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## 7.0 Electrical Power Lines

Electrical service requirements for the Project include utilizing existing service lines and constructing electrical transmission and distribution power lines to the tank farm, pump stations, and delivery facilities. Because local electrical power providers, not Keystone, will be constructing and operating the electrical power lines, the electrical power providers will be responsible for obtaining any necessary approvals or authorizations from federal, state, and local governments. While the permitting process for the electrical facilities is an independent process from the pipeline ROW approval process, the construction and operation of these power lines are considered connected actions under NEPA and, therefore, are evaluated within this Environmental Report for the Project.

### 7.1 Electrical Power Line Requirements

New electrical transmission power lines (i.e., power line with voltage of 69 kV or greater) will be constructed to service pump stations and a tank farm along the Project route. Other electric power requirements (e.g., valve sites) will be supplied from distribution service drops from adjacent distribution power lines (i.e., power line with voltage below 69 kV). Each of these distribution service drops will require the installation of approximately one or two poles and a transformer. The length of these distribution service drops typically will be less than 200 feet. Power providers will restore the work area as required upon completion of the new service drop in accordance with local permits. Figure 7.1-1 illustrates a typical power line single pole structure, with size depending on the electrical load the line will carry.

Table 7.1-1 details the proposed lengths for the new electrical power lines associated with the Project pumping stations and tank farm. Preliminary routing has been identified in consultation with utility companies for each power line. Where feasible, the entire length of each of these preliminary power line routes has been placed along existing county roads, section lines, or field edges to minimize interference with adjacent agricultural lands. The preliminary power line proposed alternative routes that link existing powerlines to each pump station are illustrated on the Power line Route Sheets (Appendix B). These routes are subject to change as the pumping station supply requirements are further reviewed with the power providers.

**Table 7.1-1 Estimated Lengths Requirements for the Proposed Electrical Power Lines**

Station	County	kV	Approximate Length (miles)	Typical Pole/Tower Spacing (feet)
<b>Montana</b>				
Pump Station 09	Phillips	115	57.0	500-600
Pump Station 10	Valley	115	51.0	500-600
Pump Station 11	McCone	115	11.9	500-600
Pump Station 12	McCone	69	3.3	300-400
Pump Station 13	Prairie	115	9.6	500-600
Pump Station 14	Fallon	115	5.1	500-600
Pump Station 15	Fallon	115	42.1	500-600
<b>South Dakota</b>				
Pump Station 16	Harding	69	13.7	300-400
Pump Station 17	Meade	115	11.3	500-600
Pump Station 18	Haakon	230	10.2	700-900
Pump Station 19	Jones	115	18.5	500-600
Pump Station 20	Tripp	115	16.1	500-600
Pump Station 21	Tripp	115	14.2	500-600

**Table 7.1-1 Estimated Lengths Requirements for the Proposed Electrical Power Lines**

Station	County	kV	Approximate Length (miles)	Typical Pole/Tower Spacing (feet)
<b>Nebraska</b>				
Pump Station 22	Holt	115	7.4	500-600
Pump Station 23	Wheeler	115	23.1	500-600
Pump Station 24A-1	Merrick	115	10.1	500-600
Pump Station 25	Filmore	115	14.2	500-600
Pump Station 26	Jefferson	115	13.3	500-600
Steele City Tank Farm <sup>1</sup>	Jefferson			
<b>Kansas</b>				
Pump Station 27A-1	Clay	115	10.2	500-600
Pump Station 29A-1	Butler	161	10.2	600-700
<b>Oklahoma</b>				
Pump Station 32	Payne, OK	138	6.0	600-700
Pump Station 33	Seminole, OK	138/138	1.4	600-700
Pump Station 34	Coal, OK	138/138	4.7	600-700
Pump Station 35	Bryan, OK	138	5.5	600-700
<b>Texas</b>				
Pump Station 36	Delta, TX	69	7.5	300-400
Pump Station 37	Wood, TX	138	8.2	600-700
Pump Station 38	Smith	138	0.2	600-700
Pump Station 39	Nacogdoches	138	9.4	600-700
Pump Station 40	Polk	138	7.2	600-700
Pump Station 41	Liberty	230	0.4	700-900

Note: Table 7.1-1 does not include power lines constructed to pump stations 28 and 31 along the Keystone Cushing Extension, which are being permitted and will be constructed as a portion of the Keystone Cushing Extension.

