

Steptoe Valley (Link 370) and the Schell Creek Range just north of Connors Pass (Link 380). At the southern end of Dry Lake Valley, a 69kV transmission line traverses the toe of the Burnt Springs Range from Black Canyon south into Delamar Valley and then parallel to Pahranaagat Wash (Links 675, 690, 700).

In Utah, the Intermountain Generating Station is located north of Delta (Links 581 and 582). The IPP to Adelanto 500kV DC transmission line crosses from this power plant southeast of Delta. The Gondor to IPP 230kV transmission line is joined by the Gondor to Pavant 230kV transmission line just west of Marjum Pass. The two lines run parallel from this point to the Gondor Substation north of Ely, Nevada.

Parks, Recreation, and Preservation - The land use study also identified parks, recreation and preservation lands managed by federal, state, or local agencies, including national parks, national monuments, and state and local parks. The inventory also includes privately owned recreational sites and facilities.

In addition, other special management areas on public lands such as Wilderness areas, wilderness study areas (WSA), natural areas (NA), areas of critical environmental concern (ACEC), scenic areas (SA), and special recreation management areas (SRMA) were inventoried. Specific recreation sites included campgrounds, day-use areas and picnic areas, off-road vehicle use areas, trails and trailheads, boat launches, roadside rest areas, and other facilities.

WSAs are established under Section 603 of the Federal Lands Policy and Management Act (FLPMA) of 1976. The BLM manages these lands to protect unique natural resources and values under the Interim Management Guidelines. These regulations apply only to lands within the boundaries of WSAs and will be in effect until Congress designates these lands as Wilderness or recommends that they be returned to multiple use.

The Lower Salmon Falls Creek WSA was the only WSA identified within the study corridors in Idaho. The recently designated Mount Moriah Wilderness in Nevada was the only Wilderness area identified within a study corridors. A total of fourteen WSAs were identified within the study corridors in Nevada, including portions of South Pequop, Bluebell, Goshute Peak, Goshute Canyon, Marble Canyon, Mount Grafton, Fortification Range, Delamar Mountains, Evergreen, Meadow Valley Mountains, Fish and Wildlife 1, 2, & 3, and Arrow Canyon. Six WSAs were inventoried within the study corridors in Utah including Howell Peak, King Top, Notch Peak, Fish Springs, and Swasey Mountain. Table 3-3 lists the mileage that each of the alternative routes would be adjacent or parallel to WSA boundaries (e.g., 0-1/4 mile, 1/4-1 mile)

Parks and recreation uses in Idaho include the Minidoka Relocation Center Interpretive site (Links 20), the Oregon Trail (Links 41, 61, 64), the Hagerman Fossil Beds National Monument (Links 63, 64), the Snake River Rim Recreation Area (Links 41, 61), and the Salmon Falls Creek Reservoir SRMA (Links 50, 64, 70,).

Parks and recreation uses within the study corridors in Nevada include the California National Study Trail (Links 140 and 151), the California Trail Scenic Back Country Byway (Link 82, 83, 140, and 151) and the Pony Express Trail (Links 263, 264, and 270). Additional

areas include the Salmon Falls Creek SRMA (Links 711, 72), the proposed Kane Springs Back Country Byway (Link 680), and proposed Horse and Cattle Camp Back Country Byway (Link 364). Great Basin National Park is located just outside the study corridor near the Nevada-Utah state line (Link 460).

Transportation and Access - In Idaho, alternative routes would cross and/or parallel Interstate 84, U.S. Highway 93, and portions of U.S. Highways 25, 30, and 50. Highways that would be crossed by alternative routes within the study corridors in Nevada include Interstate 80 between Wells and Wendover, U.S. Highway 6/50 between Ely and the Nevada Utah state line, and U.S. Highway 6 between Ely and Currant, Nevada. U.S. Highway 93 would be paralleled and crossed by several alternative routes from the Idaho-Nevada state line south to Wells. U.S. Highway 6/50 and Utah State Highway 21 are the only highways that would be crossed by the study corridors in Utah.

