Lake Powell Pipeline Project  
FERC Additional Information Request Schedule B – Item 21  

Land Use Plans and Conflicts

21. In section 5.3.14.1.2.6 of exhibit E, you discuss Wild and Scenic Rivers, and in table 5-111 you summarize your effects assessment. However you do not provide a sufficient assessment of the effects on the Lower Paria River, which is eligible for a Wild and Scenic River designation. Please provide more detailed, specific information, including a map of the potentially affected river segment(s) showing the location of each proposed project feature or activity associated with any effect.

UBWR Response:

The proposed Glen Canyon to Buckskin transmission line alignment (230 kV) would cross over the Lower Paria River – 1 segment considered by BLM to be eligible for Recreation designation as a Wild and Scenic River, parallel to two existing transmission lines (Navajo-McCullough 500 kV transmission line and Glen Canyon to Buckskin 138 kV transmission line) north of the Paria Canyon-Vermilion Cliffs Wilderness boundary (see Appendix E, Map Panel 12 and Figure 2-1). The proposed 230 kV transmission line conductors (three separate conductor lines) each would be 1.4 inches diameter and consist of non-specular materials. The proposed transmission line towers (H-towers) would be 45.5 feet tall above the ground.

Visual Effects Analysis
The proposed transmission line could have direct visual effects on the Paria River corridor, although the proposed Glen Canyon to Buckskin transmission line may be difficult to visually distinguish from observation points within the canyon because of its distance above the canyon floor. The vertical distance from the bottom of the Paria River canyon immediately below the proposed direct transmission line crossing to the transmission line at its lowest sag point would range from 252 feet on the west to 272 feet on the east. This distance range includes 27 feet to account for required minimum ground clearance at the maximum sag point, and is calculated from the Paria River canyon bottom elevation of 4230 feet MSL to the top of the canyon rim where transmission line towers would be located on the west at 4455 feet MSL (ground level) and on the east at 4475 feet MSL (ground level). Views of the proposed transmission line from 150 feet horizontal distance from either side the transmission line alignment would increase the sight distance from the bottom of the canyon to the transmission line to a range of 293 feet on the west to 311 feet on the east. Figure 2-2 shows an example photograph of a 230 kV transmission line taken 250 feet away from the photographer (near the middle of the photograph). The 230 kV transmission line with non-specular conductors is difficult to see in Figure 2-2. Figure 2-3 shows the same photograph of the 230 kV transmission line with a transmission line tower included for perspective (the tower is closer to the photographer, standing on the highway, because the transmission line is crossing US 89 at an angle to the highway).
The top portions of two proposed transmission line towers would be visible from the canyon bottom under and in the vicinity of the proposed direct transmission line crossing. Figures 2-4, 2-5 and 2-6 show a viewshed analysis from the top elevations of three proposed transmission line towers that would be located east, center and west, respectively, on both sides of the Paria River canyon. The east and center transmission towers would not be visible in their entirety because the sides of the canyon are too steep to allow direct line of sight. The west transmission line tower would not be visible from the canyon bottom as shown in Figure 2-6.

A second, partial crossing of the proposed 230 kV transmission line would occur over a portion of the Paria River canyon where the river makes a sharp turn to the east just upstream of the proposed direct crossing of the same transmission line (Figure 2-1). The proposed transmission line may not be visible from directly underneath because the river undercuts the west and south canyon walls. The vertical distance from the bottom of the Paria River canyon immediately below the proposed transmission line crossing to the transmission line at its lowest sag point would range from 237 feet on the west to 247 feet on the east. This distance range includes 27 feet to account for required minimum ground clearance at the maximum sag point, and is calculated from the Paria River canyon bottom elevation of 4235 feet MSL to the top of the canyon rim where transmission line towers would be located on the west at 4445 feet MSL (ground level) and on the east at 4455 feet MSL (ground level). Views of the proposed transmission line from 150 feet horizontal distance from the north (upstream) side the transmission line alignment would increase the sight distance from the bottom of the canyon to the transmission line to a range of 280 feet on the west to 289 feet on the east. Figure 2-2 shows an example photograph of a 230 kV transmission line taken 250 feet away from the photographer (near the middle of the photograph). The 230 kV transmission line with non-specular conductors is difficult to see in Figure 2-2. Figure 2-3 shows the same photograph of the 230 kV transmission line with a transmission line tower for perspective (the tower is closer to the photographer, standing on the highway, because the transmission line is crossing US 89 at an angle to the highway).

The top portions of two proposed transmission line towers would be visible from the canyon bottom under and in the vicinity of the proposed partial transmission line crossing. Figures 2-4, 2-5 and 2-6 show a viewshed analysis from the top elevations of three proposed transmission line towers that would be located east, center and west, respectively across the Paria River canyon. The west and center transmission towers would not be visible in their entirety because the sides of the canyon are too steep to allow direct line of sight. The east transmission line tower would not be visible from the canyon bottom under in the vicinity of the proposed partial transmission line crossing as shown in Figure 2-4.

