

Bonneville Power Administration
McNary-John Day Transmission Line Project
Record of Decision

Decision

The Bonneville Power Administration (Bonneville) has decided to construct the proposed McNary-John Day Transmission Line Project in Benton and Klickitat Counties, Washington, and Sherman and Umatilla Counties, Oregon. Bonneville has decided to implement the proposed action identified in the McNary-John Day Transmission Line Project Final Environmental Impact Statement (DOE/EIS-0332, August 2002). The proposed action consists of building 79 miles of 500-kilovolt (kV) transmission line between Bonneville's McNary Substation and John Day Substation. As part of the proposed action, Bonneville has also decided to construct certain short-line routing alternatives identified in the Final EIS. These alternatives are the *McNary Substation Alternative A – Relocate Building* and the *Hanford-John Day Junction Alternative A – North Side*. Bonneville has also decided to construct either one of the short-line routing alternatives (i.e., either Alternative A or B) at *Corridor Mile 32* and *Corridor Mile 35*, depending on the outcome of further negotiations with the owners of tribal allotments crossed by Alternative A at each location.

Background

Construction of the McNary-John Day transmission line is needed to allow new power expected to be generated in southeast Washington and northeast Oregon to be transmitted over Bonneville's transmission system. A number of gas-fired and wind-powered generation facilities have been proposed for construction in this area. The power generated from these facilities, when built, will need to be transmitted to the west side of the Cascades where there is a high demand for electricity from the west-side's urban areas. Because the existing transmission lines in this area are at capacity and cannot carry additional power, the construction of the McNary-John Day line is needed to allow the new power to be transmitted. Providing this additional capacity will allow Bonneville to meet statutory obligations to ensure that there is sufficient capacity on our system necessary to integrate and transmit electric power.

At the time of this Record of Decision, many of the generation facilities proposed in the area are on hold due to market conditions and the need to secure financing. Complete construction of the McNary-John Day line will correspond with funding commitments from the parties that will utilize the capacity added by the line. Bonneville is looking to those parties to pay for the costs of building the line based on the amount of line capacity they will use (pro-rated). The parties will, over time, be reimbursed through their payments to use the line. The cost of the line will be about \$117 million. It is assumed that commitments for funding will occur in the next one to five years.

Some preliminary construction activities, such as purchasing easements in specific sections of the line and constructing the proposed transmission tower pads at the Columbia River crossing

near McNary Substation, likely will occur in 2003. The schedule for constructing the remainder of the transmission line will depend on securing funds for the work.

Rationale for Decision

Bonneville has analyzed the environmental impacts of the proposed action, the short-line routing alternatives and the no-action alternative, and has considered public comments received on the Draft EIS. In making its decision, Bonneville considered how well the various alternatives would meet the following project purposes (i.e., objectives) identified for this project in the Final EIS:

- Maintenance of transmission system reliability;
- Consistency with Bonneville's environmental and social responsibilities; and
- Cost and administrative efficiency.

Bonneville believes that implementation of the proposed action with the identified short-line routing alternatives would best meet these objectives. The proposed action provides for maintenance of transmission system reliability by increasing the capacity of the system to accommodate the new power that is expected to integrate into the system. The proposed action also is consistent with Bonneville's environmental and social responsibilities. Bonneville worked to lessen potential environmental and social impacts through the design of the project and the development of mitigation measures. Cultural resources that were discovered along the line will be avoided, protected, or further evaluated as necessary. Wetlands that cannot be avoided will be permitted through the U.S. Army Corps of Engineers and compensation for wetland losses provided through off-site wetland restoration, protection, or enhancement. Fish impacts will be minimal by spanning all fish-bearing streams, preserving riparian vegetation, and providing erosion-control measures at construction sites. Wildlife impacts will be lessened by avoiding burrow locations, conducting further surveys for raptors to determine if nests are being used, scheduling construction so as not to disturb birds, and providing bird diverters on the conductors in areas of high flyway use. Vegetation and habitat impacts will be mitigated through reseeded disturbed areas, avoiding sensitive plant species, and restoring, protecting, or enhancing off-site locations. Although there will be additional incremental visual impacts due to having another transmission line in the existing corridor that holds two and sometime three lines presently, Bonneville has attempted to minimize this impact by placing the proposed line next to existing lines to the greatest extent possible. Bonneville is continuing to work with landowners in efforts to lessen impacts as much as possible to irrigation systems, orchards, and vineyards. Short-term impacts of construction on socioeconomics, air quality, transportation, and noise will be lessened through the use of mitigation measures. A complete list of mitigation measures adopted for the project is attached.