Paved and unpaved "section" roads grid agriculture areas throughout the alternative study corridors in Idaho. Public lands south of the agriculture areas near the Nevada-Idaho state line contain numerous unimproved roads. In Nevada, both public and private lands are connected to the highway system by a vast network of unpaved roads. Numerous improved and unimproved roads were inventoried traversing the basin areas in Nevada and Utah. In mountainous areas, four-wheel drive trails and miners' roads wind along many of the slopes and drainages.

The Union Pacific Railroad in Idaho would be crossed one time by Links 20, 30, 41 on the Snake River plateau and once more north of the Nevada-Idaho state line (Link 50). The Nevada Northern Railroad would be paralleled by several alternative routes. The portion of the Nevada Northern Railroad between Ely and McGill, Nevada (Link 370), is used by historic steam engine train excursions.

Mining Claims and Extractive Uses - The only extractive land uses within the study corridors in Idaho are several sand and gravel operations and a pumice mining operation in the foothills outside the Sawtooth National Forest (Link 41). Only two active mining claims were identified in the study corridors in Idaho. The total mileage of mining claims crossed by each route are shown in Tables 2-4 and 2-5.

Mining is an important land use in Nevada. There are numerous mines dispersed throughout the mountainous areas of the state. Mines in the vicinity of the alternatives occur in the foothills of the Schell Creek Range at the edge of the Steptoe Valley, and in Cooper Canyon southeast of Ely. The Robinson Project, formerly the Kennecott copper pit, is a large mine west of Ely located outside the study corridors.

The Crystal Queen Mine, an active mining operation, is located in Dry Gulch at the edge of Spring Valley. Mine facilities adjacent to U.S. Highway 6/50 are over two miles from the nearest route segment (Link 400). Mining operations and exploration sites were also identified in Utah in the Drum Mountains (Links 630, 640), northwest of Delta.

Public lands in mountainous areas in Nevada and Utah have been staked with numerous, and often overlapping, mining claims. Further, the trend in mining methods in the 1980s has resulted in the staking of many new mining claims on lands in the alluvial areas of the open

basins and valleys. All of the alternative routes would cross active mining claims. Some of the most recent mining claims were identified on the Humboldt National Forest along the northern boundary of Great Basin National Park in the Osceola area and along the edges of the north end of Spring Valley (Links 262, 264, 265, and 266).

The BLM will conduct a search of the public records to identify those unpatented mining claims that SWIP may ultimately cross prior to the issuance of the right-of-way grant for both pre- and post-1955 claims (P.L. 167, 69 Stat. 30 USC 612).

Alternative Routes - Midpoint to Dry Lake

Route A

Between Midpoint Substation to Jackpot, Nevada, Route A would cross primarily sage and grass covered range lands parallel to the Midpoint to Valmy 345kV and the Midpoint to Hunt 230kV transmission lines (Link 10). The route would turn south and pass adjacent to the Minidoka Relocation Center Historic Site and a stockyard/feedlot in the vicinity of the community of Eden (Link 20). From a small substation near Hunt, the route would continue south parallel to the 345kV transmission line traversing agricultural lands and crossing over the Snake River Canyon (Link 41). Route A would cross the Oregon Trail (Link 41) southwest of Murtaugh. Southeast of Twin Falls, the route would turn west along the edge of the foothills crossing mixed agricultural lands and sage/grass covered range. It would then cross U.S. Highway 93 south of Rogerson (Link 50) and traverse the Salmon Falls Creek Reservoir SRMA, located west of Browns Bench (Link 70).

From Jackpot, Nevada, the route would cross through the Salmon Falls Creek SRMA (Link 72) parallel to the Midpoint to Valmy 345kV and the Upper Salmon to Wells 138kV transmission lines, roughly parallel to U.S. Highway 93. Continuing south paralleling these lines and the highway (Links 101, 101), the route would pass just east of the community of Contact (Link 110). Further south, near HD Summit, the route would turn sharply east across U.S. Highway 93 (Link 1612). Then adjacent to West Bush Creek, the route would cross the California National Study Trail (Link 1612). In Toano Draw, the route would cross the Union Pacific Railroad northwest of Oasis.

