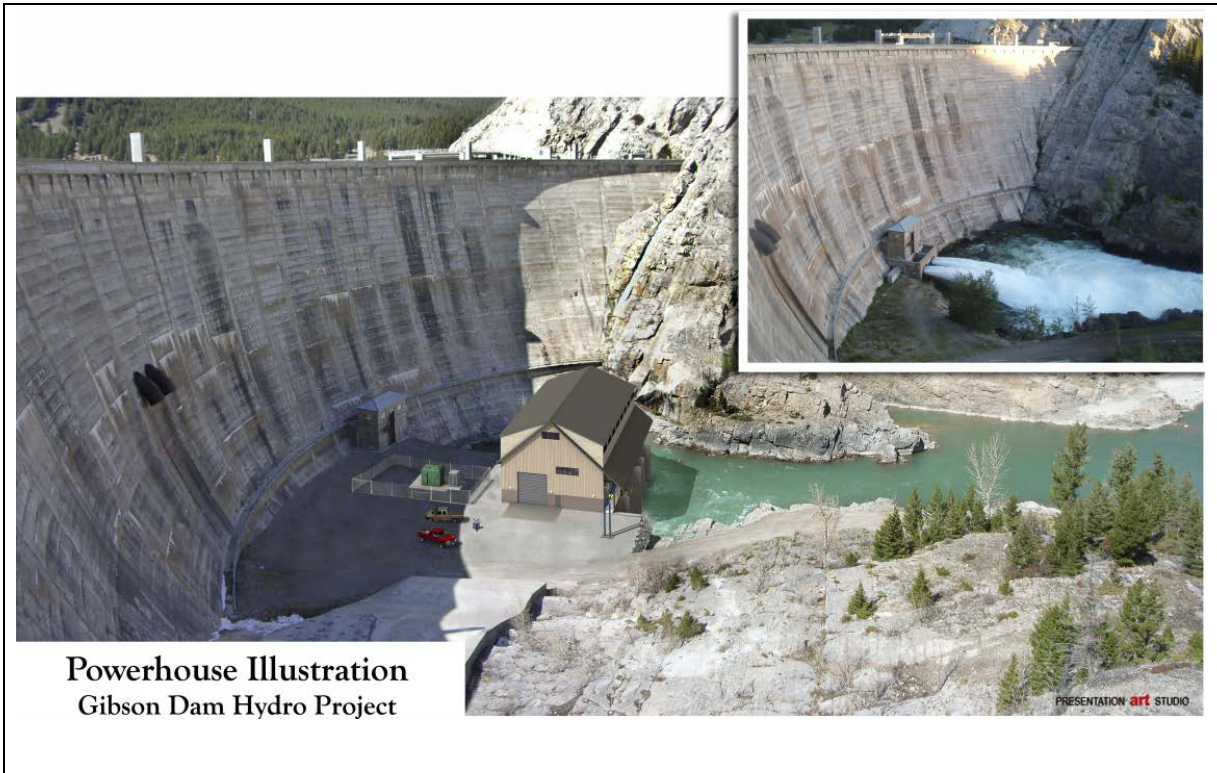


Hydropower Project Summary

SUN RIVER, MONTANA

GIBSON HYDROELECTRIC PROJECT (P-12478)



Photo/rendering courtesy of Tollhouse Energy Company

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Hydropower Reform Coalition

and

River Management Society

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The project, yet to be constructed but licensed in Jan 2012, would be located on the Gibson dam, owned by the Bureau of Reclamation and located inside the Lewis and Clark National Forest in Lewis and Clark and Teton Counties in Montana.

The Gibson dam and reservoir is an existing irrigation storage facility in northwestern Montana, approximately 19 miles northwest of Augusta, MT and 70 miles west of Great Falls, MT. Gibson dam is part of Reclamation's Sun River Irrigation Project. Irrigation is the only federally authorized purpose for the dam. The applicant proposes to construct new penstocks, a powerhouse, a maintenance building, a transmission line, a step-up substation, and other appurtenant facilities.