With the non-specular conductors partially visible at 250 feet sight distance and less visible at longer sight distances, the proposed transmission line is expected to have minimal to no visual effect on recreational users within the Paria River canyon.

**Noise Effects Analysis**

Noise effects of the proposed transmission line operation are projected to be below the level of normal human conversation (60 dBA). The Ldn (typical day/night noise levels) 150 feet away from a 230 kV transmission line are projected at 58.2 dBA (Electrical Design Parameters of...
Typical 230 kV and 500 kV Transmission Lines, 2005 Southern Company Services). The Ldn 250 feet away from the 230 kV transmission line would be approximately 50.0 dBA. Therefore, at the bottom of the Paria River canyon immediately under the proposed 230 kV transmission line, the noise generated by the transmission line would be approximately 50 dBA. As the distance from the transmission line increases, the noise level would decrease by 6 dBA with every doubling of distance.
Lake Powell Pipeline Project

Spatial Reference: UTM Zone 12N, NAD-83

Lower Paria River Segment 1 - Eligible for Recreation Designation

Lower Paria River Segment 1 - Eligible for Wild Designation

Legend:
- 138 kV Transmission Line
- 230 kV Transmission Line
- 500 kV Transmission Line
- Township
- Section

Existing 138 kV
Glen Canyon to Buckskin Transmission Line

Existing 230 kV
Glen Canyon to Buckskin Transmission Line

Existing 500 kV
Navajo-McCullough Transmission Line

Proposed 230 kV
Glen Canyon to Buckskin Transmission Line

GRAND STAIRCASE-ESCALANTE NM FO BLM ADMINISTRATION

KANAB FO BLM ADMINISTRATION

Lower Paria River Segment 1 - Eligible for Recreation Designation

Lower Paria River Segment 1 - Eligible for Wild Designation

Township

Section

Land Ownership

- BLM
- BLM Wilderness

Figure 2-1

FERC Project Number: 12966-001
BLM Serial Numbers:
AZA-34941
UTU-85472

Proposed 230 kV Transmission Line Crossing of the Paria River

Figure 2-2
Rocky Mountain Power 230 kV Transmission Line 250 feet from Photographer (along US 89)
Figure 2-3
Rocky Mountain Power 230 kV Transmission Line 250 feet from Photographer, with Tower (along US 89)
Lake Powell Pipeline Project
Proposed 230 kV Paria River Transmission Line Crossing
East Tower Viewshed Analysis

FERC Project Number: 12966-001
BLM Serial Numbers: AZA-34941
UTU-85472

Proposed 230 kV Paria River Transmission Line
Glen Canyon to Buckskin Transmission Line

Lower Paria River Segment 1 - Eligible for Recreation Designation
Not Visible

GRAND STAIRCASE-ESCALANTE NM FO
KANAB FO

Township
Section

Existing 138 kV
Glen Canyon to Buckskin Transmission Line

Existing 500 kV
Navajo-McCullough Transmission Line

230 kV Transmission Line
500 kV Transmission Line
230 kV H-Frame
138 kV H-Frame
500 kV Steel Lattice

Viewshed Point
Lake Powell Pipeline Project

Proposed 230 kV Paria River Transmission Line Crossing Center Tower Viewshed Analysis

FERC Project Number: 12966-001
BLM Serial Numbers: AZA-34941
UTU-85472

Spatial Reference: UTM Zone 12N, NAD-83

Paria River Canyon

Existing 138 kV
Glen Canyon to Buckskin Transmission Line

Proposed 230 kV
Glen Canyon to Buckskin Transmission Line

Existing 500 kV
Navajo-McCullough Transmission Line

Lower Paria River Segment 1 -
Eligible for Recreation Designation

Lower Paria River Segment 1 -
Eligible for Wild Designation

Lower Paria River Segment 1 -
Eligible for Recreation Designation

Lower Paria River Segment 1 -
Eligible for Wild Designation

GRAND STAIRCASE-ESCALANTE
NM FO BLM ADMINISTRATION

Grand Staircase-Escalante NM FO
KANAB FO

Visible
Not Visible

- 138 kV Transmission Line
- 230 kV Transmission Line
- 500 kV Transmission Line
Township
Section

0 150 300 600 Feet

 figura 2-5
Spatial Reference: UTM Zone 12N, NAD-83

Lake Powell Pipeline Project

Proposed 230 kV Paria River Transmission Line Crossing West Tower Viewshed Analysis

UDWRe

230 kV H-Frame
138 kV H-Frame
500 kV Steel Lattice

Existing 138 kV Glen Canyon to Buckskin Transmission Line
Existing 500 kV Navajo-McCullough Transmission Line

Lower Paria River Segment 1 - Eligible for Recreation Designation
Lower Paria River Segment 1 - Eligible for Wild Designation

GRAND STAIRCASE-ESCALANTE NM FO
KANAB FO

Granite County, Utah 2013

FERC Project Number: 12986-001
BLM Serial Numbers: AZA-34941
UTU-85472

Figure 2-6

0 150 300 600 Feet

0 150 300 600 Feet