From Oasis, Route A would cross Interstate 80 passing east of a ranch at the toe of the Pequop Mountains (Link 211), and begin to parallel the Nevada Northern Railroad at Shafter (Link 212). The route would continue south along the railroad through sage scrub range lands and would pass within one mile of the South Pequop WSA in the Goshute Valley (Link 230). Southwest of Dolly Varden, the route would turn south through the Currie Hills to cross U.S. Highway 93 Alternate (Link 250) just north of Lages Station. The route would parallel this highway (Link 259) along the western toe of the Schell Creek Range and would then cross the highway again to access the North Steptoe substation site (Link 260).

From the proposed North Steptoe substation site, Route A would cross sage scrub range lands in the Steptoe Valley and cross the Egan Range through Dry Canyon (Links 291, 293). Just south of Cherry Creek Station, the route would cross the Pony Express Trail (Link 291).

The route would cross U.S. Highway 50 just before reaching the Robinson Summit substation site (Link 310). Continuing south, the route would cross U.S. Highway 6, passing through sparse grass-covered range lands in Jakes Valley and the White River Valley (Links 669, 670). The route would pass around the southern end of the Wayne Kirch Wildlife Management Area. Here the route crosses through several military operating areas (MOAs) in Dry Lake Valley, Delamar Valley, and Coyote Spring Valley. Nellis AFB conducts flight training and low-level operations in the Reveille MOA (Links 670, 671, 672), the Caliente MOA (Links 671, 673, 675, 690), and the Sally Corridor MOA (Links 690, 700). Approximately 130 miles of Route A would cross MOAs in Nevada.

Continuing south through range lands in Dry Lake Valley, the route would begin to parallel a 69kV transmission line, before crossing U.S. Highway 93, a designated scenic highway, at the southern end of the valley. Near the highway crossing, the route would pass several miles east of a private airstrip (Link 675). The route would pass within a mile of a utility airstrip in Delamar Lake located at the southern end of Dry Lake Valley (Link 690). Just east of Maynard Lake, the route would parallel U.S. Highway 93 through sparse range in Pahrangat Wash through a narrow area between the Delamar Mountains WSA (Link 690) and the Evergreen WSA. Route A would use a designated utility corridor through the west edge of the Aerojet Land Exchange area in Coyote Spring Valley parallel to U.S. Highway 93. This route would pass between the Fish and Wildlife 1, 2, & 3 WSAs (Link 700) in the Sheep Creek Range that bound the Desert National Refuge and the Arrow Canyon WSA (Link 700) northeast of Las Vegas. In Hidden Valley, the route would turn east through a pass at the southern end of the Arrow Canyon Range to reach the Dry Lake substation site.

Approximately 79 percent of the lands that would be crossed by Route A are administered by the BLM. Of the lands remaining, about 20 percent are private land and about 1 percent are state-administered lands. No Forest Service lands would be crossed by this route.

The predominant land use along this route is range, over 490 miles of range are crossed. Approximately 21 miles of this route would cross irrigated prime and unique farmlands located primarily in Idaho between the Midpoint Substation and the Idaho-Nevada state line. In addition, there are approximately 17 miles of other cultivated lands that would be crossed.

Route A would cross approximately 33 miles of mining claims, primarily located in Nevada. The route would parallel approximately 55 miles of H-frame 69kV transmission line and about 96 miles of 345kV transmission line (Midpoint to Valmy).

Route B

Route B is the same as Route A between Midpoint Substation and Jackpot, Nevada.

South of Jackpot, Route B would cross U.S. Highway 93 and pass through grass and sage range lands in Trout Creek (Links 91, 92). In Thousand Springs Valley, the route would cross the California National Study Trail (Link 140) and the California Trail Scenic Back

Country Byway. The route would cross the Southern Pacific Railroad at southern end of Toano Draw, and then would cross Nevada State Highway 233 (Link 221) in the vicinity of Oasis, Nevada.