The proposed action would cost about \$117 million. These are reasonable costs for the construction of 79 miles of 500-kV line and associated substation work.

Alternatives

Bonneville considered the Proposed Action with several short-line routing alternatives, and the No Action Alternative.

Proposed Action

The Proposed Action includes construction of about 79 miles of 500-kV single-circuit transmission line. The transmission line will begin at the existing McNary Substation in Umatilla City (Umatilla County, Oregon) near the Columbia River, and cross the Columbia River into Washington between the McNary Dam and the Umatilla Bridge. The line will then generally follow the Columbia River and State Route (SR) 14 west through Benton and Klickitat Counties. At the John Day Dam, the line will cross back into Oregon and connect into the John Day Substation near Rufus (Sherman County, Oregon). For most of the route, the line will parallel existing transmission lines in an existing corridor that runs between the McNary and John Day Substations.

The new line will be on lattice steel towers. Construction will include the upgrade of about 40 miles of existing access roads, and the construction of 8 miles of new road and 270 short spur roads (each about 250 feet long from an existing access road to a new tower). In addition, the McNary Substation will be expanded on the east side by 1.3 acres.

As part of the proposed action, Bonneville considered several short-line routing alternatives. The short-line routing alternatives considered are as follows:

McNary Substation Alternatives

- Alternative A - Relocate Building (chosen alternative). The transmission line will exit the northeast side of the substation, cross Third Street (which runs in front of the substation), and head west, adjacent to the road for about 2,400 feet, then turn north and cross the Corps of Engineers' Wildlife Natural Area to the river crossing.
- Alternative B - Cross Wildlife Area. The transmission line would have exited the northeast side of the substation, crossed Third Street, and run northwest (gradually toward the river) behind the office building and across the Corps of Engineers' Wildlife Natural Area.
- Alternative C - Bus Work in Wildlife Area. With this alternative, the transmission line would have exited the northeast side of the substation, crossed Third Street, and then descended into bus work across the Corps of Engineers' Wildlife Natural Area behind the office building. The bus work would have been in a graveled fenced area about 2,000 feet long by 75 feet wide.

Hanford-John Day Junction Alternatives

- Alternative A - North Side (chosen alternative). With this alternative, the proposed transmission line will stay in alignment, paralleling the existing lines. This will require moving the existing Hanford-John Day line 200 feet to the north. At corridor mile 70, the

proposed line will cross to the south side of the corridor and the Hanford-John Day line will ease back into its original alignment in the corridor.

- Alternative B - South Side. With this alternative, the proposed transmission line would have crossed to the south side of the corridor just before the Hanford-John Day line enters the right-of-way. The proposed line would have stayed on the south side of the corridor for the rest of the route.
- Alternative C - South Side Highway. This alternative was very similar to Alternative B; the proposed line would have crossed to the south side of the corridor and highway just before the Hanford-John Day line enters the right-of-way. This alternative differed from Alternative B in that the proposed line would have stayed on the south side of the highway until the existing lines crossed the highway, eliminating two highway crossings of the proposed line.

Corridor Mile 32 Alternatives (either alternative may be constructed)

- Alternative A - Parallel existing line across tribal property. With this alternative, Bonneville will construct the proposed line across the tribal-owned property at corridor mile 32, paralleling the existing lines within the existing right-of-way. About 1,100 feet of conductor and perhaps one tower will be located on the property.
- Alternative B - Move entire corridor off tribal property. With this alternative, the proposed line will be moved to skirt around the tribal-owned property. The other two existing lines will also be moved to avoid the property.