<sup>1</sup>. The power line from pump station 26 will also supply the Steele City tank farm power supply.

## 7.2 Electrical Power Line Construction

The construction phase for each electrical power line will consist of ROW acquisition, ROW clearing, construction, and site restoration and cleanup. The following is a brief summary of the typical steps associated with power line construction. Actual power line construction procedures will be developed by each power provider to address site specific conditions.

- **ROW easements.** The electric power provider will obtain any necessary easements.
- **ROW clearing.** Limited clearing will be required along existing roads in native and improved grasslands and croplands. Some trees may require removal to provide adequate clearance between the conductors and underlying vegetation. Trimming to avoid tree removal may be employed in some locations.
- **Power line construction.** The structures will be delivered on flatbed trucks. A mobile crane or picker truck may be needed to install the poles. Holes will be excavated for structure placement, typically with radial arm diggers. The wooden or steel poles will be directly embedded into the ground and anchors may be required at angles and dead ends. Pulling or reeling areas will be needed for installation of the conductor wires. Conductors (wires) will be attached to the structure using porcelain or fiberglass insulators.

**Figure 7.1-1 Typical Utility Powerline Structure**

- Restoration. After the power line structures are in place and the conductors are strung between the structures, the disturbed areas will be restored. The soil in the disturbed areas will be reshaped and contoured to its original condition. Reseeding will follow landowner requirements. All litter and other remaining materials will be removed from the construction areas and properly disposed.

### 7.3 Affected Environment and Environmental Consequences

This section addresses the natural and human resources potentially affected by the construction, operation, and maintenance of the proposed electrical transmission and distribution power lines associated with the Project. Impacts associated with the electrical distribution line service drops are expected to be minimal and comparable to those associated with supplying electricity to the average home or farm.

The proposed power line routes were evaluated for potential environmental impacts through aerial interpretation of the preliminary proposed routes and by field survey wherever practicable. This investigation included land ownership, land use, vegetative cover, wetland and waterbody crossings, cultural resource impacts, and residential structures, (Tables 7.3-1 through 7.3-5). Further environmental review of the power line routes will be carried out by the electrical power providers as required by state and local powerline permitting processes.

#### 7.3.1 Climate and Air Quality

The regional climate and meteorological conditions that influence transport and dispersion of air pollutants and existing levels of criteria air pollutants in the region of the Project is similar to those described in Section 3.2. Issues associated with these power lines will be limited to emissions associated with construction of power lines, including dust generation from ground disturbance and unpaved roads, mobile emissions from construction equipment. No impacts to air quality are anticipated from the operation power line. There will be no long term effects on the climate or air quality of the region.

#### 7.3.2 Geology, Mineral Resources, and Paleontology

Power line construction and operation will occur in the vicinity of the Project area, and geologic conditions and hazards will be similar to those described in Section 3.3. Potential issues associated with power lines will be similar to those outlined in Section 4.2.2 of this document. Additionally, where power line routes are located on BLM managed lands, paleontological surveys will be performed as required by the BLM prior to construction by the power providers to avoid the loss of important paleontological features. Although power lines may limit the extraction of mineral resources, this impact will be minimal due to the siting of power lines along existing roads and/or utility ROWs.

#### 7.3.3 Soils

Soils along the preliminary power line routes will be similar in character to those associated with the Project, and are described in Section 3.4. Potential issues associated with soils will be due to construction of the power lines; no additional impacts will be expected during operation. Issues could include temporary reduced soil quality, including compaction, and corresponding reductions in the productivity of desirable vegetation of crops caused by construction traffic and activities. These impacts could be reduced by mitigation measures such as soil decompaction and other measures.

#### 7.3.4 Water Resources

Distances of wetlands and waterbodies crossed by proposed power line routes are summarized in Table 7.3-1. Power line construction only requires one utility location to be placed approximately 200 feet from the next utility location, thereby lending greater potential to avoiding surface features such as streams and wetlands by

spanning the feature between two support poles. Therefore, the utility pole locations will be selected to minimize impacts in sensitive environments along each of the proposed routes. Once power lines were in place, impacts will be minimal.