From Oasis to Silver Zone Pass (Link 222) Route B would parallel Interstate 80 a few miles north of the highway. The route would then cross the highway in the pass before continuing south along the eastern toe of the Goshute Mountains through sparse range lands. West and south of Wendover, the route would pass near the Bluebell WSA (Link 222) and the Goshute Peak WSA (Links 222, 224, 226). Also in this area, the route would pass through portions of two military operating areas (MOA). The Lucin A and Gandy MOAs (Links 222) are part of the Utah Testing and Training Range (UTTR) operated by Hill AFB for low-level flight operations.

Near Ferguson Mountain, the route would cross U.S. Highway 93 (Link 224) and pass adjacent to the boundary of the Goshute Peak WSA (Link 226). Roughly parallel and several miles south of this highway, Route B would continue southeast (Link 226) through sparse range lands to the northern end of the Schell Creek Range near Lages Station, Nevada, where this route would cross U.S. Highway 93 into the North Steptoe substation site (Link 260).

From the North Steptoe substation site to the Robinson Summit substation site, Route B would cross the Pony Express Trail southwest of Cherry Creek Station (Link 280) in the Steptoe Valley, where this route would then parallel the Nevada Northern Railroad for a short distance, before turning west through Antone Pass. The route would cross high valley range lands in Butte Valley south to the Robinson Summit substation site.

Route B is the same as Route A from the Robinson Summit substation site to the Dry Lake substation site, northeast of Las Vegas.

Approximately 78 percent of the lands that would be crossed by Route B are administered by the BLM. Of the lands remaining, about 21 percent are private land and about 1 percent are state-administered lands. No Forest Service lands would be crossed by this route.

Range is the predominant land use along this route. The route would cross approximately 493 miles of range land. Approximately 21 miles of this route would cross irrigated prime and unique farmlands. These lands are primarily located in Idaho between the Midpoint Substation and the Idaho-Nevada state line. In addition, there are approximately 17 miles of other cultivated lands that would be crossed.

Route B would cross approximately 47 miles of mining claims, mainly in Nevada. Approximately 55 miles of this route would parallel H-frame 69kV transmission line and about 73 miles would parallel 345kV transmission line.

Route C

Route C is the same as Route B between Midpoint Substation to the vicinity of Oasis, Nevada (Link 200). From Oasis to the proposed Dry Lake substation site, Route C is the same as Route A.

Approximately 76 percent of the lands that would be crossed by Route C are administered by the BLM. Of the lands remaining, about 23 percent are private land and about 1 percent are state-administered lands. No Forest Service lands would be crossed by this route.

Range uses are the predominant land use along this route. Route C would cross approximately 486 miles of range land. The route would cross approximately 21 miles of irrigated prime and unique farmlands, mainly in Idaho between the Midpoint Substation and the Idaho-Nevada state line. In addition, there are approximately 17 miles of other cultivated lands that would be crossed.

The route would cross approximately 37 miles of mining claims. The majority of these claims are located in Nevada. Approximately 55 miles of this alternative route would parallel H-frame 69kV transmission line and about 73 miles would parallel 345kV transmission line.

Route D

From Midpoint Substation to Jackpot, Nevada, Route D is the same as Route A. In addition, this route is also the same as Route A to just north of HD Summit (Link 162).

From HD Summit, Route D would continue south parallel to the Upper Salmon to Wells 138kV transmission line through sage grassland range along Bishop Creek (Links 1611, 166, 167). The route would cross the California National Study Trail adjacent to Flats Creek (Links 167). Just west of Wells Peak, the route would cross U.S. Highway 93 and would pass through range lands in the Town Creek Flats (Links 1613, 170) before crossing Interstate 80 west of Wells, Nevada.

