org).

# Resources

Sign up for **Shave the Peak** at [massenergy.org/shavethepeak](https://massenergy.org/shavethepeak) and [ripower.org/shavethepeak](https://ripower.org/shavethepeak)

Read more about our **advocacy** on [massenergy.org/advocacy](https://massenergy.org/advocacy) and [ripower.org/advocacy](https://ripower.org/advocacy)

**ISOToGo and ISO Express** - track the peak from your phone and computer