**Table 7.3-1 Wetland and Waterbody Types Crossed by Proposed Power Line Routes**

	<b>Palustrine Emergent</b>	<b>Palustrine Forested</b>	<b>Riverine/Open Water</b>	<b>Palustrine Scrub-Shrub</b>	<b>TOTALS</b>
NWI Codes	PEM	PFO	ROW	PSS	
<b>Steele City Segment</b>					
<b>Montana</b>					
Pump Station 09	<0.1	0.0	1.8	0.0	1.9
Pump Station 10	0.1	<0.1	0.4	0.1	0.6
Pump Station 11	0.0	0.0	0.4	0.0	0.4
Pump Station 12	<0.1	0.0	<0.1	0.0	<0.1
Pump Station 13	0.0	0.0	0.0	0.0	0.0
Pump Station 14	0.0	0.0	0.1	0.0	0.1
Pump Station 15	0.0	0.0	0.7	0.0	0.7
<b>South Dakota</b>					
Pump Station 16	0.0	0.0	0.1	0.0	0.1
Pump Station 17	0.0	0.0	0.1	0.0	0.1
Pump Station 18	0.0	0.0	0.2	0.0	0.1
Pump Station 19	0.0	<0.1	0.3	0.0	0.3
Pump Station 20	0.4	0.2	<0.1	0.0	0.6
Pump Station 21	0.0	0.0	<0.1	0.0	<0.1
<b>Nebraska</b>					
Pump Station 22	<0.1	0.0	<0.1	0.0	<0.1
Pump Station 23	0.1	0.1	0.2	0.0	0.4
Pump Station 24A-1	<0.1	0.2	0.5	0.0	0.7
Pump Station 25	0.0	0.1	0.2	0.0	0.3
Pump Station 26	0.0	0.1	0.3	0.0	0.4
Steele City Tank Farm					
<b>Kansas</b>					
Pump Station 27A-1	0.0	0.1	0.1	0.0	0.2
Pump Station 29A-1	0.0	0.3	0.2	0.0	0.5
<b>Gulf Coast Segment</b>					
<b>Oklahoma</b>					
Pump Station 32	0.32	8.26	1.86	0.0	10.44
Pump Station 33	0.0	1.98	0.0	0.0	1.98
Pump Station 34	0.0	6.96	2.90	0.0	9.86
Pump Station 35	0.0	0.0	0.0	0.0	0.0
<b>Texas</b>					
Pump Station 36	0.0	7.94	0.31	0.0	8.25
Pump Station 37	0.0	5.39	0.20	0.0	5.59
Pump Station 38	0.0	0.0	0.0	0.0	0.0
Pump Station 39	2.88	60.72	6.41	0.0	70.02
Pump Station 40	0.0	0.0	0.71	0.0	0.71
Pump Station 41	0.0	2.45	0.0	0.0	2.45
<b>Power Line Total</b>					117.2

### 7.3.5 Terrestrial Vegetation

Types of vegetation along the proposed power line routes are similar to that described in Section 3.6. Because of the nature of power lines, minimal impacts to vegetation communities will be expected, with the exception of wooded areas, where trees and shrubs will be trimmed or cleared. This type of impact is anticipated to occur in a relatively small area. Temporary removal of other vegetation is typically caused by the construction of power lines. After construction, reclamation of affected lands will be performed by power providers in accordance with state and local standards and associated permits.

### 7.3.6 Wildlife and Fisheries

Surface disturbance due to the construction of the power line routes is minimal after reclamation. Because many sensitive habitats can be avoided during construction and operation by spanning, relatively few permanent disturbances to terrestrial or aquatic wildlife will occur. During construction, issues will be similar to those addressed in Sections 3.7 and 4.2-5.

