

**Bonneville Power Administration's
Finding of No Significant Impact (FONSI)
for the
Grand Coulee's Third Powerplant 500-kV Transmission Line Replacement
Project
DOE/EA-1679**

SUMMARY

The Bonneville Power Administration (BPA) announces its environmental findings on the Bureau of Reclamation's (Reclamation) Grand Coulee Third Powerplant 500-kV Transmission Line Replacement Project. This project involves replacing the six 500-kV transmission lines of the Third Powerplant (TPP) at Grand Coulee Dam. The transmission lines are presently installed within the dam and a two-chambered tunnel that leads to a Spreader Yard about a mile west of the TPP. BPA would design and construct the new lines for Reclamation.

BPA has prepared an environmental assessment (EA) (DOE/EA-1679) for Reclamation that evaluated various alternatives for the proposed project, including four overhead alternatives, a rebuild alternative, and a No Action alternative. The EA also identified Overhead Alternative 2 as the agency preferred alternative. Based on the analysis in the EA, BPA has determined that Overhead Alternative 2 is not a major federal action significantly affecting the quality of the human environment, within the meaning of the National Environmental Policy Act (NEPA) of 1969. Therefore, the preparation of an environmental impact statement (EIS) is not required and BPA is issuing this FONSI for this alternative. This alternative is not the type of action that normally requires preparation of an EIS and is not without precedent.

The comments received on the Preliminary EA and responses to the comments are in the Revision Sheet for the Final EA. The Revision Sheet also identifies only one minor change being made to the EA to provide further information concerning Reclamation's plans for the existing mid-station tour bridge that currently spans the area between the incline elevator and the TPP. In the Preliminary EA, removal of this bridge was proposed as a part of all overhead alternatives. Subsequent to issuance of the Preliminary EA, however, Reclamation's Technical Service Center identified a previously unknown structural relationship between the TPP Superstructure and the tour bridge, and recommended that the bridge not be removed. Based on this recommendation, Reclamation's Grand Coulee Power Office has decided not to remove the mid-station tour bridge. Even though the bridge will remain, Reclamation plans on adhering to their revised tour in which Reclamation will be providing vans to move visitors from place to place along the tour. The bridge, however, will not be accessible to visitors participating in the revised tour.

Attached is a Mitigation Action Plan (MAP) that lists all of the mitigation measures that the Agencies are committed to implementing.

PUBLIC AVAILABILITY

This FONSI will be mailed directly to interested parties, a notification of availability will be mailed to other potentially affected parties, and the FONSI will be posted on BPA's website (www.bpa.gov/go/coulee).

PROPOSED ACTION

BPA has been asked by Reclamation to design and construct six new 500-kV transmission lines at Grand Coulee Dam. These proposed new overhead lines would replace six existing underground lines, which are actually an assemblage of 18 aging, oil-filled lines that extend between Grand Coulee's TPP and the 500-kV spreader yard, both of which are owned, operated, and maintained by Reclamation. The proposed new overhead transmission lines would transfer power that is generated at the TPP, across the Columbia River, over the visitor center area, and then proceed uphill where they will connect to existing lines that transfer power from this area into the Regional power grid. All work would be completed on lands owned by Reclamation and will be adjacent to the existing right-of-way of the temporary backup transmission lines. The proposed construction would start in early 2012 and continue through fall 2012.

As mentioned above, the EA that has been prepared for this proposal identified five alternatives for the Proposed Action. Four of the Proposed Action alternatives involve an overhead configuration, and one involves an underground configuration. Details of the Proposed Action alternatives are presented in Chapter 2 of the EA.

NO ACTION ALTERNATIVE

Under the No Action alternative, Reclamation would continue to operate Grand Coulee Dam without any improvements to existing transmission lines that transfer power from the TPP. Reclamation considers this alternative to be unacceptable for the primary long-term reliability of power delivery from Grand Coulee Dam. Secondly, operating limits of the existing transmission lines would make it impossible to also act on proposals to increase power production within the TPP. Populations that reside within the Pacific Northwest would continue to live with elevated risk of cascading power outages which would follow failure of the existing transmission lines.

