

The rapid expansion in the Seaport district that has resulted in an increased demand for electrical energy was preemptively predicted and planned for by Eversource Energy.

According to Juan Martinez, engineering manager at Eversource, these plans are made up to a decade in advance.

"My department actually looked at the ten- year window. For the Seaport area, specifically, we knew the load was coming basically prior to 2015."

Martinez and his team are responsible for the planning of electrical substations, structures that convert high- voltage electricity into a lower voltage that may then be distributed for residential use and alike.

"At the substation level, we actually built a new substation in 2016," Martinez said. "That substation was specifically built because we saw the need and growth in the Seaport, years in advance."

Issues surrounding high consumption, however, lie not in the ability to produce electrical power at the substation level, but rather in the process of actual electrical distribution through circuits that come out of the station to supply the customer.

"At the substation level, we're not worried at all because we do have a significant amount of capacity because of the new station that was built recently. The substations actually have expansion capabilities... within the next 20 years we're not worried at the substation capacity level," Martinez said.

"At the distribution level, obviously the distribution itself is a lot more dynamic than the substation level... but yes, you are going to have areas that will experience a little bit more growth and obviously, that department will assess that and then maybe add additional reinforcements."

Recent heat waves and widespread power outages have been a cause for concern for residents who fear that electricity demands may not be able to be met as temperatures rise. Martinez noted, however, that in Eversource's distribution department's planning strategy, heat waves and high consumption days are accounted for.

"The Distribution Department also has a yearly plan where they look at what we call reliability and then what we call capacity. So they will look at all the circuits, look at the consumption during the peak days of the summer and they will look at the capacity of the circuit. And if there's any deficit we'll address it ahead of time, you know, we don't wait for things to basically overload."

Chris McKinnon, a spokesperson for Eversource, explained the process Eversource employs, "We have system operators who are in real time monitoring the entire system so they can actually see where the load is. And if necessary, if they see it getting too high in a certain area, they can use our remote switching capabilities to actually ship some of that load into other circuits so that it doesn't get overloaded. So there's these preemptive steps that we're constantly taking to make sure that our system doesn't get overloaded."

According to McKinnon, mass outages due to heat are commonly mistaken to be caused by overloading, but instead are likely due to overheating of individual cables or other parts of the distribution process.

"When we saw some of the outages in the last round it wasn't necessarily because there was overloading on a system, it was actually because equipment on the system became physically overheated... any type of machinery that gets overheated can have physical damage caused to it. And then you have to go out and you make the repair and then you get things back up and running," McKinnon said.

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