



LADWP Crews Act Fast to Repair Critical Transmission Tower

By Carol Tucker

On August 5, 2021, LADWP's Transmission Construction and Maintenance Division was notified that a critical transmission tower supporting the Victorville-Century Transmission LT2 Line was severely damaged and leaning after being struck by a vehicle. An emergency response operation was conducted by Transmission, Construction and Maintenance, working collaboratively with several other LADWP groups and divisions, and the critical transmission line was re-energized just eight days later.

The tower was crippled when the vehicle crashed into a horizontal bar that ties two tower legs together. The Victorville-Century Lines 1 and 2 are critical high-voltage circuits that bring power to the Los Angeles Metro area from outside the city. Operating since 1936, they are part of the original Boulder Transmission Lines 1 and 2. Over the years those lines were renamed and divided into several circuits, forming a major transmission corridor between Boulder, Nevada and Los Angeles.

Two Electrical Distribution Mechanic Supervisors were dispatched immediately using an Aviation Services helicopter to inspect the damaged tower, located in the remote Mojave Desert about 30 miles south of Victorville. They determined the 130-foot high tower was unstable and that a temporary structure needed to be built as quickly as possible to restore service on the line. Crews were mobilized from the Metro, Victorville and Mojave yards and began transporting tools, equipment and materials.



Temporary transmission tower to restore circuits. Photo by Graham Peace.

Brian Wilbur, Deputy Senior Assistant General Manager of Power Construction, Maintenance and Operations, said the crews received support from many other LADWP divisions, including Transmission and Structural Engineering, and Environmental Services. Security Services dispatched personnel to guard the equipment at night, and Fleet Services provided two 110-ton hydro cranes along with operators, drivers and fuel trucks.

The impacted portion of the lines was in the same vicinity as the 2016 “Blue Cut” fire, which took the lines out of commission for 69 days. When reconductoring the lines after the fire, the Power System was able to upgrade the conductors with higher-grade aluminum, which is lighter and easier to repair than the original copper wires.

The repair work entailed stabilizing and securing the damaged tower, and building a temporary structure to support the conductors until a new permanent structure can be erected. For the temporary

tower, the crews used fiberglass poles that had been purchased for emergency restoration. The fiberglass poles offer greater mobility and ease of construction compared to traditional methods using guyed lattice temporary towers. The Victorville-Century lines were reenergized at 1646 hours on August 13, 2021—a mere eight days after the accident.

Graham Peace, Superintendent of Transmission, Construction and Maintenance, attributed the quick turn-around to the crews' experience repairing the transmission system during emergencies such as fires, windstorms and even plane crashes.

"Prior emergencies have provided the employees with the necessary experience and skills to respond efficiently and effectively to new events such as this," he said. Past experience also has helped employees from different divisions work well together. "The support the section received from the top down and the working relationship developed with Fleet and Engineering ensured crews received the assistance and resources needed to finish the project in such a short time span."

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