The Sun River begins in the mountains at the confluence of the North and South Fork of the Sun River on the eastern edge of the Bob Marshall Wilderness Complex. From its origin, the river flows for a little over five miles before the river flows through two dams, the Gibson Dam and the Sun River Dam located three miles further downstream. The River empties into the Missouri

A. SUMMARY

1. License Issued: January 12, 2012.
2. Expiration: December 31, 2062.
3. Waterway: Sun River.
4. Capacity: 15.00 MW.
5. Licensee: Gibson Dam Hydroelectric Company, LLC (Jointly owned by Tollhouse Energy Company and Greenfields Irrigation District).
6. Counties: Lewis and Clark and Teton.
7. Federal lands: 44.0 acres of Forest Service (Lewis and Clark National Forest) land and 24.5 acres of Bureau of Land Management (BLM) land, for a total of 68.5 acres of federal lands.
8. Project Website: <http://www.gibsonhydro.com>.
9. Project Facilities:
 - a. Gibson Dam
 - Part of the Sun River Irrigation Project.
 - Concrete arch dam 960 feet long and 199 feet tall.
 - A reservoir with 96,477 acre-feet of water at the normal high water elevation of 4,724 feet above mean sea level (msl).
 - An intake structure and two 72-inch-diameter steel conduits through the base of the dam

b. Proposed New Structures

- Two new 120-foot-long, 72-inch-diameter steel main penstocks, each with a capacity of 1,525 cubic feet per second.
- A powerhouse to be located at the base of the dam.
- Two 1.5 MW and two 6 MW Francis turbines.
- A maintenance building.
- A 26.19-mile-long transmission line consisting of three distinct segments beginning at the dam and continuing east to the interconnection point at Jackson’s Corner:
 - a 4.57-mile-long, 34.5-kilovolt (kV) Canyon Segment;
 - a 4.71-mile-long, 34.5-kV Plains Segment; and
 - a 16.91-mile-long, 69-kV Plains Segment.
- a step-up substation, and other appurtenant facilities.

10. Operation: run-of-river mode that retains the existing flow regime.

B. IMPORTANT PROVISIONS AND REQUIREMENTS IN LICENSE

1. *Flows*

The license does not allow the hydropower project to modify flows at the dam. The Greenfields Irrigation District regulates flows for irrigation. The typical releases are:

October – April (non-irrigation season)	200 cfs to 600 cfs
May – September (irrigation season)	2,000 cfs to 2,600 cfs

2. *Wildlife Protection* [Reference: License Article 407]

The Canyon segment of transmission shall be scheduled to occur outside of the period of November through April to minimize disturbance to migrating elk and bighorn sheep lambing.

The Plains Segment of the transmission line shall be scheduled to avoid the period of April through May sharp-tailed grouse courtship and mating season, unless surveys for elk are conducted in mid- to late-April, prior to beginning construction, and show no sharp-tailed grouse breeding is occurring along the plains segment (in which case, construction may occur in the remainder of April and May).

The license requires Gibson Hydro to file a Wildlife Protection Report that documents compliance with these requirements within 180 days of completion of project construction.

3. *Aviation Protection* [Reference: License Article 408]

In consultation with federal and state agencies, the licensee is required to file a final Aviation Protection Plan (based on the Avian Protection Plan filed on August 28, 2009) at least 90 days before any land-disturbing or land-clearing activities associated with construction of the transmission line

The final plan shall include: (1) a provision to notify Montana Department of Fish, Wildlife, and Parks within 24 hours of discovering an avian nest on any project transmission-line facility; (2) detailed design drawings of the transmission line clearly showing phase-spacing, configuration, and grounding practices; and (3) a construction schedule that is consistent with the wildlife protection requirements of Article 407 of this license.

4. *Wetland Survey and Protection* [Reference: License Article 409]

Gibson Hydro is required to file a Wetland Survey and Protection Plan at least 90 days before any land-disturbing or land-clearing activities associated with construction of the transmission line. The plan, whose purpose is to protect wetlands that could be affected by construction of the project transmission line, shall be developed after consultation with the Army Corps of Engineers, Forest Service, Bureau of Reclamation, and Bureau of Land Management.

5. *Recreation* [Reference: License Article 411]

Gibson Hydro filed a Recreation Construction Plan on August 28, 2009 that shall be implemented during project construction. The company is required to file a subsequent report within 180 days of conclusion of construction activities.

6. *Other Conservation Measures*

To protect fish and aquatic habitat in the Sun River, the license requires Gibson Hydro to implement a Sediment and Erosion Control Plan.

To protect vegetation and wildlife resources, the license requires Gibson Hydro to implement a Noxious Weed Control Plan; Bear Safety Plan; Wetland Protection Plan; Avian Protection Plan; Transmission Line Management Plan; and Threatened and Endangered, Proposed for Listing, and Sensitive Species Plan.