South of the interstate, the route would traverse the western toe of the Wood Hills (Link 180) and would parallel the Union Pacific Railroad southeast across Independence Valley, where the route would cross another segment of the California National Study Trail (Link 190). At the Pequop Mountains, the route would cross into the Goshute Valley passing near the South Pequop WSA (Link 190) to parallel the Nevada Northern Railroad (Link 230). The route would continue south parallel to the railroad, then turn south to pass approximately three miles east of Currie, Nevada. Southeast of this community, the route would cross U.S. Highway 93 into the Steptoe Valley on the west side of Goshute Lake. Along the western edge of Steptoe Valley, Route D would pass adjacent to the Goshute Canyon Recreation Area at the eastern tip of the Goshute Canyon Natural Area which is within the Goshute Canyon WSA (Link 241). In addition, this route would pass near the Goshute Canyon WSA. At the base of the Cherry Creek Range before the route reaches the North Steptoe substation site, Route D would pass near several ranches.

From the proposed North Steptoe substation site to the proposed Dry Lake substation site, Route D is the same as Route A.

Approximately 78 percent of the lands that would be crossed by Route D are administered by the BLM. Of the lands remaining, about 21 percent are private land and about 1 percent are state-administered lands. No Forest Service lands would be crossed by this route.

Range uses are the predominant land use along this route. The route would cross approximately 492 miles of range land. Approximately 21 miles of this route would cross irrigated prime and unique farmlands located, primarily in Idaho between the Midpoint Substation and the Idaho-Nevada state line. In addition, there are approximately 17 miles of other cultivated lands that would be crossed.

Route D would cross approximately 40 miles of mining claims, mainly in Nevada. Approximately 55 miles of this alternative route would parallel H-frame 69kV transmission line and about 80 miles would parallel 345kV transmission line.

Route E

From Midpoint Substation to the vicinity of Oasis, Nevada (Link 200), Route E is the same as Route A. Then, from Oasis to the proposed North Steptoe substation site, Route E is the same as Route B.

From the proposed North Steptoe substation site to the proposed Robinson Summit substation site, Route B would cross the Pony Express Trail southwest of Cherry Creek Station (Link 280) in Steptoe Valley and would parallel the Nevada Northern Railroad for a short distance before turning west through Antone Pass. The route would then continue through high valley range lands in Butte Valley south to the Robinson Summit substation site.

Route E is the same as Route A from the Robinson Summit substation site to the proposed Dry Lake substation site, northeast of Las Vegas.

Approximately 81 percent of the lands that would be crossed by Route E are administered by the BLM. Of the lands remaining, about 18 percent are private land and about 1 percent are state-administered lands. No Forest Service lands would be crossed by this route.

Range uses are the predominant land use along this route, crossing approximately 502 miles. Approximately 21 miles of this route would cross irrigated prime and unique farmlands. These lands are primarily located in Idaho between the Midpoint Substation and the Idaho-Nevada state line. In addition, there are approximately 17 miles of other cultivated lands that would be crossed.

Route E would cross approximately 40 miles of mining claims, mainly in Nevada. Approximately 55 miles of this alternative route would parallel H-frame 69kV transmission line and about 96 miles would parallel 345kV transmission line.

Route F

Route F would depart Midpoint Substation to the west toward the Hagerman area crossing rural agricultural lands broken by dispersed sage scrub range (Link 61) parallel to the Midpoint to Malin 500kV and the Midpoint to Boise Bench 230kV transmission lines. The route would pass near rural residences and cross agricultural lands in the Snake River Valley. There are several residences on the bluff above and in the Hagerman area adjacent to the this route. The route would cross the Snake River (Link 61) just south of Malad Gorge State Park. On the west side of the Snake River, the route would parallel the north and west boundaries of the recently designated Hagerman Fossil Beds National Monument (Links 62, 64).

The route would turn south (Link 64) across a long, narrow strip of BLM lands known as Dickey Bird Lane. This area is used for wildlife research by BLM and the Idaho Fish and Game Department. From the end of Dickey Bird Lane, the route would traverse adjacent to a utility airstrip used by aerial spraying operations located near the southern boundary of the Hagerman Fossil Beds National Monument and would cross rural agricultural lands passing near several rural residences.

About a mile northeast of Balanced Rock State Park, the route would cross Salmon Falls Creek Canyon, north of the portion designated as an area of critical environmental concern (ACEC), parallel to the Upper Salmon to Wells 138kV transmission line (Link 64). The route would continue south parallel to this transmission line roughly paralleling the western rim of the Salmon Falls Creek Canyon. East of Browns Bench, the route would pass through sage grassland range in the Salmon Falls Reservoir SRMA to the Idaho-Nevada state line near Jackpot, Nevada (Link 70).

