

FINDING OF NO SIGNIFICANT IMPACT

Grand Coulee's Third Powerplant 500-kV Transmission Line Replacement Project Finding of No Significant Impact (FONSI) PN FONSI 11-04

SUMMARY

The Bureau of Reclamation (Reclamation) announces its environmental findings on Reclamation's 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 has prepared an environmental assessment (EA) for Reclamation (DOE/EA-1679) that evaluated the proposed project and its alternatives. Based on the analysis in the EA, Reclamation has determined that the Proposed Action 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 Reclamation is issuing this FONSI for the Proposed Action. The Proposed Action 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. Only one minor change is being made in the Revision Sheet for the final EA as a result of a new Value Engineering Study performed by Reclamation. The preliminary EA discussed the removal of the mid-station tour bridge, or Visitor's Bridge, which would be necessary as part of this proposed line replacement project. Subsequent to Reclamation's Value Engineering Study, the Grand Coulee Power Office has decided not to remove the mid-station tour bridge, in part due to recently identified concerns regarding possible structural relationships between the TPP Superstructure and the tour bridge. As a result of this change in scope, Reclamation plans on adhering to their revised tour in which Reclamation is providing vans and/or buses to move visitors from place to place along the tour. The bridge, however, will not be accessible to visitors participating in the revised tour until repairs to the incline elevator and bridge are completed.

Attached is a Mitigation Action Plan (MAP) that lists all of the mitigation measures that Reclamation is 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 Reclamation's website (<http://www.usbr.gov/pn>).

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 exist between Grand Coulee's TPP and the 500-kV spreader yard, both of which are owned and 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. Details of the Proposed Action 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. Secondarily, 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 immediately 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 some of the new towers be taller than the originally proposed towers, and overall cost would be slightly more than the original proposal.

Other alternatives were discussed in the preliminary EA in addition to the No Action Alternative and the Preferred Alternative. Three alternatives proposed overhead configurations that varied slightly from the Preferred Alternative regarding tower placement. Another alternative proposed an underground configuration for the new replacement transmission lines, which consist of replacing/rebuilding the existing underground transmission lines within the tunnel system within the dam.

SIGNIFICANCE OF POTENTIAL IMPACTS OF THE PROPOSED ACTION

To determine whether the Proposed Action (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 for 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.
- 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 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.

- Because most areas that would be disturbed by the Proposed Action 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.

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 addressed 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 that may be affected by passing through turbines can 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 2 acres and permanent impacts of less than 1 acre.
- 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 will 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.

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 Best Management Practices (BMPs) for controlling erosion and timing of the disturbance will help minimize these impacts.
- Disturbed areas will 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 will be prepared and implemented to reduce erosion and runoff and stabilize disturbed areas. Use of BMPs also will 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 will 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 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 be primarily visual and 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 within the various viewpoints examined.

- The Preferred Alternative will require 6 new towers (instead of 9 new towers as outlined in the other overhead alternatives) which will range in height from 280 to 316 feet tall. Direct visual impacts will occur from the proposed towers and transmission lines at various viewpoints around the Project area.
- The Proposed towers and transmission lines 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 will be used to notify pilots of tall structures in the area as required by the Federal Aviation Administration.
- Non-reflective insulators will be used.

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 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 between 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 Proposed Action 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 per the fact that Reclamation has already implemented a revised public tour of the Grand Coulee Dam and its facilities. This modified tour has been in response to reliability concerns with the incline elevator 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 though 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 will prepare a safety plan to minimize all potential health and safety risks.
- Mitigation measures will be in place for traffic along State Route 155 when the proposed transmission lines are being strung by helicopter. Appropriate protection will be provided using wooden guard structures to prevent the lines from falling on passing vehicular traffic. Protective measures will also be put in place for the visitor center parking lot and for the road to the Left Powerhouse.

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.
- Removal of towers from the lower grounds could block vehicle access to the lower grounds for up to two days.
- 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 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.

Reclamation is proposing to replace six 500-kV transmission lines of the TPP at Grand Coulee Dam. The Preferred Alternative will 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, Reclamation determines that the Proposed Action 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 Reclamation is issuing this FONSI for the Proposed Action.

Approved:



Mark C. Jenson
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12/3/2011

Date