Corridor Mile 35 Alternatives (either alternative may be constructed)

- Alternative A - Parallel existing line across tribal property. With this alternative, Bonneville will construct the proposed line across the tribal-owned property at corridor mile 35, paralleling the existing lines within the existing right-of-way. About 500 feet of conductor will be located across the property.
- Alternative B - Move entire corridor off tribal property. With this alternative, the proposed line will be moved to skirt around the tribal-owned property at corridor mile 35. The other two existing lines will also be moved to avoid the property.

No Action

The No Action Alternative assumes that no transmission line is built. Bonneville considers the No Action Alternative to be the environmentally preferred alternative. The No Action Alternative would not cause impacts to the environment (land uses, wetlands, vegetation, wildlife, cultural resources, visual) that the construction and operation of the transmission line will have.

Mitigation

All the mitigation measures describe in the Draft EIS and updated in the Final EIS have been adopted. A complete list of these measures is attached. A Mitigation Action Plan will be prepared to be included in the construction specifications to ensure mitigation measures are implemented.

Issued in Portland, Oregon.

/s/ Stephen J. Wright
Stephen J. Wright
Administrator and
Chief Executive Officer

October 30, 2002
Date

Attachment:
Mitigation Measures

**Mitigation Measures Adopted
for the
McNary-John Day Transmission Line Project**

Land Use and Recreation

- Locate towers and roads so as not to disrupt irrigation circles, where possible.
- Locate structures and roads outside of agricultural fields, orchards, and vineyards, where possible.
- Coordinate with landowners for farm operations, including plowing, crop dusting, and harvesting.
- Redesign irrigation equipment and compensate landowner for additional reasonable costs where new right-of-way needs to be acquired.
- Compensate farmers for crop damage and restore compacted soils.
- Control weeds around the base of the towers.
- Keep gates and fences closed and in good repair to contain livestock.
- Repair damages to access roads caused by or arising out of Bonneville use, leaving roads in good or better condition than prior to construction.

Geology, Soils, and Seismicity

- Minimize vegetation removal.
- Avoid construction on steep slopes, where possible.
- Properly engineer cut-and-fill slopes.
- Install appropriate roadway drainage to control and disperse runoff.
- In areas of potential wind erosion, apply gravel to access road surfaces.
- In area of landslide (corridor miles 39 and 41) do not construct any new roads within 100 feet of slide area; reshape existing access road with out-slope to provide drainage; and site tower east of area, if possible.
- Apply erosion control measures such as silt fence, straw mulch, straw wattles, straw bale check dams, other soil stabilizers, and reseeded disturbed areas as required (prepare a Stormwater Pollution Prevention Plan).
- Regularly inspect and maintain project facilities, including the access roads, to ensure erosion levels remain the same or less than current conditions.
- Consider helicopter construction in areas of steep slopes to lessen the size of access roads and temporary tower site impacts (laydown areas of materials).

Streams, Rivers, and Fish

- Place towers outside of stream riparian areas and utilize natural landscape features to span the conductor over existing shrub and tree riparian zones and avoid cutting.
- Place new access roads outside of stream riparian areas, where possible.
- Construct fords instead of culverts at access road crossings of dry washes or seasonal streams, where possible. Where culverts are required, design and install to accommodate flows associated with a 100-year flood event.
- Where access roads cross a dry wash, the road gradient should be 0% to avoid diverting surface waters from the channel.
- Preserve existing vegetation where practical, especially next to intermittent and perennial streams.
- Avoid construction within the 200-foot designated stream buffers in Klickitat and Benton Counties, Washington.
- Maximize the use of existing roads, minimizing the need for new road construction.
- Avoid tower or access road construction on potentially unstable slopes, where feasible.

Streams, Rivers, and Fish, continued

- Use erosion control methods during construction (see mitigation measures for Geology, Soils, and Seismicity), to minimize transport of sediments to streams via runoff.
- Install appropriate water and sediment control devices at all dry wash crossings, if necessary.
- Reseed disturbed areas following construction, where appropriate.
- Construct any required culverts using Washington Department of Fish and Wildlife culvert installation guidelines. Methods may include avoiding installation during periods of flow, armoring streambanks near the culvert entrance and exit, installing culverts on straight sections of stream to ensure unimpeded flow, and following the contour of the stream channel.
- Repair existing road failures and drainage devices between corridor mile 33 to 47 to reduce potential impacts to dry washes.
- Avoid blasting within 200 feet of fish-bearing or potentially fish-bearing streams during periods when salmonid eggs or alevins are present in gravels.
- Develop and implement a Spill Prevention and Contingency Plan to minimize the potential for spills of hazardous material including provisions for storage of hazardous materials and refueling of construction equipment outside of riparian zones, spill containment and recovery plan, and notification and activation protocols.
- Keep vehicles and equipment in good-working order to prevent oil and fuel leaks.
- Return staging areas to pre-construction condition.
- Site staging areas away from streambeds.