Preliminary power line routes associated with the Project cross rivers and riparian areas that are likely to attract raptors and migratory birds. The new electrical power line segments will incrementally increase the collision potential for migrating and foraging bird species (e.g., raptors and migratory birds [APLIC 1994]). However, collision potential typically is dependent on variables such as the line location in relation to high use habitat areas (e.g., nesting, foraging, and roosting), line orientation to flight patterns and movement corridors, species composition, visibility, and line design. In addition, distribution lines that are less than 69 kV but greater than one kV could pose an electrocution hazard for raptor species attempting to perch on the structure. Configurations less than one kV or greater than 69 kV typically do not present an electrocution potential, based on conductor placement and orientation (APLIC 1996).

Potential collision and electrocution impacts to bird species from the Project could be reduced further if electrical service providers agree to implement the following mitigation measures.

- Incorporation of standard, safe designs, as outlined in Suggested Practice for Raptor Protection on Power Lines (APLIC 1996), into the design of electrical distribution lines in areas of identified avian concern to prevent electrocution of raptor species attempting to perch on the power poles and lines. These measures include, but are not limited to, a 60-inch separation between conductors and/or grounded hardware and recommended use of insulating materials and other applicable measures depending on line configuration (APLIC 1996).
- Incorporation of standard raptor-proofing designs, as outlined in Mitigating Bird Collision with Power Lines (APLIC 1994), into the design of the electrical distribution lines to prevent collision to foraging and migrating raptors within the Project area, as applicable.

In addition to electrocution and collision impacts, power lines may have impacts to grouse species occurring along the route. According to the final management plan and conservation strategies for sage grouse in Montana (MSGWG 2005: "Power lines provide additional hunting perches for raptors in otherwise treeless areas. Power lines most likely impact grouse near leks, in brood-rearing habitat, and in wintering areas that also support large numbers of wintering raptors.")

### 7.3.7 Land Use and Ownership

#### 7.3.7.1 Ownership

Lands crossed by the proposed power line routes are summarized by ownership in Table 7.3-2. No tribal lands have been identified along the preliminary routes. The proposed routes primarily are on private lands.

**Table 7.3-1 Ownership of Lands Crossed by Proposed Power Line Routes**

Pump Station	Ownership (miles)			
	Federal	State	Private	TOTAL
<b>Steele City Segment</b>				
<b>Montana</b>				
Pump Station 09	23.8	1.5	31.8	57.0
Pump Station 10	8.7	11.8	30.5	51.0
Pump Station 11	5.9	1.3	4.7	11.9
Pump Station 12	0.0	0.9	2.4	3.3
Pump Station 13	0.0	0.5	9.2	9.6
Pump Station 14	1.0	0.7	3.5	5.1
Pump Station 15	11.2	3.0	27.9	42.1
<b>South Dakota</b>				
Pump Station 16	0.0	6.6	7.2	13.7
Pump Station 17	0.0	0.0	11.3	11.3
Pump Station 18	0.0	0.0	10.3	10.3
Pump Station 19	0.0	0.0	18.5	18.5
Pump Station 20	0.0	0.0	16.1	16.1
Pump Station 21	0.0	0.0	14.2	14.2
<b>Nebraska</b>				
Pump Station 22	0.0	0.0	7.4	7.4
Pump Station 23	0.0	0.0	23.1	23.1
Pump Station 24	0.0	0.0	10.1	10.1
Pump Station 25	0.0	0.0	14.2	14.2
Pump Station 26	0.0	0.0	13.3	13.3
Steele City Tank Farm				
<b>Keystone Cushing Extension</b>				
<b>Kansas</b>				
Pump Station 27	0.0	0.0	0.2	0.2
Pump Station 29	0.0	0.0	0.5	0.5
<b>Oklahoma</b>				
Pump Station 32	0.0	0.0	5.7	5.7
Pump Station 33	0.0	0.0	5.1	5.1
Pump Station 34	0.0	0.0	5.7	5.7
Pump Station 35	0.0	0.0	5.7	5.7
<b>Gulf Coast Segment</b>				
<b>Texas</b>				
Pump Station 36	0.0	0.0	5.7	5.7
Pump Station 37	0.0	0.0	5.7	5.7
Pump Station 38	0.0	0.0	5.7	5.7
Pump Station 39	0.0	0.0	5.7	5.7
Pump Station 40	0.0	0.0	5.0	5.0
Pump Station 41	0.0	0.0	5.7	5.7
<b>Powerline Total</b>	<b>49.6</b>	<b>26.3</b>	<b>312.3</b>	<b>707.7</b>

<sup>1</sup>Discrepancies in total mileage are due to rounding

Impacts to private and public land resources will mostly be limited to visual resources, because ground disturbance will only occur at utility locations. Utility locations include poles in remote areas, and service drops in more a populated areas. Utility locations will be selected to avoid most areas of concern.

