ALERTWildfire is a consortium of three universities -- The University of Nevada, Reno (UNR), University of California San Diego (UCSD), and the University of Oregon (UO) -- providing access to state-of-the-art Pan-Tilt-Zoom (PTZ) fire cameras and associated tools to help firefighters and first responders:

(1) discover/locate/confirm fire ignition,
(2) quickly scale fire resources up or down appropriately,
(3) monitor fire behavior through containment,
(4) during firestorms, help evacuations through enhanced situational awareness, and
(5) ensure contained fires are monitored appropriately through their demise.

During the past two fire seasons of 2016-2017, ALERTWildfire provided critical information for over 350 fires, including the Lilac, Wall, Whittier, Thomas, Tule, Woodchuck, Earthstone, Truckee, Draw, Snowstorm, Hot Pot, and Emerald fires; a 2016 arson spree in Lake Tahoe; and hundreds more.

In late 2017, the devastating North Bay Complex and Thomas fires brought into sharp focus the need to quickly expand coverage across the western US.

ALERTWildfire Partners

University of Nevada, Reno	Sonoma State University
University of California San Diego	UC Davis Tahoe Environmental Research Center (TERC)
University of Oregon	University of California Santa Barbara
Nevada Seismological Laboratory	San Diego State University
High Performance Wireless Research and Education Network (HPWREN)	San Diego Gas and Electric, Inc.
Nevada Bureau of Land Management	Southern California Edison, Inc.
Oregon-Washington Bureau of Land Management	San Diego County Board of Supervisors
Idaho Bureau of Land Management	San Diego County Fire Authority
Tahoe Prosperity Center	San Diego County Sheriff
National Forest Service	California Department of Parks and Recreation
Nevada Division of Emergency Management	Orange County Fire Authority
Nevada Enterprise IT Services (EITS)	Corporation for Education Network Initiatives in California (CENIC)
NSHE System Computing Services	Heavenly Ski Resort
Nevada Department of Transportation	Homewood Ski Resort
California Tahoe Conservancy	Diamond Peak Ski Resort
Tahoe Regional Planning Agency	Sugarbowl Ski Resort
Sonoma County Water Agency	Alpine Meadows Ski Resort
California Dept of Forestry and Fire Protection	Sierra at Tahoe Ski Resort
Douglas County, Nevada	Mount Rose Ski Resort
Northwest Nazarene University	

SoCal Edison camera network monitors potential wildfires

By Carlos Granda, ABC News
Monday, March 4th, 2019

In August 2018 as the Holy Fire threatened Santiago Peak, it was all captured by new SoCal Edison cameras and those images helped firefighters battle the blaze.

"They recognized early on that fire was going to be substantial burning into the forest and they were able to dispatch appropriate resources, aircraft, dozers and crews quickly," said Troy Whitman, SCE fire management officer.

The cameras allowed firefighters to see when and where the fire started and to follow it. It's part of a network of cameras set up across Southern California. On a clear day each can see up to 50 miles. In addition, SoCal Edison is upgrading its power lines and poles and will install weather sensors across the area.

"What this provides us with is real time information of what is going on across the service territory," said Don Daigler, SoCal Edison's director of business resiliency.

All of these cameras are monitored 24 hours a day at the SoCal Edison command center. They also work with fire agencies to help in wildfire response.

"We can control to the degree we can our system, but we can't control the weather, we can't control the changing climate environment," Daigler said.

By the end of next year, SCE expects to have up to 160 cameras covering 90 percent of their service area. Anyone can go online and check them out at alertwildfire.org.

Eyes in the sky: Edison is using this tech to sound the alarm about wildfires
SCE also fire-proofing conductors, power poles

By STEVE SCAUZILLO, San Gabriel Valley Tribune
February 28, 2019

Just three months before the Holy Fire broke out last summer, new high definition cameras were installed atop Santiago Peak as part of a joint venture between Southern California Edison and the University of California San Diego to assist first responders and protect lives and property.

Although the Holy Fire burned 23,000 acres and destroyed 18 structures mostly in Trabuco Canyon, nearby communities of Corona and Lake Elsinore were spared.

You could say the camera system — which now covers five Southern California counties and counting — survived its trial by fire. In fact, the two test cameras proved SCE's contention that installing cameras in remote, high-fire areas is a worthwhile investment.

"The Orange County Fire Authority was able to steer the cameras toward Holy Canyon and they saw the amount of smoke coming out and quickly deployed engines, aircraft and dozers. It was a much faster response," Troy Whitman, SCE senior fire management officer, said Thursday.

"If the fire was not detected this early, and the cameras didn't provide situational awareness, the air drops wouldn't have occurred. Or they would've occurred after the peak was burned," he added.

By Thursday, SCE reached a near halfway point, installing its 70th camera. As part of a three-year, $10.5 million contract, it will reach 160 cameras in place by the end of 2020, covering 90 percent of the utility's highest fire-risk regions, said Thomas Brady, SCE senior manager for emergency responses.

Utilities are taking to technology to inform fire agencies of wildfire threats sooner. But they are also using technology to fire-proof utility lines and equipment to, yes, keep the lights on, but also to protect the utility and its stockholders from liability and potential insolvency.

PG&E filed for bankruptcy protection last month, facing $30 billion in potential damages from lawsuits over the catastrophic wildfires in 2017 and 2018 which killed scores of people and destroyed thousands of homes. Investigators are probing whether the utility's equipment sparked the Camp Fire in Butte County, the deadliest, most destructive wildfire in 100 years. It killed at least 86 people and torched 15,000 homes.

In 2017, San Diego Gas & Electric supported the installation of 15 high-definition cameras in San Diego's most fire prone areas, according to UC San Diego. In San Diego and Lake Tahoe, the same system SCE is installing was credited with detecting more than 500 fires in the last two years, the university reported.

The cameras are just one aspect of how SCE is trying to protect itself from igniting wildfires and being sued.

SCE has replaced 54,000 utility poles in high-fire risk and high-wind areas from 2014-2018 and with fire-resistant ones in high-risk areas. When a pole topples during a wind storm, the live electrical wires can ignite brush.

Also, SCE is currently working on "hardening" its conduits by covering conductor elements with an inflammable sheath.

"This can help prevent the risk of debris blowing up and creating an ignition source," Brady said. The efforts are part of a Wildfire Prevention Plan filed with the California Public Utilities Commission earlier this month.

In Irwindale, SCE opened an Emergency Operations Center staffed 24 hours a day to view camera images on big screen TVs. So far, SCE has placed cameras on the highest points near Malibu, Thousand Oaks, Trabuco Canyon, Corona and Lake Arrowhead, spokesman Reggie Kumar said.

Those evacuated from their homes during a fire can view the cameras on a public site. Often, it may tell them if their homes were spared or burned, Whitman said. "It is also giving them good intelligence of how they should evacuate," he said.

Besides cameras, SCE will have installed 850 portable weather stations on peaks, mountains and canyons by the end of 2020 and has about 125 operating already. Wind speed and direction, humidity and barometer data are fed to the operation center where meteorologists predict weather patterns five to seven days ahead.

"We can find windier spots in different canyons in the mountains," SCE meteorologist Daniel Russell said.

SCE uses remote cameras and weather data to determine if electrical power should be shut down as a precaution. Last year, emergency power shutoffs occurred twice, affecting about 150 customers, Brady said.

Sometimes, troubleshooters venture into the canyons by foot with handheld wind meters, Brady said. "(Wind) causes the most issues for our system in general," said Russell, who added that wind speed readings in canyons often are lacking in National Weather Service reports.