For Columbia River water work:

- Site staging area 150 feet or more from water body.
- If working within 150 feet of water body, check vehicles daily for leaks and diaper stationary power equipment.
- Construct during recommended Corps in-water work windows for the Columbia River (December 1 thru March 31).
- Isolate in-water work area and capture and release fish from the work area under the supervision of a competent fisheries biologist experienced to capture ESA-list fish.
- Use appropriate fish screens on all intakes and pumps.

Vegetation

- Locate the proposed transmission line adjacent to the existing corridor to minimize additional clearing.
- Utilize the existing access road system to the extent possible to reduce the need for new access roads.
- Keep vegetation clearing to the minimum required to maintain safety and operational standards.
- Avoid construction activities or permanent tower or access road siting in native shrub-dominated shrub-steppe communities, if possible.
- Reseed areas temporarily disturbed in higher quality shrub-steppe with native grasses and forbs (if recommended by local county) and salvage topsoil and bunchgrass plant material. Reseeding should occur at the appropriate planting season. Reseed all disturbed areas with seeds recommended by the local county.
- Equip all vehicles with basic fire-fighting equipment including extinguishers, shovels, and other equipment deemed appropriate for fighting grass fires.
- Avoid tree removal to the extent possible.

Vegetation, continued

- Limit construction equipment to tower sites, access roads, and conductor tensioning sites.
- Avoid construction or construction activities at location of desert evening-primrose (*Oenothera caespitosa* ssp. *marginata*) near tower 47/1.
- Minimize disturbance to native shrub-dominated shrub-steppe communities and cryptogamic crusts, where possible, during construction. Where not possible, consider compensatory habitat through either restoration or acquisition and preservation of shrub-steppe communities.
- Conduct a pre-construction and a post-construction noxious weed survey to determine if construction contributed to the spread of noxious weed populations.
- Enter into active noxious weed control programs with land owners/mangers or county weed control districts where activities may have caused or aggravated an infestation.
- Wash vehicles that have been in weed-infested areas (removing as much weed seed as possible) before entering areas of no known infestations.
- Use certified weed-free mulching.

Wildlife

- Prior to construction, conduct raptor nest surveys (for existing and new nests) of cliffs located within 0.25 mile of the right-of-way (corridor miles 3, 54, 56, 57, 72, 73). See potential mitigation measures below for specific species.
- Between January 1 and July 30, avoid using helicopters within 0.25 mile of cliffs identified as Priority Habitat by the Washington Department of Fish and Wildlife (use ground-based equipment near cliffs. Avoid blasting cliffs identified as Priority Habitat by Washington Department of Fish and Wildlife and consult with the Washington Department of Fish and Wildlife or Oregon Department of Wildlife regarding measures to minimize nest disturbance on a site-by-site basis if nests are found.
- If bald eagle nests are found on the cliffs, restrict construction during nesting season (January 1 through July 15).
- **Mitigation for burrowing owls.** If possible, avoid disturbance within 160 feet of occupied burrows during the non-breeding season of September 1 through January 31 or within 250 feet during the breeding season of February 1 through August 31.
- **Mitigation for peregrine falcon.** If possible, avoid disturbance within 0.25 mile of any active nests during the breeding season (March through June).
- **Mitigation for prairie falcon.** If possible, avoid construction activities between February 15 and July 15 within 0.25 mile of active nests.
- **Mitigation for red-tail hawk.** If possible, avoid construction activities within 320 feet between February 15 and July 15.
- **Mitigation for other raptors.** Consult with Oregon Department of Fish and Wildlife and Washington Department of Fish and Wildlife.
- Install line markers in avian flight paths or migration corridors, near crop circles in the vicinity of the town of Paterson (north of the Umatilla National Wildlife Refuge) and at the Columbia River crossings and the Rock Creek crossing.
- For the McNary Substation Alternatives, avoid placing towers and lines across wetlands to minimize risk of bird collision.
- Minimize the amount of shrub-steppe plant communities removed by clearing only the amount of vegetation necessary to prepare tower footings or build roads.