PREFERRED ALTERNATIVE

The Preferred Alternative, or Alternative 2, involves an extended span. This span would be from the transmission lines that emanate from the six turbine generator transformers at the TPP, up to the face of the forebay dam, across the Columbia River, and up towards the hillside immediate west of the Visitor Center. The Preferred Alternative would not include towers on the Visitor Center grounds as originally proposed. This alternative would also increase separation between transmission lines and private property and would result in three less towers being built (six instead of nine). However, the Preferred

Alternative would require that these new towers would need to be taller towers, and would cost more than the original proposal.

SIGNIFICANCE OF POTENTIAL IMPACTS OF OVERHEAD ALTERNATIVE 2

To determine whether Overhead Alternative 2 (the Preferred Alternative) has the potential to cause significant environmental effects, the potential impact of each alternative on human and natural resources was evaluated. This impact analysis is in Chapter 3 of the EA and is summarized for the Preferred Alternative below. To evaluate potential impacts from construction, operation, and maintenance activities, four impact levels were used—high, moderate, low, and no impact. These impact levels are based on the considerations of context and intensity defined in Council of Environmental Quality (CEQ) regulations (40 CFR 1508.27). High impacts could be considered significant impacts, while moderate and low impacts are not. The Preferred Alternative would have no significant impacts.

The following discussion provides a summary of the Preferred Alternative’s potential impacts and the reasons these impacts would not be significant.

Vegetation

Impacts to vegetation would be low to moderate.

- No direct impacts would occur to the aquatic/shoreline habitat identified as Zone 1 within the Preliminary EA. If present, any shoreline trees may have to be topped or removed if they grow to be within 50-foot proximity of the proposed overhead transmission lines.
- Temporary removal of landscaped lawn and shrubs would be directly impacted within the developed area identified as Zone 2 in the Preliminary EA by the removal of the existing backup towers. However, these temporary disturbances would be remedied once the existing backup towers have been removed and the developed area has been re-landscaped.
- Disturbance of native shrub-steppe habitat would result in temporary impacts of less than 15 acres and permanent impacts of less than 5 acres¹.
- Noxious weed infestation of wildlife habitat could occur; however vegetation management and mitigation measures specific to the spread of noxious weeds within the project area would minimize that potential.
- The intact and disturbed shrub-steppe communities would be directly impacted by accessing and removing existing towers; installing new towers; access roads to new towers; and equipment staging areas. Vegetation would be temporarily removed at the tower footprints during tower removal, but the greatest potential impacts on vegetation would be from repairing the existing access roads to allow

¹ An updated map of all disturbance areas has been included in the Revision Sheet for the Final EA (*See* Figure 1).

deconstruction crews to access the two towers at mid-slope. Approximately 3,000 linear feet of road would need to be repaired to access the two towers. This repair could exacerbate existing erosion and associated unvegetated areas. However, implementation of Best Management Practices (BMPs), as identified in the attached MAP, would minimize erosion.

- Because most areas that would be disturbed by the Preferred Alternative already support many invasive species, concerns for this project would be that construction may expand existing distribution of invasive plants on the hillsides above the Visitor's Center. Reseeding with native plants would minimize this potential impact.

Fish and Wildlife

Impacts to fish and wildlife species would be low to moderate.

- Construction noise and physical disturbance would temporarily impact wildlife. Mitigation of noise and other construction-related disturbance to wildlife was identified in an Avian Protection Plan to reduce the effects of these disturbance issues.
- Lines spanning over the aquatic zone could interfere with or reduce aerial habitat used by birds and bats that forage or travel over the river near where fish killed from going through the turbines provide food for opportunistic foraging birds, such as gulls, cormorants, bald eagles, osprey, turkey vultures, great blue herons and ravens. This potential reduction of foraging habitat, however, is unlikely to result in injury or death of wildlife.
- An osprey nest site located on the existing north tower on the Visitor's Center grounds would be removed and relocated to a nearby perch pole.
- Disturbance of native shrub-steppe habitat would result in temporary impacts of less than 15 acres and permanent impacts of less than 5 acres.
- Noxious weed infestation of wildlife habitat could occur; however vegetation management and mitigation measures specific to the spread of noxious weeds within the project area would minimize that potential.
- The Preferred Alternative is expected to increase the potential risk of avian mortality and would likely result in some birds striking the conductors or ground wires over time, including birds protected under the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act. However, the Avian Protection Plan prepared for this proposed Project recommends the implementation of bird deflectors on the ground wires to minimize the impacts to birds utilizing the Project Area. The use of bird deflectors is identified in the MAP.

