Proposed Action and Alternatives (Chapter 2)

Existing Corridor

Page 2-1, paragraph 3 has been modified as follows:

There are three existing transmission lines that cross the river near McNary Substation. Up to two sets of river-~~-~~crossing towers would be replaced for the proposed line. The existing towers farthest east are 345-kV towers owned by Bonneville that may need to be replaced with 500-kV towers. The transmission line towers farthest west (closest to the Umatilla Bridge) are 69-kV towers owned by Benton County Public Utility District (PUD). Benton County PUD is presently not using the towers, but is retaining them for future use when they need to run a transmission line from Oregon to Washington. Bonneville proposes to buy these tower locations and replace them with new 500-kV double-circuit towers that could hold a Bonneville ~~two~~ line~~s~~ and a Benton County PUD line. ~~(double-circuit towers).~~

Page 2-2, paragraph 4 has been modified as follows:

~~Mercer Ranch, just north of corridor mile 27 is a location being proposed for a new generation facility. If this facility is approved and built, a new substation would have to be constructed adjacent to the existing transmission line corridor. The proposed McNary-John Day transmission line would be built through this substation. (See the section on Other Projects or Documents Related to this Project, Chapter 1, for more information about the Mercer Ranch Project.)~~ At around corridor mile 68, the new line would cross to the south side of the existing corridor and continue to the river crossing at John Day Dam.

New Easements

Page 2-4, new text has been added after bullet item 2 as follows:

- from corridor mile 65 to 67, a 150 to 200-foot right-of-way easement would be needed. This proposed right-of-way easement would be about 300 feet north of the existing right-of-way to avoid building on the steep slope.

Page 2-4, new text has been added after paragraph 2 as follows:

The towers exiting the McNary Substation and the towers at the river crossings would be larger than the typical towers. The towers on either side of the Columbia River at McNary would be about 315 feet tall in order to provide

adequate conductor to river clearance for the approximate 2,000-foot span. The tower on the north side of the river at John Day would be about 340 feet tall; the tower on the south side would only be about 140 feet tall because it would be located on the hill, which naturally creates high clearance.

The five to six towers that would carry the conductor from the McNary Substation to the river crossing would be about 200 to 270 feet tall in order to span over the multitude of existing lines coming into the substation.

Page 2-4, paragraph above last bullet item on the page has been modified as follows:

Transmission towers are attached to the ground with footings. The footings are a metal assembly in the ground at each of the four tower corners. ~~Three~~ Four types of footings would be used depending on the terrain and tower type.

Page 2-4, paragraph 5 has been modified as follows:

The towers for the proposed new 500-kV line would be 145 to 165 feet tall lattice steel towers with spans of ~~1,150 to 1,500~~ 1,000 to 1,300 feet between towers. The towers would be similar to the towers of the existing lines (see figure 2-2). The towers would be made of galvanized steel and may appear shiny for two to four years before they dull with the weather. About 360 transmission towers would be needed to carry the wires (conductors) for the proposed transmission line, including about 20 towers in Oregon and 340 towers in Washington.

Page 2-5, new text has been added after bullet item 2 as follows:

Concrete footings are often used when a tower is built in water or a wet area. There are two types of concrete footings that could be used for the McNary river-crossing towers. One type of concrete footing is composed of 6 to 9-foot-wide steel-encased poured concrete with a piece of angle steel embedded for attachment of the tower leg. The footing can be over 40 feet deep in the ground (depending on the strength needed) and extend up to 11 feet above the ground surface. The second type of concrete footing is composed of a 12-by-12-foot wide concrete pad buried 20 feet deep. The pad may also need steel piles under it for further support. A concrete pier would be connected to the top of the pad and, like the shaft, could extend up to 11 feet above the ground surface. The top of the pier would have either a steel connection point for the tower leg, or have a piece of angle steel embedded for the tower leg connection.