Route F is the same as Route B from just south of Jackpot to near Oasis, Nevada. Then, from Oasis to the proposed Dry Lake substation site, Route F is identical to Route A.

Approximately 77 percent of the lands that would be crossed by Route F are administered by the BLM. Of the lands remaining, about 23 percent are private land and about 1 percent are state-administered lands. No Forest Service lands would be crossed by this route.

Range uses are the predominant land use along this route. The route would cross approximately 507 miles of range land. Route F would cross approximately 32 miles of irrigated prime and unique farmlands, mainly in Idaho between the Midpoint Substation and the Idaho-Nevada state line. In addition, there are approximately 22 miles of other cultivated lands that would be crossed.

Route F would cross approximately 30 miles of mining claims. These claims are primarily located in Nevada. Approximately 55 miles of this alternative route would parallel H-frame 69kV transmission line, about 33 miles would parallel guyed-steel 345kV transmission line and approximately 25 miles would parallel H-frame 230kV and steel lattice 500kV transmission lines.

Route G

Route G is the same as Routes A from Midpoint Substation south to Jackpot, Nevada, to the Idaho-Nevada state line (Link 70).

West of Jackpot, the route would cross Salmon Falls Creek (Link 711) a mile west of the Upper Salmon to Wells 138kV transmission line crossing. This route would be the third transmission line crossing in an area managed as the Salmon Falls Creek SRMA. Route G would then turn southwest (Link 714) to parallel the Midpoint to Valmy 345kV transmission line south along the west side of the Upper Salmon to Wells 138kV transmission line (Link 101, 715) through sage grassland range, parallel to the west U.S. Highway 93. Just north of Contact, Nevada, the route would turn sharply east across U.S. Highway 93 passing adjacent to several residences (Link 713) and then would turn sharply south. The route would continue south paralleling these two transmission lines on the east side to Rocky Peak (Links 110, 130). Route G would turn southeast away from the existing transmission line corridor before crossing the California National Study Trail (Link 151) in Thousand Springs Valley. The route would cross the California Trail Scenic Back Country Byway near the Winecup Ranch (Link 151).

The route would traverse sage scrub range lands along the western edge of the Toano Draw (Link 200) into Goshute Valley. Passing to the west of Oasis, Nevada, the route would cross Interstate 80 (Link 211) and traverse sage scrub range lands near several ranches at the base of the Pequop Mountains in the Goshute Valley. The route would continue south through the Goshute Valley (Links 212, 230) parallel to the Nevada Northern Railroad past Shafter and Dolly Varden. A little south of Mizpah, the route would turn south away from the railroad to cross U.S. Highway 93 several miles southeast of Currie, Nevada (Link 241). Continuing south along the western edge of Goshute Lake, the route would turn southeast into the North Steptoe substation site.

Route G is the same as Routes B from the North Steptoe substation site to the Dry Lake substation site northeast of Las Vegas, Nevada.

Approximately 79 percent of the lands that would be crossed by Route G are administered by the BLM. Of the lands remaining, about 18 percent are private land and about 1 percent are state-administered lands. No Forest Service lands would be crossed by this route.

Range uses are the predominant land use along this route. Route G would cross approximately 473 miles of range land. The route would cross approximately 21 miles of irrigated prime and unique farmlands. These lands are primarily located in Idaho between the Midpoint Substation and the Idaho-Nevada state line. In addition, there are approximately 17 miles of other cultivated lands that would be crossed.

Route G would cross approximately 28 miles of mining claims, mainly in Nevada. Approximately 55 miles of this alternative route would parallel H-frame 69kV transmission line and about 96 miles would parallel 345kV transmission line.

