

LEE VINING HYDROELECTRIC PROJECT DESCRIPTION

Southern California Edison (SCE) is beginning the Federal Energy Regulatory Commission (FERC) relicensing of the 11.25 megawatt (mW) Lee Vining Hydroelectric Project (FERC No. 1388) (Project or “Lee Vining”). The Project consists of four dams, powerhouse and the other lands and waters necessary to operate the Project. The Project is located on Lee Vining Creek in Mono County, California.

All non-federal hydroelectric projects in the United States operate under licenses issued by FERC. FERC issued a 30-year license to SCE in February 1997 and that license expires on January 31, 2027. For SCE to continue operating the Project, SCE must obtain a new operating license from FERC. This process requires SCE to complete a multi-year application process and file a license application with FERC by January 2025. The process of relicensing formally commences with the filing of a Preliminary Application Document (PAD) and Notice of Intent (NOI); SCE anticipates filing the PAD and NOI in August of 2021.

PROJECT OVERVIEW

The Project is located on the east slope of the Sierra Nevada along the eastern boundary of Yosemite National Park and approximately nine miles upstream from Mono Lake and the town of Lee Vining in Mono County, California. Most of the Project occupies public lands administered by the U.S. Forest Service (USFS), Inyo National Forest.

The Project is located on Lee Vining Creek. The key Project facilities include Saddlebag Dam and Lake, Tioga Dam and Lake, the Rhinedollar Dam and Ellery Lake, a flowline consisting of pipeline and penstock, and the Poole Powerhouse. Both Saddlebag Lake and Tioga Lake drain into Ellery Lake, which is the intake and regulating reservoir for Poole Powerhouse. The two lakes have historically been drawn down in the winter to provide storage capacity for spring runoff. Ellery Lake is the forebay for the powerhouse, and its storage level is not as varied as the two upper reservoirs. Water is conveyed from Ellery Lake to the powerhouse via the flowline and penstock. Minimum flows are provided into stream reaches between the reservoirs and the powerhouse.

SADDLEBAG LAKE AND DAM

Saddlebag Lake is in the headwaters of Lee Vining Creek. The dam is 45 feet high and 600 feet long, geomembrane-lined, redwood faced, and composed of rockfill. The dam impounds the 297-acre Saddlebag Lake. The spillway is centrally located on the dam and is 54-feet-long and 3-feet-deep timber flume.

TIOGA LAKE, TIOGA DAM, AND TIOGA AUXILIARY DAM

Tioga Lake is in the headwaters of Glacier Creek, which then drains into Lee Vining Creek. Tioga Lake has two dams, the main Tioga Dam and the Tioga Auxiliary Dam. Tioga Dam is a 27-foot-high, 270-foot-long, redwood faced, rockfill dam. Tioga Auxiliary Dam is a 9-foot-high, 50-foot-long, constant radius concrete-arch dam. These dams together impound the 73-acre Tioga Lake. The Tioga Dam spillway is a 57-foot-long, 4-foot-deep rock-filled concrete weir at the southeast end of the dam.

ELLERY LAKE AND RHINEDOLLAR DAM

Ellery Lake is on Lee Vining Creek. Both Saddlebag and Tioga Lakes drain to Ellery Lake. The Rhinedollar Dam is an 18.5-foot-high, 437-foot-long rockfill dam that impounds the 61-acre Ellery Lake. The Project's concrete intake structure is located at Rhinedollar Dam. The Rhinedollar Dam spillway is a concrete side channel and is 36 feet long and 5 feet deep.

POOLE POWERHOUSE

The Poole Powerhouse contains one General Electric generating unit with a rated capacity of 11.25 mW. The Project has one Pelton single overhung, horizontal-impulse turbine with a design capacity of 17,910 horsepower (hp) with a hydraulic capacity of 105 cubic feet per second (cfs).

FLOWLINE/PIPELINE AND PENSTOCK

The Project's pipeline/flowline is 2,452 feet long, 48 inches in diameter, and 3/16 inches thick. It is composed of double riveted lap joint steel pipe. The Project's penstock is 3,681 feet long, 28 to 44 inches in diameter, and 3/8 to 3/4 inches thick. It is composed of lap welded steel. These features are below ground in a tunnel.

OPERATIONAL MINIMUM FLOW REQUIREMENTS

The Project's minimum flow release requirements are outlined in the FERC license. Minimum flow requirements are different below each dam. Requirements are based on whether the water year is wet, normal, or dry and the water inflow each reservoir receives. A water year is considered "wet" when the annual precipitation was in the highest 30% of the previous years, back to 1966. A water year is "dry" when the precipitation is in the lowest 30% of the previous years, back to 1966. A "normal" water year is when it is neither wet nor dry.

Below Saddlebag Dam, the flow requirements are determined annually with USFS, no later than May 1. If SCE and USFS do not agree on flows, these minimums apply year-round: 14 cfs for wet years, 9 cfs for normal years, and 6 cfs for dry years.

Below Tioga Dam, the flow requirements are different depending what month it is:

- May through September: the flow requirement is modified depending on the water-year and the amount of inflow.
- October and November: the minimum flow is 2 cfs or the natural inflow.
- December through April: the minimum flow is equal to the natural flow.

Below Rhinedollar Dam, the minimum flow requirement is 27 cfs or the natural flow, whichever is less, between August and May. In June and July, the minimum flow is 89 cfs or the natural flow, whichever is less.