Wildlife, continued

- Minimize road construction in shrub-steppe areas with burrows (near corridor miles 19, 21, 63, and 76).
- Span riparian corridors to minimize removal of shrubs or trees within riparian areas.

Wetlands and Groundwater

- Locate structures, new roads, and staging areas so as to avoid waters of the U.S., including wetlands. Where avoidance is not possible, provide compensation for wetland impacts in accordance with Corps Section 404 permitting requirements.
- Avoid construction within designated Klickitat and Benton Counties, Washington wetland and stream buffers to protect potential groundwater recharge areas (Klickitat County Critical Areas Ordinance; Benton County Code Title 15).
- Avoid mechanized land clearing within wetlands and riparian areas to avoid soil compaction from heavy machinery, destruction of live plants, and potential alteration of surface water patterns to reduce groundwater turbidity risk.
- Anticipate and avoid, as required, contaminated soil and underground tanks during construction activities near pipelines and agricultural and other historic projects. Anticipate and avoid orphaned wells, as required, particularly near the communities of Plymouth, Paterson, Roosevelt, Sundale, and Towal.
- Use erosion control measures (see mitigations listed in the Soils, Geology, and Seismicity section) when conducting any earth disturbance within 100 feet of wetlands, or within the resource buffer as established by Benton and Klickitat Counties.
- Avoid refueling and/or mixing hazardous materials where accidental spills could enter surface or groundwater.
- Use existing road systems, where possible, to access tower locations and for the clearing of the transmission line alignment.
- Avoid construction on steep, unstable slopes if possible.
- Place tower footings on upland basalt outcroppings and limit access road construction in wetlands complex and buffers between corridor miles 70 and 74, if possible.
- Place tower footings and access roads within uplands within the wetland complex between corridor miles 48 and 50.

Cultural Resources

- Locate structures, new roads, and staging areas so as to avoid known cultural resource sites.
- Utilize existing access road system to the extent possible to reduce the need for new access roads.
- Limit construction equipment to tower sites, access roads and conductor tensioning sites.
- On maps and in specifications provided to construction contractors, indicate cultural sites as generic avoidance areas to maintain site confidentiality.
- Have a monitor on site for construction activities in and around sites eligible for listing in the National Register of Historic Places.

Cultural Resources, continued

- Determine sites to be monitored based on Bonneville practices for avoiding adverse effects to historic properties, tribal concerns and the Oregon and Washington SHPO concurrence.
- Continue consultation with the Umatilla Tribes, Warm Spring Tribes, and the Yakama Nation to set up consultation protocols on site mitigation and management.
- Continue consultation with the Umatilla Tribes, the Warm Springs Tribes, and the Yakama Nation to ensure that the cultural and natural resources are protected.
- Conduct offsets and buffers around previously recorded and newly identified archaeological sites based on Bonneville practices for avoiding adverse effects to historic properties, tribal concerns and the Oregon and Washington SHPO concurrence.
- Stop all construction activities in the immediate area should any previously unknown artifacts be identified during construction until the resource can be evaluated by an archaeologist meeting the Secretary of the Interior's Qualifications Standards for Archaeology (48 FR 44738-39). Prehistoric site indicators include, but are not limited to, chipped stone, obsidian tools and tool manufacture debitage (waste flakes), grinding implements such as mortars and pestles, and darkened soil that contains organic remains of food production such as animal bone and shellfish remains. Historic site indicators include, but are not limited to, ceramic, glass, wood, bone, and metal remains.
- If previously unknown artifacts are identified during construction, immediately contact representatives of the affected tribes.
- For previously unknown artifacts, identify type and significance of discovered resource for determining if avoidance is necessary, depending on the type and significance of any discovered resource, procedures may include testing the site with shovel test probes to determine site boundaries and any possible subsurface components. If results of the shovel test probes determine the presence of an extensive subsurface component, move structure location to a suitable location that avoids the site. Alternatively, develop and implement a full data recovery program for the site or other mitigation in consultation with the affected tribes and the Oregon and Washington State historic preservation officers.
- Stop construction in the area immediately should human remains and/or burials be encountered. Secure the area, placing it off limits for anyone but authorized personnel and immediately notify proper law enforcement, Bonneville archeologist and appropriate tribes. .

