What Is Demand Response?

Demand response allows consumers to save money while lessening the load on the electric grid during periods of extreme energy consumption or when power prices are high. It's a tool utility companies use to balance supply and demand while rewarding those who participate with incentives.

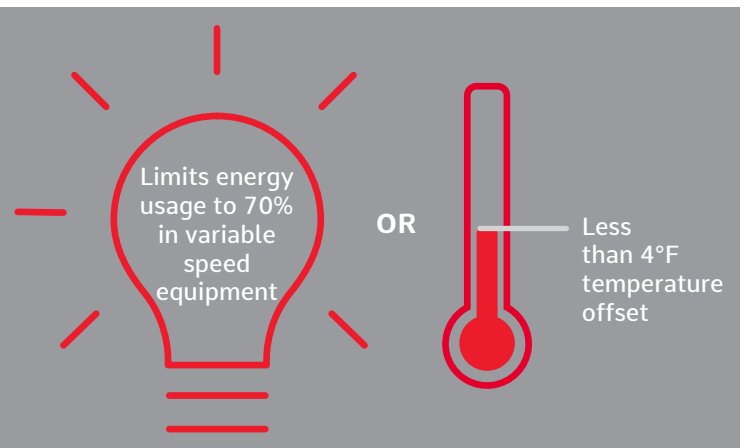
What's a DR event?

A DR event is called by utility companies during peak periods of demand to lessen the load on the electric grid. They are often referred to as Load Shed Events and can be loosely broken into 3 categories:

MOST COMMON:

General Curtailment Event*:

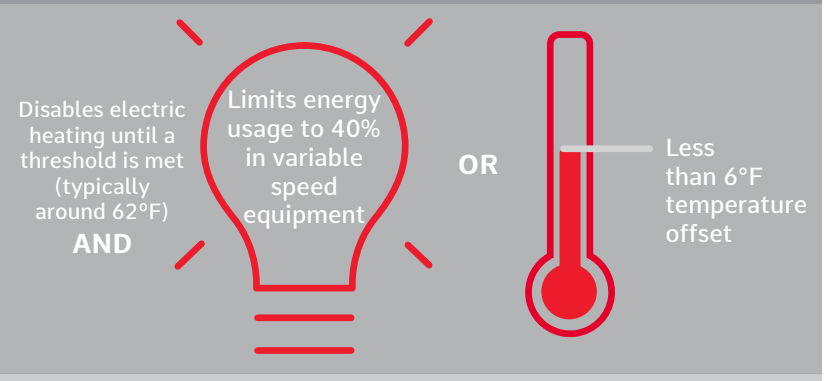
Results in a reduction in energy while maintaining comfort.



LESS COMMON:

Critical Curtailment Event*:

Results in an aggressive energy reduction and can have an impact on comfort.



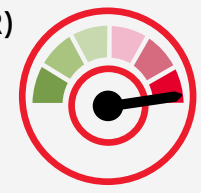
RARE:

Grid Emergency Event*:

Reserved for emergencies where the utility turns off the equipment.

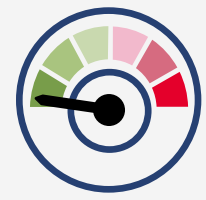
*For all the listed events, utilities typically provide means to override the event.

Demand Response (DR) is the ability to reduce energy consumption during periods of high demand.



DR programs are offered by utility companies for energy consumers to enroll in and receive money back for reducing or shifting their energy usage during **DR events.**

The opposite of Load Shed Events are **Load Up or Load Shifting Events*.**



These occur when utilities have excess energy and offer lower rates to encourage consumers to use it.

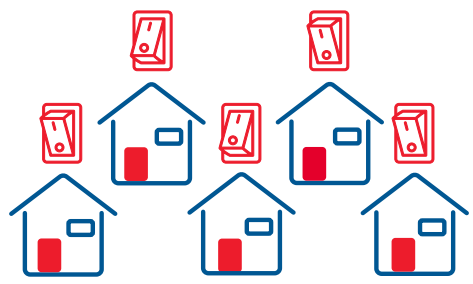
The idea is that by shifting when a home is cooled or heated (and electric cars are charged, water is heated, clothes are dried, etc.), the need to use energy during peak demand periods is offset.

Thermal storage systems use load up events the most frequently.

There are 2 ways to get involved & save money with DR

1 **Manual DR**

Involves someone physically turning off pieces of energy-consuming equipment during an event or scheduling a planned outage in a programmable thermostat.



2 **Automated DR (ADR)**

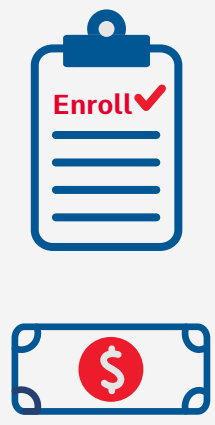
An end-to-end process managed by an aggregator that uses technology to manage electricity. ADR requires no action from the energy user and causes no interruption to business operations.

AUTOMATED

How does ADR work?

Aggregators enroll customers and establish a strategy that fits their needs. When a utility company realizes that demand is approaching maximum capacity, they call for a DR event.

Once the event ends, the schedule automatically goes back to normal, and the utility company pays the customer for contributing.



Examples of peak period reduction

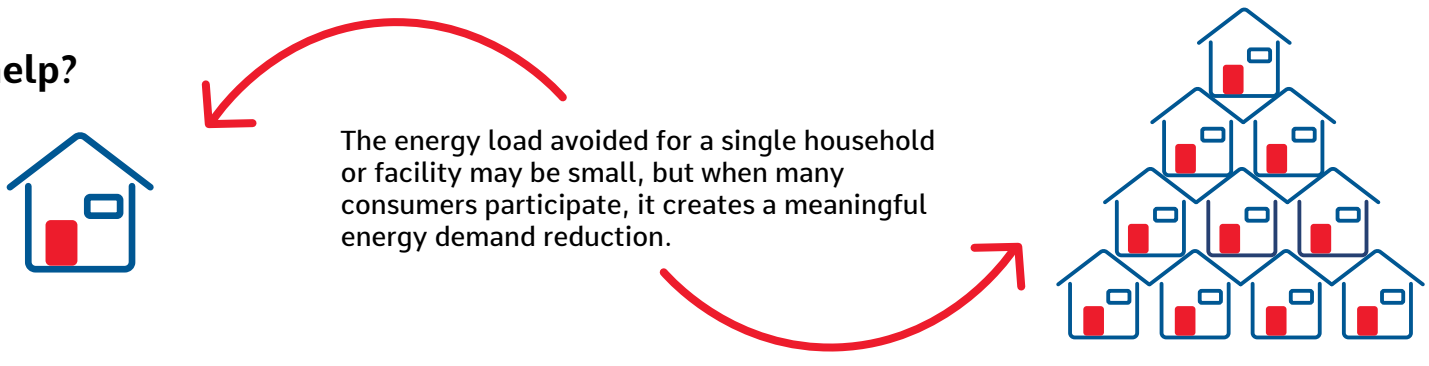
Turning up the thermostat temperature to reduce air conditioning load

Turning off certain lights

Using a thermostat's schedule feature to match lower utility rates

Shifting the time of use of some energy-consuming devices to avoid the peak demand period

How does this help?



The energy load avoided for a single household or facility may be small, but when many consumers participate, it creates a meaningful energy demand reduction.