Visual resources are those characteristics of the landscape visible to residents and visitors. Descriptions of visual resources include the aesthetic value of the natural and developed landscape, the public value of viewing the natural landscape, and the visibility of the landscape from sensitive viewpoints (e.g., residences, recreation areas, rivers, and highways). The potential visual effects of the power lines include evaluation of physical features of the landscape, with particular attention to the ability of the particular landscape to absorb the visual modifications that will be introduced, together with the level of concern, or sensitivity, people have for scenic quality. Together these factors define the degree of landscape modification that will be acceptable.

There are no formal guidelines for managing visual resources for private or state owned lands. As described in Section 3.8, the BLM is responsible for identifying and protecting scenic values on public lands under several provisions of the Federal Land Policy Management Act (FLPMA) and the NEPA. Preliminary evaluations of visual impacts from power lines are in process. Results based on VRM classifications will be provided to BLM in their POD and will be fully determined as required for incremental permits applied for by individual power utilities.

**7.3.7.2 Land Use**

Land uses crossed by the preliminary power line routes are classified as described in Section 3.8. Table 7.3-3 provides the miles crossed by the power line routes categorized by land use..

**Table 7.3-2 Miles of Land Use Types Crossed by the Proposed Power Line Routes**

State	Developed	Agriculture/ Cropland	Rangeland/ Grassland	Forest Land	Water	Wetlands	Total
<b>Steele City Segment</b>							
<b>Montana</b>							
Pump Station 09	0.7	5.2	49.2	<0.1	1.8	<0.1	57.0
Pump Station 10	4.4	17.2	28.7	0.0	0.4	0.3	51.0
Pump Station 11	0.2	0.7	10.4	0.2	0.4	0.0	11.9
Pump Station 12	0.2	1.4	1.7	0.0	<0.1	<0.1	3.3
Pump Station 13	7.4	1.2	1.0	0.0	0.0	0.0	9.6
Pump Station 14	<0.1	1.1	3.9	0.0	0.1	0.0	5.1
Pump Station 15	1.5	2.4	37.5	0.0	0.7	0.0	42.1
<b>South Dakota</b>							
Pump Station 16	0.4	0.0	13.2	0.0	0.1	0.0	13.7
Pump Station 17	1.7	2.8	6.6	0.0	0.1	0.0	11.2
Pump Station 18	0.1	3.8	6.2	0.0	0.1	0.0	10.3
Pump Station 19	0.7	1.7	15.4	0.1	0.6	<0.1	18.5
Pump Station 20	1.0	8.1	6.2	0.1	<0.1	0.5	16.1
Pump Station 21	0.4	4.0	9.6	0.1	<0.1	0.0	14.2

**Table 7.3-2 Miles of Land Use Types Crossed by the Proposed Power Line Routes**

State	Developed	Agriculture/ Cropland	Rangeland/ Grassland	Forest Land	Water	Wetlands	Total
<b>Nebraska</b>							
Pump Station 22	<0.1	4.8	2.1	0.5	<0.1	<0.1	7.4
Pump Station 23	0.3	5.2	17.0	0.2	0.2	0.2	23.1
Pump Station 24A-1	1.7	3.1	4.3	2.3	0.5	0.2	10.1
Pump Station 25	1.0	12.1	0.8	0.1	0.1	0.1	14.2
Pump Station 26	1.3	7.7	3.7	0.2	0.3	0.1	13.3
<b>Keystone Cushing Extension</b>							
<b>Kansas</b>							
Pump Station 27A-1	1.7	6.5	1.5	0.3	0.1	0.1	10.2
Pump Station 29A-1	0.3	2.6	6.7	0.1	0.2	0.3	10.2
<b>Oklahoma</b>							
Pump Station 32	0.7	0.0	4.2	1.0	<0.1	0.0	6.0
Pump Station 33	0.0	0.0	0.0	0.0	1.4	0.0	1.4
Pump Station 34	4.7	0.0	0.0	0.0	0.0	0.0	4.7
Pump Station 35	5.5	0.0	0.0	0.0	0.0	0.0	5.5
<b>Texas</b>							
Pump Station 36	0.0	5.7	0.0	0.0	0.0	0.0	0.0
Pump Station 37	0.0	0.0	0.0	5.7	0.0	0.0	0.0
Pump Station 38	0.0	0.0	5.7	0.0	0.0	0.0	0.0
Pump Station 39	0.0	5.7	0.0	0.0	0.0	0.0	0.0
Pump Station 40	0.0	5.0	0.0	0.0	0.0	0.0	0.0
Pump Station 41	0.0	5.0	0.0	0.0	0.0	0.0	0.0
<b>Powerline Total</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**7.3.7.3 Developed Land/Residential/Commercial Areas**