Geology and Soils

Impacts to local geology and soils would be low to moderate.

- The Preferred Alternative would require grading and excavations for towers as well as subsurface drilling/auguring should drilled shaft tower attachments be

used. This would result in exposed fine grained soils and silts and the potential for being moved by wind, rain and/or gravity. The use of BMPs for controlling erosion and timing of the disturbance, as identified in the MAP, would minimize these impacts.

- Disturbed areas would be revegetated after construction (with native seed stock where applicable) in areas with adequate soil productivity.

Water Resources, Wetlands, and Fisheries

Impacts to water resources, wetlands, and fisheries would be low.

- Vegetation removal and soil disturbance would increase wind and water erosion rates, which could increase sediment deposition in streams and other surface waters, but impacts would be temporary. A Stormwater Pollution Prevention plan would be prepared and implemented to reduce erosion and runoff and stabilize disturbed areas. Use of BMPs also would minimize impacts to water quality from turbidity and sedimentation.
- The Preferred Alternative would have little to no effect on underlying aquifers, with 5.4 acres of impervious surface and all storm water being contained and infiltrated onsite.
- No direct impacts would occur to wetlands or to the Columbia River and its floodplain as there would be no in-water work or no work within the floodplain.

Land Use

Impacts to land use would be low.

- Other than low to moderate incremental visual impacts from various locations within the Project Area, the proposed lines would have no effect on adjacent commercial, residential, and public open space land uses.
- No direct impacts would occur to Visitor's Center grounds as the Preferred Alternative eliminates the need for towers to be located adjacent to the Visitor's Center.

Recreation

Impacts to recreation would be low.

- No direct impacts would occur to recreation as the proposed towers and roads would be contained on Reclamation-owned lands and would not encroach on other lands designated for recreation or other public uses. The proposed tower and transmission line effects would not be expected to change off-site recreational opportunities.
- The proposed towers and transmission lines would have little to no impact on local tourism that occurs within the nearby towns that surround the Project area.

Visual Quality

Impacts to visual quality would be low to moderate.

- The Preferred Alternative requires 6 new towers (instead of 9 new towers as outlined in the other overhead alternatives) which range in height from 280 to 316 feet tall. The proposed towers and transmission lines would be visible at various viewpoints around the Project area. However, the existing towers are visible from these same viewpoints.
- The Proposed towers and transmission lines, similar to the existing structures, would be visible from the Visitor's Center and portions of Reclamation's public tour, from nearby parks, motels, residential areas, and from State Road 155.
- Night-time obstruction lighting would be used to notify pilots of tall structures. This lighting is required by the Federal Aviation Administration.
- Non-reflective insulators would be used to minimize visual impacts.

Laser Light Show

Impacts to the laser light show would be low to moderate.

- The greatest amount of intersection of the laser light show with the proposed transmission lines would be above the TPP, where four of the six proposed lines (12 triplex conductors) would be present within and roughly parallel to laser trajectories.
- The proposed lines would also intersect with laser trajectories projected to the right of the elevator above the TPP, to the Right Powerplant and to the spillway.
- Intersections of the laser light show with the proposed lines, however, would cause only minute distortions to the laser projects in the form of reflection, shading, or silhouetting.

Cultural Resources and Tribal Consultation

Impacts to cultural resources would be moderate.

