PALISADES DAM

Sees a Brighter Future With Lighting Upgrade

70%
Reduced Electrical Consumption

256,279 kWh
Annual Energy Savings

$64,070
Incentive Received

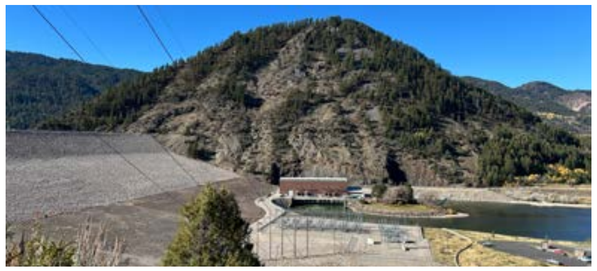
Project Background

With financial and technical assistance from Bonneville Power Administration's (BPA) Energy Smart Reserved Power (ESRP) Program, U.S. Bureau of Reclamation's (USBR) completed energy saving lighting upgrades at their Palisades Dam's facilities in 2024.

Palisades Dam, completed in 1957, is located on the Snake River 55 miles southeast of Idaho Falls, Idaho. The dam creates a reservoir of 1.2 million acre-feet working capacity with an outlet works capacity of 33,000 cubic feet per second. Palisades Dam's powerplant is Idaho's largest USBR power facility and boasts a total generating capacity of 177 megawatts (MW). It produces approximately 907 million kilowatt-hours (kWh) of electricity annually, which is enough to power a city with a population of 85,000 (about the size of Idaho Falls). Much of the power produced at the dam is used to pump water for the Minidoka Project. Excess power is used to supply power to BPA's southeast Idaho utility customers.

Palisades Dam staff requested technical assistance from BPA's ESRP program to perform a lighting energy audit which would identify the lighting fixtures that needed to be upgraded. Dick Stroh, an experienced engineer from BPA's Power Energy Efficiency organization, conducted a detailed lighting energy audit and analysis which specified the higher efficiency light emitting diodes (LED) fixtures and bulbs for the interior areas of their facilities.

Palisades Dam received ESRP Program incentive by upgrading to LED lighting in its powerhouse, gate house, parts warehouse, maintenance shop, and conference center.



TOP: Palisades Dam.
BELOW: New high bay LED lights in the powerhouse generator room.

Results

- Improved energy efficiency by upgrading 839 existing interior fluorescent, incandescent, and high intensity (HID) metal halide lighting fixtures to innovative LED lighting fixtures and bulbs.
- Reduced operations and maintenance cost by using the longer life LED bulbs.
- Enhanced lighting quality from LEDs which results in improved safety.
- Increased opportunity to use saved generated electricity.

New corncob LED lights in the powerhouse pipe gallery

Bonneville
POWER ADMINISTRATION

BPA's ESRP Program provides turnkey technical assistance and financial incentives for implementing energy efficiency projects at eligible federal agency sites in BPA Territory that have no serving electric utility. These sites include the U.S. Army Corps of Engineers and the USBR hydroelectric facilities with electric loads that use station service (self-supplied power).

To learn more about BPA's ESRP program and how it can help you,
visit Energy Smart Reserved Power - Bonneville Power Administration.
For assistance, contact the program at esrp@bpa.gov.