Table 7.3-6 provides a summary of the residences/residential areas and public assembly places within 500 feet of the proposed power line routes. Places of public assembly are defined as hospitals, churches, government buildings, and assembly halls, etc. The number of residences within 50 feet of the proposed pipeline will be further defined once the civil surveys can be completed along all areas of the power lines.

**7.3.7.4 Noise**

The existing noise environment will be similar to levels described in Section 3.8.5. Operation of the power lines is not anticipated to increase ambient noise.

**Table 7.3-4 Natural and Human Resources Potentially Affected by Proposed Power Line Routes**

Pump Station	kV	Proposed Power line Route	
		Residences within 50 feet	Other Resources Issues
<b>Montana</b>			
Pump Station 09	115	45	Crosses BLM lands and Montana State Trust lands.
Pump Station 10	115	71	Crosses BLM lands and Montana State Trust lands.
Pump Station 11	115	6	Crosses BLM lands, Department of Defense (USACE) lands. Crosses Montana State Trust lands.
Pump Station 12	69	4	Crosses Montana State Trust lands.
Pump Station 13	115	7	Crosses Montana State Trust lands.
Pump Station 14	115	3	Crosses BLM lands and Montana State Trust lands.
Pump Station 15	115	19	Crosses BLM lands and Montana State Trust lands.
<b>South Dakota</b>			
Pump Station 16	69	1	Crosses South Dakota Game, Fish, and Park lands
Pump Station 17	115	7	none
Pump Station 18	230	4	none
Pump Station 19	115	10	none
Pump Station 20	115	61	none
Pump Station 21	115	36	none
<b>Nebraska</b>			
Pump Station 22	115	36	none
Pump Station 23	115	35	none
Pump Station 24	115	64	none
Pump Station 25	115	38	none
Pump Station 26	115	55	none
<b>Kansas</b>			
Pump Station 27	115	48	none
Pump Station 29	161	28	none
<b>Oklahoma</b>			
Pump Station 32	138	0	none
Pump Station 33	138/138	0	none
Pump Station 34	138/138	0	none
Pump Station 35	138	5	none
<b>Texas</b>			
Pump Station 36	69	1	none
Pump Station 37	138	3	none
Pump Station 38	138	4	none
Pump Station 39	138	0	none
Pump Station 40	138	0	none
Pump Station 41	230	0	none