- The visual presence of proposed lines and towers would alter the historic character of Grand Coulee Dam, the TPP, and the Forebay Dam - which are eligible for listing on the National Register of Historic Places. However, mitigation for these impacts has been resolved through a Memorandum of Agreement among Reclamation, the Washington State Department of Archaeology and Historic Preservation and the Colville Confederated Tribes. The Agreement was signed on September 15, 2011 (Agreement No. R11MA10732).

Indian Trust Assets and Indian Sacred Sites

The Preferred Alternative would have no effect on Indian Trust Assets or Indian Sacred Sites.

Socioeconomics and Environmental Justice

Impacts to socioeconomics and environmental justice issues would be low.

- Construction and operation of the proposed overhead alternatives is not expected to have high and adverse human health or environmental effects on nearby communities and no environmental justice impacts are anticipated.
- Public services and utilities (police protection, fire protection, medical services, schools, and utilities) would not be adversely affected because no long-term increase in the local population is expected to occur as a result of implementation of the Proposed Action.
- Impacts to tourism related to Grand Coulee Dam would be low. Reclamation has already implemented a revised public tour of the Grand Coulee Dam and its facilities. This modified tour has been in response to the incline elevator being out of service frequently as well as safety issues related to the tour bridge that spans between the incline elevator mid-stop and the TPP.
- The proposed towers and transmission lines would have little to no impact on local tourism that occurs within the nearby towns that surround the Project area.

Public Health and Safety

Impacts to public health and safety would be low.

- Construction activities could pose some risk to the public through increased traffic and other hazards, but implementation of identified mitigation such as proper signage, safety measures, and appropriate fencing would reduce this potential impact to low levels.
- The electric and magnetic fields of the proposed transmission lines would remain at standard safety levels as the electric and magnetic fields are emitted along the proposed transmission line right-of-way.
- Before construction, the contractor would prepare a safety plan to minimize all potential health and safety risks.
- Mitigation measures would be in place for traffic along State Route 155 when the proposed transmission lines are being strung by helicopter. Appropriate protection would include using wooden guard structures to prevent the lines from falling on passing vehicular traffic.

Air Quality

Impacts to air quality would be low.

- Minor increases in dust and exhaust emissions would be temporary and confined to the immediate vicinity, and air quality would not be perceptibly affected.

Traffic and Transportation

Impacts to traffic and transportation would be low to moderate.

- Trucks delivering tower sections, conductors, heavy equipment and other project materials could delay vehicles by slow speeds and stops required to make turns. This potential impact would be short term.
- Removal of towers from the lower grounds could block vehicle access to the lower grounds for up to two days. This impact would be temporary.
- Traffic on SR 155 would need to be stopped as conductors are installed (most likely with the use of helicopters).

FLOODPLAIN STATEMENT OF FINDINGS

This Floodplain Statement of Findings was prepared in accordance with 10 C.F.R. Part 1022. Notice of floodplain and wetlands involvement was included in the letter sent to the project mailing list announcing the availability of the Preliminary EA on March 20, 2009. An assessment of impacts to floodplains and wetlands is in Chapters 3 and 4 of the EA. No comments were received relating to impacts to floodplains. BPA is proposing to replace six 500-kV transmission lines of the TPP at Grand Coulee Dam. The Preferred Alternative would not require the placement of towers to occur within floodplain areas. No access road work would occur in floodplains. Indirect impacts to floodplains would be low and limited to incidental amounts of sediment deposited in the floodplain from soil erosion in disturbed areas near the floodplain. Operation and maintenance is expected to have a low impact on floodplains; activities would be infrequent, short-term, and localized, and would not substantially alter floodplain functions.

Determination: Based on the information in the EA, as summarized here, BPA determines that Overhead Alternative 2 (the Preferred Alternative) is not a major federal action significantly affecting the quality of the human environment within the meaning of NEPA, 42 U.S.C. 4321 et seq. Therefore, an EIS will not be prepared and BPA is issuing this FONSI for this alternative.

Issued in Portland, Oregon.

/s/ F. Lorraine Bodi

F. Lorraine Bodi

Vice President, Environment, Fish and Wildlife

December 16, 2011