



## RELIABILITY

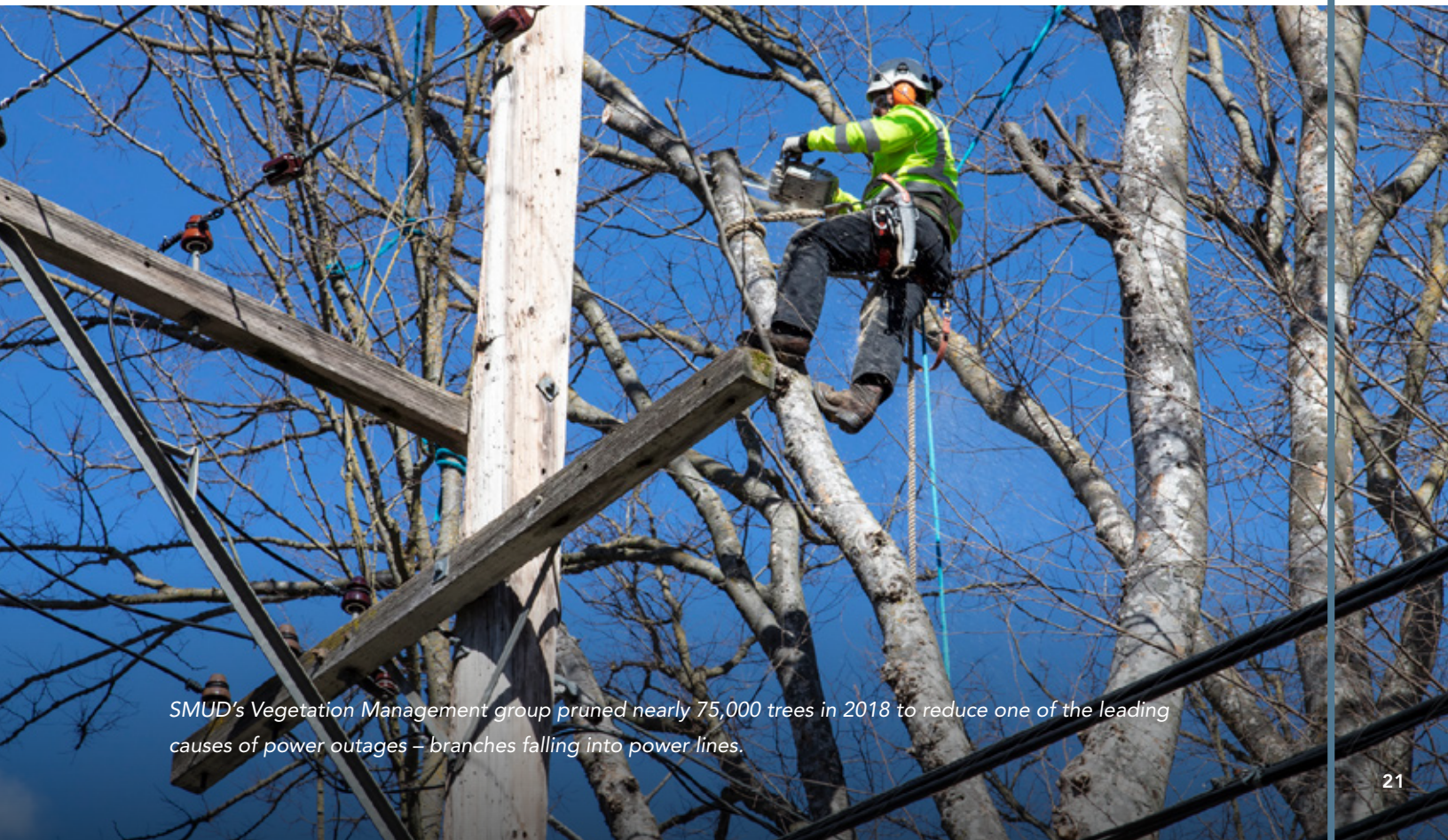
Providing reliable electric service to all of our customers is one of SMUD's core values. The frequency and duration of outages is one of the most important factors on how customers and regulators judge SMUD.

After a couple of challenging years, due in part to an increased number of cars crashing into utility poles, SMUD delivered greatly improved reliability in 2018.

The two ways SMUD measures distribution system reliability are through SAIDI (System

Average Interruption Duration Index) and SAIFI (System Average Interruption Frequency Index). SAIDI indicates the average outage duration for customers in a given year. SAIFI indicates how many outages, on average, our customers experience in a year.

SMUD's numbers were excellent in 2018 - 45 minutes for SAIDI, 0.93 for SAIFI. Both figures are better than SMUD Board's aggressive reliability goals. The SAIDI figure was SMUD's lowest since 2006, and SAIFI figure was the best since 2013.



*SMUD's Vegetation Management group pruned nearly 75,000 trees in 2018 to reduce one of the leading causes of power outages – branches falling into power lines.*



The improved figures were attributable to a variety of factors, including:

- The installation of more remotely operable switches on the 69kV system;
- Two rounds of vegetation patrols on all of the 69kV circuits targeting trees located outside SMUD's rights of way;
- The use of LIDAR technology in our vegetation management efforts;
- The installation of pole barrier systems, relocation of poles and installation of new visibility strips, reducing the impact from car pole accidents;

- Infrared inspections of bulk transmission substations; and
- The installation of animal guarding at three substations most susceptible to animal-related outages.

SMUD is replacing Substation A at 16th and H Streets with what will be known as Substation G. The new substation will accommodate the future load growth we're anticipating in downtown Sacramento.

SMUD purchased land for a new substation in Elk Grove in 2006. The recession delayed its construction, but Elk Grove is booming again, and the Franklin Bulk Substation will meet the increased energy demands of the south county area.

**SMUD REPLACED MORE THAN 370,000 FEET OF UNDERGROUND CABLE IN 2018. THE NUMBER OF CABLE FAULTS IN 2018 WAS 516 AS COMPARED TO 641 IN 2017.**

