In Ashes of Eaton Fire, New Questions for the Power Company

Investigators are still trying to determine what started a fire that raged through Altadena, Calif. A new video appears to show sparking on a power line near the origin of the blaze.



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Early on the evening of Jan. 7, a resident of a neighborhood of homes backed up against the San Gabriel Mountains in Southern California saw what he described as a bright white light, and then a small fire at the base of an electrical tower up in Eaton Canyon. Another neighbor reported that his lights flickered a few minutes before he saw fire underneath the tower.

So far, many clues to the origins of the deadly Eaton fire, which started in the area just after 6 p.m. that evening and went on to kill 17 people, have pointed to the brushy hillside where a tangle of electrical lines stretch up Eaton Canyon.

Yet Southern California Edison, the utility that operates the electricity infrastructure in much of the Los Angeles region, has said it has no record of an electrical failure on its lines in the vicinity, and that three low-voltage distribution lines in the area had been de-energized long before the fire.

While an official cause is likely to take months for investigators to determine, a growing body of evidence is emerging that suggests the fire started in the dry grasses below a set of transmission towers carrying high-energy power lines. The lines were buffeted that evening by winds that at times reached 100 miles per hour.

A video recorded by a surveillance camera at a gas station less than a mile south of the towers appears to provide an important new clue: Supporting what the residents saw, it shows flashes of light at 6:11 p.m. in the vicinity of three high-voltage electrical towers in Eaton Canyon, and then flames moments later.

The location of the flashes, verified by The New York Times through photographs and videos captured from the same vantage point as the original surveillance footage, could help determine whether power lines played a role in igniting the deadliest of several blazes that are still burning across the Los Angeles area.

The high-voltage transmission lines still had power amid the fire, even though, under Edison's guidelines, engineers should consider cutting their power when winds exceed 68 to 90 miles per hour.

Edison officials said they had not seen the new video until The Times shared it with them. They urged that it immediately be made available to investigators.

"It requires analysis," said Kathleen Dunleavy, a spokeswoman for the utility. "This is an ongoing investigation and every piece of information is crucial. We are fully cooperating with the investigation and are committed to a thorough process."

Neither the video nor any other evidence so far shows conclusively what ignited the fire. But a variety of photos and video from the scene, together with interviews with eyewitnesses, investigators, firefighters and outside experts, all point to a fire that began near the base of one of the utility towers and started to quickly spread.





Source: Aerial image by Nearmap, fire extent from Cal Fire • Photos and videos (clockwise from top left): Security camera footage from Arco gas station security camera footage; provided by Mikal Watts; Jeffrey Ku; Jennifer Errico

The issue has enormous implications for who — if anyone — will be held liable for the blaze, which damaged or destroyed more than 10,000 structures and could lead to financial losses currently estimated by Verisk, an analytics company, at as much as \$10 billion.

Pacific Gas & Electric, California's largest utility, filed for bankruptcy protection in 2019 after accumulating \$30 billion in liability from years of wildfires. The deadliest, the 2018 Camp fire, destroyed the town of Paradise and led PG&E to plead guilty to 84 counts of involuntary manslaughter.

The parent company of Southern California Edison has seen its stock decline by more than 26 percent this year as questions grow about its potential liability. But California enacted controversial legislation in 2019, championed by Gov. Gavin Newsom, shielding the state's public utilities from runaway liability following wildfires, and effectively bailing PG&E out in the wake of the Camp fire.



Transmission towers in the hills above Altadena where the Eaton fire began. Blacki Migliozzi/The New York Times

In the days after the fire started, Edison had insisted that there was no evidence to support the idea that a failure of its equipment sparked the Eaton fire.

"We're not seeing any electrical anomaly until more than an hour after the reported start time of the fire," Pedro Pizarro, the president and chief executive of Edison International, the parent company of Southern California Edison, said in an interview this month. "And we don't see any anomaly until an hour, over an hour" after the start of the fire.

Eyewitness reports of a fire around the transmission towers could have resulted from human activity under the lines, Edison officials have said.

One video newly shared with The Times, registered at 6:14 p.m. from a home on Kinclair Drive in the Kinneloa Mesa neighborhood near Eaton Canyon, shows the early stages of a fire directly beneath one of the electrical towers.

Max Belin, whose house has a view of the electrical towers, was the neighbor who saw the flash of light, followed by a small blaze at the tower's base. Brendan Thorn, the other neighbor, said that when he first saw the fire, it "completely engulfed all four legs of the tower."



Max Belin noticed the beginnings of a fire near his home in Altadena, Calif. Stephen Ross Goldstein for The New York Times

Several sets of transmission towers stand in the hills above Altadena, the unincorporated community northeast of Los Angeles that bore the brunt of the fire's spread. The Times was able to verify the location of the trio of towers near the fire's start by matching the 6:14 p.m. video, and others taken around the same time, with the vantage points of eyewitness from 10 locations in the surrounding area.

There was discoloration on this group of towers, and metal debris underneath, that were visible days later and was unlike other towers that The Times visited in nearby burned areas.

Whisker Labs, a Maryland technology company with sensors that can detect abnormal activity on electrical wires, detected electrical faults in the general area at around 6 p.m.

