Sylmar Converter Station Turns 50

By Christy Holland

Fifty years ago, LADWP celebrated the completion of the 846-mile Pacific DC Intertie (PDCI) and the launch of the Sylmar Converter Station—a state-of-the-art power transmission facility. The Sylmar Converter Station is the southern anchor of the PDCI, which is a high-voltage, direct current transmission power line that originates at the Celilo Converter Station in The Dalles, Oregon. Today, the station has not only withstood the test of time; it remains just as relevant and vital as when it received its first megawatt in 1970.

“When the PDCI was first completed, it was the longest and highest voltage DC line in the United States,” said Robert Fick, Manager, Hydro & Renewable Generation/High Voltage Stations, Power Supply Operations Division. “Nothing of this magnitude had been built before, so there was a lot of risk in taking on a project of this size.”

Giant thyristors at Sylmar Converter Station. Photo by Chris Corsmeier

Flash forward 50 years and the PDCI is still the longest DC line in the United States and in North America. While it is no longer the highest voltage DC line, it can boast that its southern anchor, the Sylmar Converter Station, has recently increased its capacity from 3,100 megawatts (MW) to 3,220 MW following a $223 million facility upgrade. This modernization project was designed to extend the facility's lifespan for 40 more years, ensuring continued reliability of power transmission between the two regions.

Think of the PDCI as a high-voltage electric superhighway and the Sylmar Converter Station as a transfer hub. The station receives high voltage power and then safely and efficiently converts it to AC

power for delivery to customers throughout Los Angeles. The PDCI makes it possible to balance the power needs in the west by taking a surplus commodity and sharing it with partners in Southern California, where power supply demands are much greater.

It also helps strengthen LADWP's path to meeting our
100 percent renewable energy goal by 2050.

"The PDCI was such a pioneering achievement when it was built, and Los Angeles and Southern California still benefit from it today," said Fick. "Not only does it tie two distinct regions together for greater reliability of the western grid, it also provides access to power from clean hydroelectric and renewable sources."

The Sylmar Converter Station is maintained and operated by LADWP; partners include Southern California Edison, and the cities of Glendale, Burbank and Pasadena.
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Featured Photo: The Sylmar Converter Station crew. Clockwise from left front: Kenneth Ly, Anthony Juarez, Daniela Lara, Andrew Gonzales, Robert Fick, Jeffrey Lamb, Bryon Harlacher, Michael Lane, Arin Barkhordarian and Gabriel Perez. Photo by Art Mochizuki