Peak demand in electricity usage

As illustrated in the example below, both situations require one kilowatt hour of energy. The first scenario uses one kilowatt hour of energy by lighting one 100-watt bulb over the course of 10 hours. The second scenario uses the same one kilowatt hour of energy, but with ten 100-watt bulbs lit at the same time, more resources are required to provide that amount of power simultaneously. Light bulbs are a simplified example, but when you are talking about large appliances in your home such as HVAC systems, electric ovens and clothes dryers, you can see how running all of these appliances at once requires significantly more resources than staggering their energy usage over various times.

In power, time is a factor. The energy used by one 100-watt light bulb lit for 10 hours is the same as the energy used by 10 bulbs lit for 1 hour.