Scars Appear on Transmission Towers

On Jan. 20, nearly two weeks after the Eaton fire broke out, investigators were examining transmission towers, which had visible signs of smoke residue that appeared to have resulted in a brown discoloration on the structure — features that distinguished them from other towers in the area.

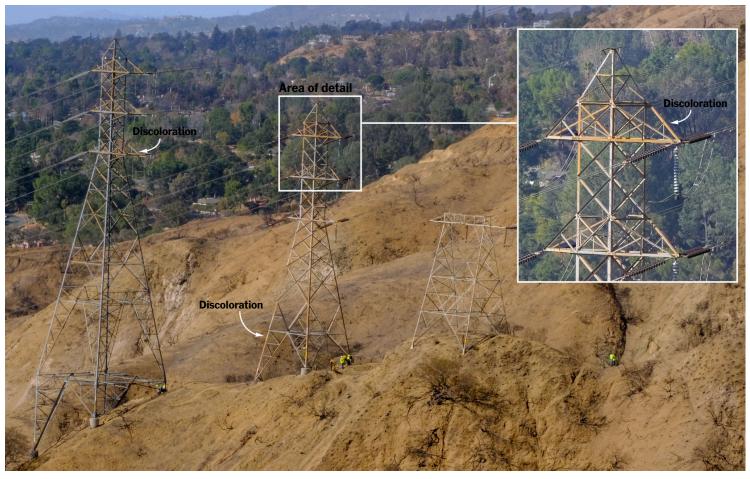


Photo by Blacki Migliozzi / The New York Times

Edison's account has shifted. Initially, in the days following the start of the fire, Mr. Pizarro said there were no electrical problems in the area during the 12 hours before the blaze. But last week, the utility said that while there was not a problem in the transmission lines running through Eaton Canyon, a fault had been measured at 6:11 p.m. at a substation roughly five miles away.

As a precaution, Southern California Edison had cut power to three low-voltage distribution circuits that served Kinneola Mesa before 4 p.m. on Jan. 7, more than two hours before the reported start time of the fire.

But the utility maintained power on the towering high-voltage transmission lines, each carrying 220 kilovolts of electricity.

Problems during wind events often occur on the much-smaller distribution lines, which typically run on wooden poles and are less resistant to wind than the heavy metal towers that carry high-voltage transmission lines.

But problems have been known to occur on much stronger transmission lines as well. In past fires, transmission equipment has heated up when massive faults occur on these high-voltage lines and they begin to arc, said Robert McCullough, of McCullough Research, a utility consulting firm based in Portland, Ore., who reviewed records and data at the Times's request.

During arcing, electricity jumps from one place to another, and the lines can dangerously flash and spark. When that happens, the metal on the steel towers can reach temperatures as high as 1,500 degrees, melting pieces of the towers, the bolts on the structures or the aluminum wires. The molten metal drops to the ground and can spark brush fires.

"Arcing can ignite a fire, and that's obviously going to be largely dependent on what's underneath that pole at the time," said Shawn Zimmermaker, deputy chief of law enforcement for the northern region of Cal Fire, the state fire agency. "It would be a cause that investigators would consider, but every potential cause will be looked at." He emphasized that he was not involved in the investigation.

Cal Fire investigators were seen at the transmission towers on Jan. 14, a week after the fire, combing the area with metal detectors.

The decision by Southern California Edison to shut off power to Kinneola Mesa, a community of more than 1,000 residents that lost many homes in a 1993 fire, was based on a set of criteria that includes weather forecasts and conditions on the ground, Edison officials said.

"We have rigorous criteria," Mr. Pizarro said. "What's the overall risk of the area, the potential for consequence? And then what are the ambient conditions? Let's say, you know, humidity in the air? What is the moisture or fuel content, you know, around the sites? And importantly, what are wind speeds now?"

Cutting power to a transmission line is a significant step, likely leading to power disruptions over a broad area. So Mr. Pizarro said the threshold for cutting power to transmission lines is high, and Edison never had indication it was needed. "We recognize that there might be something that we just don't understand right now," he said.

At least a dozen lawsuits with scores of plaintiffs have already been filed against Edison on behalf of people who have either lost their homes or their lives, presaging a long legal battle ahead.

Last week, a state judge ordered the utility to produce "data from the four low-voltage distribution circuits closest to the preliminary origin area in Eaton Canyon."

Edison had initially rebuffed efforts to preserve the data, writing in a letter to lawyers that it was "unaware of any information or evidence suggesting that" the company's "electrical facilities in Altadena may have been related to the ignition of the Eaton Fire."

In any case, the investor-owned utility is shielded from the full measure of damages under the 2019 law. While the legislation required utilities to establish new wildfire prevention measures, it also created a \$21 billion fund that utilities can draw from in the aftermath of fires, if damages exceed \$1 billion.

Loretta Lynch, a lawyer and former president of the California Public Utilities Commission, and a longtime critic of the legislation, said the law ensures that California ratepayers and taxpayers will cover some part of liability when fire damages run high, even if utilities are found to be responsible.

"It's a utility's dream," she said.

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