C. OTHER PROVISIONS

1. *Water Quality Certification conditions by Montana Department of Environmental Quality (DEQ)*

Montana DEQ, under the Water Quality Certification for the project, has prescribed nine conditions for the protection of water quality (found in Appendix A of the license).

The certification includes requirements for monitoring water quality during construction and initial project operations; implementing a dissolved oxygen enhancement program, monitoring dissolved oxygen levels and reporting the monitoring results, and conducting additional monitoring if necessary based on the monitoring results; notifying the agencies of activities that result in or may result in a discharge of pollutants to state waters; and allowing Montana DEQ reasonable access to the project and project records. The certification also requires Gibson Hydro to obtain all necessary permits and approvals prior to beginning any activities that could violate state water quality standards, and reserves authority to Montana DEQ to modify the conditions in the event that the project violates state water quality standards.

2. 4(e) conditions by Bureau of Reclamation:

BOR's final section 4(e) conditions include eleven conditions that require Gibson Hydro to:

- a. establish procedures and responsibilities for coordination with Reclamation;
- b. enter into a construction, operation, and maintenance agreement with Reclamation;
- c. consult with and obtain Reclamation approval of the design of project features that could affect the structural integrity or operation of federal facilities or the federal reservation;
- d. implement measures for identifying, responding to, and reporting conditions that could compromise the structural integrity and purposes of federal facilities or the federal reservation;
- e. re-vegetate all newly disturbed land areas;
- f. release the United States from claims against it by Gibson Hydro;
- g. recognize the primary right of any Reclamation project activity or the fulfillment of Indian water rights associated with the Reclamation project over Gibson Hydro's activities;
- h. recognize that the Commission's Regional Engineer cannot authorize advance construction of any project works until receipt of Reclamation's written approval of plans and specifications;
- i. obtain Reclamation review and approval of final plans and contractor-designed cofferdams, blasting, and deep excavations prior to the start of construction;
- j. recognize that the timing, quantity, and location of water releases will be at the sole discretion of Reclamation; and
- k. utilize Reclamation lands only for the purposes authorized by the license.

3. *4(e) conditions by U.S. Forest Service*

The Forest Service's final 4(e) conditions include 22 conditions that require Gibson Hydro to:

- a. obtain a special-use authorization;
- b. meet certain conditions prior to surrendering or transferring the license;
- c. obtain Forest Service approval of final design plans for project components that it deems as affecting or potentially affecting national forest resources;
- d. obtain Forest Service approval of modifications to constructed project facilities, operations, or approved exhibits filed with the Commission;
- e. annually consult with the Forest Service on measures necessary to protect environmental resources;
- f. reserve authority to the Forest Service to modify its 4(e) conditions;
- g. maintain project features to standards acceptable to the Forest Service;
- h. file with the Commission a Forest Service-approved Safety During Construction Plan;
- i. indemnify the United States for actions of Gibson Hydro related to its authorized use and occupancy of national forest system lands;
- j. reserve authority to the Forest Service to utilize national forest system lands for any purpose;
- k. file with the Commission a Forest Service-approved Invasive Plant and Noxious Weed Management Plan;
- l. file with the Commission a Forest Service-approved Threatened, Endangered, Proposed for Listing, and Sensitive Species Plan;
- m. file with the Commission a Forest Service-approved Erosion Control Measures Plan;
- n. file with the Commission a Forest Service-approved Public Safety Plan;
- o. file with the Commission a Forest Service-approved Hazardous Substances Plan;
- p. file with the Commission a Forest Service-approved Recreation Plan;
- q. file with the Commission a Forest Service-approved Interpretive Display Plan;
- r. consult with the Forest Service, obtain approval prior to erecting signs on national forest system lands, and maintain all licensee-erected signs on national forest service lands;
- s. provide unrestricted use by the United States of any road constructed within the project area;
- t. limit project vehicle use to roads or designated access routes;
- u. develop a Transmission Line Management Plan; and
- v. implement the Historic Properties Management Plan

D. MAP

There are two convenient ways to become familiar with this project on the Hydropower Reform Coalition website, www.hyroreform.org.

1. Go directly to the project page Gibson Dam [P-12478](#).
2. To understand the geographical context of the project, visit [this link](#) which will take you to the section for rivers in the Northwest. Locate Great Falls in Montana. Gibson dam project lies west of Great Falls on the edge of the Northern Rockies.