Page 2-5, paragraph 1 has been modified as follows:

In most cases, ~~A~~a trackhoe would be used to excavate an area for the footings. In solid rock areas where digging is not possible, blasting would be used. The

excavated area would be at least 2 feet larger than the footings to be installed (if the soil is loose or sandy, then a wider hole may be necessary). Each tower would use an area of about 0.05 acre, with a temporary disturbance during construction of about ~~0.25~~0.50 acre~~s~~ (equipment, tower assembly, vehicle maneuvering, soils, etc.). All of the soil and rock removed would be used to backfill the excavated area once the footings are installed.

Page 2-5, paragraph 5 has been modified as follows:

Bus work is used when a conductor cannot be strung between towers. With bus work, the electricity runs on a pipe set about ~~15~~30 or 41 feet off the ground. For safety reasons, the area surrounding the two towers on either end of the bus work and the pipe is fenced and graveled (similar to a small substation). Like a substation, the area must be kept free of vegetation.

Page 2-7, paragraph 1 has been modified as follows:

Access roads are the system of roads that Bonneville's construction and maintenance crews would use to get to the towers or tower sites along the line. The roads are designed to be used by cranes, excavators, supply trucks, boom trucks, log trucks, and line trucks. Bonneville prefers road grades to be 15% or less depending on the erosion potential of the soil. Roads are graded to provide a 16-foot-wide travel surface (somewhat wider on curves), with about a 20 to 25-foot-wide total area disturbed (including drainage ditches), depending on site conditions (slope of road, soils, terrain, etc.).

Page 2-7, bullet item 3 has been modified as follows:

- ~~**New roads.** About three miles of new road would need to be built from corridor mile 39 to 41 (4 miles east of Roosevelt). The terrain in this area is very steep. Because the new transmission line would be at a higher elevation than the existing lines, the grades of spur roads from the existing access road would be too steep. Instead, a parallel access road would be built at the elevation of the new towers in this section of line.~~

- **New roads.** A total of about 8 miles of new road would need to be built. The new roads would be in various locations along the proposed route where existing roads cannot reach the proposed tower sites due to steep slopes, have been rerouted to avoid wetlands, or have been obliterated. The new roads would be in the following locations: about 350 feet of road at corridor mile 2, accessing the north side river crossing towers; about 500 feet of road at corridor mile 13 within the right-of-way; about 3 miles of road between corridor mile 42 and 47; about 2.5 miles of road from a public road south to corridor mile 62; about 1 mile of road from a public road to towers in corridor

mile 66; about 4,000 feet of road between corridor mile 70 and 71 to avoid wetlands; and about 900 feet of road at corridor mile 96 to access south side river crossing up on the bluff.

Page 2-9, paragraph 3 has been modified as follows:

Holes for tower footings are dug with a trackhoe (or blasted, if necessary) and footings put in place at each tower site. Towers are either assembled at the tower site and lifted into place by a large crane (30- to 100-ton-capacity) or assembled at a staging area and set in place by a large sky-crane helicopter. The towers are then bolted to the footings.

Page 2-10, text added as last bullet item as follows:

- 100-ton crane used to lift towers up onto their footings.

Page 2-14, text added after paragraph 2 as follows:

The Bonneville preferred and environmentally preferred alternatives are as follows:

- The Bonneville preferred alternative is the Proposed Action (to construct the McNary–John Day Line) with the following short-line routing alternatives; McNary Substation Alternatives, Alternative A – Relocate Building; Hanford –John Day Junction Alternatives, Alternative A – North Side; Corridor Mile 32 Alternatives, Alternative A – Parallel Existing Line Across Tribal Allotment; Corridor Mile 35 Alternatives, Alternative A – Parallel Existing Line Across Tribal Allotment.
- The No Action Alternative (not to construct the proposed line) is the environmentally preferred alternative.

Affected Environment, Environmental Consequences, and Mitigation (Chapter 3)

Land Use and Recreation

Page 3-2, paragraph 4 has been modified as follows:

Land use within the corridor is primarily agriculture (irrigated cropland, dryland wheat farming, and grazing). Irrigated agricultural uses in the project corridor include poplar tree farms, orchards, and a variety of crops such as potatoes, corn,