**Table 7.3-5 Known Cultural Resources Within and Adjacent to 300-Foot-Wide Power Line Survey Areas**

Station	County	kV	Cultural Resource
<b>Montana</b>			
Pump Station 09	Phillips, MT	115	Burlington Northern and Santa Fe Railroad, Two prehistoric stone circle sites, Multi component stone circle/historic debris scatter, Two stone cairn sites
Pump Station 10	Valley, MT	115	Four prehistoric stone circle sites, Stone feature site
Pump Station 11	McCone, MT	115	No known cultural resources
Pump Station 12	McCone, MT	69	No known cultural resources
Pump Station 13	Prairie, MT	115	No known cultural resources
Pump Station 14	Fallon, MT	115	No known cultural resources
Pump Station 15	Fallon, MT	115	No known cultural resources
<b>South Dakota</b>			
Pump Station 16	Harding, SD	69	No known cultural resources
Pump Station 17	Meade, SD	115	No known cultural resources
Pump Station 18	Haakon, SD	230	No known cultural resources
Pump Station 19	Jones, SD	115	No known cultural resources
Pump Station 20	Tripp, SD	115	No known cultural resources
Pump Station 21	Tripp, SD	115	No known cultural resources
<b>Nebraska</b>			
Pump Station 22	Holt, NE	115	No known cultural resources
Pump Station 23	Wheeler, NE	115	No known cultural resources
Pump Station 24A-1	Merrick, NE	115	No known cultural resources
Pump Station 25	Filmore, NE	115	No known cultural resources
Pump Station 26	Jefferson, NE	115	No known cultural resources
Steele City Tank Farm	Jefferson, NE		No known cultural resources
<b>Kansas</b>			
Pump Station 27A-1	Clay, KS	115	No known cultural resources
Pump Station 29A-1	Butler, KS	161	No known cultural resources
<b>Oklahoma<sup>1</sup></b>			
Pump Station 32	Payne, OK	138	Silver Star Cemetery, Church, Historic abandoned railroad grade
Pump Station 33	Seminole, OK	138/138	No known cultural resources
Pump Station 34	Coal, OK	138/138	House with outbuilding, Historic abandoned railroad grade
Pump Station 35	Bryan, OK	138	2 GLO site leads– possible residences, Old Bennington Church, Cemetery, Historic standing structure
<b>Texas<sup>2</sup></b>			
Pump Station 36	Delta, TX	69	No known cultural resources
Pump Station 37	Wood, TX	138	41WD76, 41WD77, Abandoned railroad grade
Pump Station 38	Smith, TX	138	No known cultural resources
Pump Station 39	Nacogdoches, TX	138	Abandoned railroad grade
Pump Station 40	Polk, TX	138	Historic Moscow, Camden, San

**Table 7.3-5 Known Cultural Resources Within and Adjacent to 300-Foot-Wide Power Line Survey Areas**

Station	County	kV	Cultural Resource
			Augustine Railroad
Pump Station 41	Liberty, TX	230	No known cultural resources

<sup>1</sup>Information regarding cultural resources within and adjacent to the 300-foot-wide power line survey areas in Oklahoma was obtained from the Oklahoma Archeological Society.

<sup>2</sup>Information regarding cultural resources within and adjacent to the 300-foot-wide power line survey areas in Texas was obtained from the Texas Archeological Research Laboratory.

### 7.3.8 Cultural Resources

Federal guidelines for the protection of cultural resources as described in Section 3.9 will apply to construction and operation of power lines. Power providers will comply with this guidance.

Where required, Native American consultation will occur through appropriate agencies.

### 7.3.9 Social and Economic Conditions

Power line construction will primarily occur in locations described in Section 3.11. Because construction and operation of these power lines will be through local power providers, these power providers will be responsible for temporarily locating construction and maintenance personnel. Probable sources will include individuals already working for these companies. Construction of power lines could cause a brief increase in demand for local services due to construction personnel; however, the need for operational personnel will be determined by the individual power provider.

## 7.4 Cumulative Impacts

Potential environmental impacts for the majority of the proposed powerline routes are analogous to those described in Section 3, and are thus sufficiently characterized in that portion of the document. However, the individual wetlands and waterbodies affected by construction or maintenance of the proposed powerlines may be subject to Section 404 permitting and are outlined in detail in Table 7.3-1. Although the majority of the wetlands and waterbodies along the proposed pipeline have been identified by pedestrian survey, the areas of the proposed powerline routes not co-located with the pipeline were only characterized using desktop analysis, thus additional surveys may be necessary. The land use data presented in Table 7.3-3 was also calculated using aerial interpretation and GIS. The land crossed by the route is dominated by agriculture, pasture, and upland forest, together comprising nearly 80% of the land use in the area of both the power lines and the Project, while wetlands and waterbodies accounted for just over 5% of the area investigated.

Discussions of cumulative impacts from the power lines associated with the Project are discussed in Section 5.0. Other than the Keystone Pipeline Project, no foreseeable construction projects that overlap in space and time with the power lines were identified.