Visual Resources

- Site all construction staging and storage areas away from locations that would be clearly visible from SR 14 as much as practical.
- Provide a clean-looking facility following construction by cleaning-up after construction activities.
- Keep the areas around the towers clean and free of debris.
- Provide regular maintenance of the access roads and fences within and leading to the corridor.

Transportation

- Coordinate routing and scheduling of construction traffic with state and county road staff and Burlington Northern Santa Fe Railway.
- Employ traffic control flaggers and post signs warning of construction activity and merging traffic, when necessary for short interruptions of traffic.
- Repair any damage to local farm roads caused by the project.
- Install gates on access roads when requested by property owners to reduce unauthorized use.

Air Quality

- Water exposed soil surfaces, if necessary, to control blowing dust.
- Cover construction materials if they are a source of blowing dust.
- Limit vehicle speeds along dirt roads to 25 miles per hour.
- Shut down idling construction equipment, if feasible.

Noise

- All equipment to have sound-control devices no less effective than those provided on the original equipment.
- No equipment to have an unmuffled exhaust.
- Limit construction activities to daytime hours.
- Do not conduct noise-generating construction activity within 1,000 feet of a residential structure between the hours of 10:00 p.m. and 7:00 a.m.
- Notify landowners directly impacted along the corridor prior to construction activities.
- Restore TV or radio reception to a quality of reception as good or better than before line construction.

Public Health and Safety

- Prior to construction, contractor will prepare and maintain a safety plan in compliance with Washington and Oregon requirements. Keep plan on-site; include details on how to manage hazardous materials such as fuel, and how to respond to emergency situations.
- During construction, hold contractor crew safety meetings at the start of each workday to go over potential safety issues and concerns.
- Secure the site to protect equipment and the general public at the end of each workday.
- Ensure that employees are trained, as necessary, in tower climbing, cardiopulmonary resuscitation, first aid, rescue techniques, and safety equipment inspection.
- To minimize the risk of fire, fuel all highway-authorized vehicles off-site. Fuel of construction equipment, that is not highway authorized, in accordance with regulated construction practices and state and local laws. Fuel and house helicopters at local airfields or at staging areas.
- Consider public safety during helicopter flights (for example, flight paths could be established for transport of project components in order to avoid flying over populated areas or near schools; coordination could take place with local crop dusters and agricultural businesses to minimize interruption in agricultural activity during construction).
- Provide notice to public of construction activities, including blasting.
- Take appropriate safety measures for blasting consistent with state and local codes and regulations. Remove all explosives from the work site at the end of the workday.
- If implosion bolts are used to connect the conductors, install in such a way as to minimize potential health and safety risks.
- Inform construction and operation/maintenance workers that there is a Umatilla Army Depot emergency preparedness program in the event of a chemical release.

Public Health and Safety, continued

- Carry fire suppression equipment including (but not limited to) shovels and fire extinguishers, in vehicles.
- Adhere to local fire district regulations for fire-prevention measures.
- Stay on established access roads during routine operation and maintenance activities.
- Keep vegetation cleared according to Bonneville standards to avoid contact with transmission lines.
- Submit final tower locations and heights to the Federal Aviation Administration for review and potential marking and lighting requirements.
- Construct and operate the new transmission line to meet the National Electrical Safety Code.
- During construction, follow Bonneville specifications for grounding fences and other objects on and near the proposed right-of-way.
- Should contaminated media be unexpectedly encountered during construction, work will stop and an environmental specialist called to characterize the nature and extent of contamination and determine appropriate State-approved measures to prevent spread and protect health and safety.