



## KEY STATS

**Customer:** Idaho Power Company

**Number of Turbines:** 1

**Turbine Type:** G150 Francis

**Power:** 3033 kW

**Head:** 206 ft

**Flow:** 200 cfs

**Runner Dia:** 1075 mm

**Speed:** 400 rpm

## SCOPE OF SUPPLY

1075mm G150 Francis reaction turbine (fitted with hydraulic actuators).

Set of inlet pipework up to the flange of the main inlet valve.

Main inlet valve, double flanged 1400mm butterfly valve, weight to close hydraulic actuator to open.

3591 kVA synchronous generator, with turbine runner supported on flange end overhung shaft (including PMG, brake).

Control panel.

Hydraulic power unit.

Cooling water & pressure sensing panels.

Full set of O&M manuals.

## SHOSHONE FALLS HYDROELECTRIC FACILITY UPGRADE PROJECT

Built in 1907, Shoshone Falls was the first power plant in Idaho's Magic Valley. It was acquired by Idaho Power in 1916 and rebuilt in 1921. Shoshone Falls Power Plant is located on the Snake River near Twin Falls, Idaho, at river mile 614.7. The plant includes a diversion dam and a powerhouse. In 2018 Gilkes were awarded the contract to supply a new hydroelectric turbine to replace two smaller aging generators. Gilkes engineers selected a package that delivered a solution geared towards the energy production, efficiency and longevity of this hydro project.

Commissioning of the new turbine was completed in 2020. The Francis turbine operates on a head of 206ft with an output of 3MW. The new single 3MW unit replaces the two older turbines that had operated in the powerhouse since 1904 and 1907 respectively.

Due to recent travel restrictions, installation of this site was carried out by the owner's maintenance crews and engineers, under the remote guidance of Gilkes project engineers. The project was developed by an experienced hydro utility which allowed us to undertake the management of the installation in this way. For both the installation and commissioning supervision, and due to the seven-hour time difference, our project engineering team made themselves available to answer questions well into their evenings. This allowed the site activities to proceed smoothly and avoid costly time delays. Commissioning was completed with a US based Gilkes representative on site assisting with communications and witnessing the work.

# CASE STUDY

## Shoshone Falls, Idaho, USA