Alternative Routes - Ely To Delta

Direct Route

The Direct Route would interconnect with the Midpoint to Dry Lake portion of the SWIP at the proposed North Steptoe substation site. From this substation site, the route would cross over the north end of the Schell Creek Range to the east through the Dry Canyon into Spring Valley (Links 262, 263). The route would cross the Pony Express Trail in Spring Valley (Link 265) and continue through sage scrub range lands to the southeast, passing Twelvemile Summit, Red Hills, Mike Springs Wash, and just north of the Little Hills (Link 266).

The route then would turn east passing to the north of Tin Springs Mountain (Link 620), and would continue east paralleling the Juab-Millard county line in Utah (Link 630). The route would cross into Snake Valley at the south end of the Deep Creek Range.

The route would pass through an MOA, part of the UTTR where Hill AFB conducts flight training low-level flight operations. The route would pass through the Gandy MOA (Link 620) in Spring Valley. From approximately the Nevada-Utah state line to east of the Confusion Range, the route would be within the R-6045 Restricted Area, a controlled military airspace. The route would continue east crossing through the Confusion Range and into Tule Valley south of the Middle Range through sparse range lands passing near the southern end of the Fish Springs WSA (Link 630).

The route would pass through the Sevier A and B MOAs (Link 630) beyond the House Range near Swasey Point and the Swasey Mountain WSA, and then would turn southeast between the Drum Mountains and Little Drum Mountains (Link 640). The route would turn due east to pass south of the Drum Mountains and just north of Greener Reservoir. For approximately the last twelve miles into the proposed Intermountain substation site, the route would parallel the IPP to Adelanto 500kV DC transmission line to the north of rural agricultural lands in the vicinity of Delta, Utah (Links 572, 580, 581, 582).

Approximately 95 percent of the lands that would be crossed by this route are administered by the BLM. Of the lands remaining, about 5 percent are state-administered lands. No Forest Service or private lands would be crossed by this route.

The predominant land use along this route is range, over 135 miles of range use crossed. This route would not cross irrigated prime and unique farmlands or cultivated lands.

This route would cross approximately 7.8 miles of mining claims, primarily located in Nevada. The route would parallel approximately 11.5 miles of H-frame 230kV transmission line and about 12.8 miles of 500kV transmission line.

Cutoff Route

The first segment of the Cutoff Route from the North Steptoe substation site to just east of the Little Hills is the same as the Direct Route, described above. From the Little Hills, the route would cross to the northeast side of Government Peak through sage scrub range lands in the Little Valley. In Little Valley, the route would pass through the Gandy MOA and pass within one mile to the east of the Mount Moriah Wilderness and Marble Canyon WSA. This route would pass through the southwestern corner of the R-6045 Restricted Area (Link 267), a controlled military flight training area operated by Hill AFB for a short distance.

The route would traverse southeast across Snake Valley and through Coyote Pass in the Conger Range, within the Sevier A and B MOAs (Link 268). The route would remain within these MOAs to just west of the Delta area. North of the Buckskin Hills, the route would begin to parallel Gondor to Pavant 230kV and the Gondor to IPP (IPA) 230kV transmission lines east through Sheepmens Little Valley and Payson Canyon (Link 462). Continuing east parallel to these lines, the route would cross Tule Valley and pass through Marjum Canyon (Link 462) between the Howell Peak WSA and the Notch Peak WSA.

The two 230kV transmission lines diverge east of Marjum Canyon. The Cutoff Route would follow the IPA 230kV line northeast across the Whirlwind Valley passing near the Swasey Mountain WSA (Link 470) to the south end of the Little Drum Mountains where the 230kV line is joined by the IPP to Adelanto 500kV DC transmission line (Links 571, 572, 580, 581, 582). The route would parallel these two transmission lines into the Intermountain Generating Station.

Approximately 93 percent of the lands that would be crossed by this route are administered by the BLM. Of the lands remaining, about 7 percent are state-administered lands. No Forest Service or private lands would be crossed by this route.

The predominant land use along this route is range, with over 153 miles crossed. This route would not cross irrigated prime and unique farmlands or cultivated lands.

This route would cross approximately 7 miles of mining claims, primarily located in Nevada. The route would parallel approximately 72 miles of H-frame 230kV transmission line and about 20 miles of 500kV transmission line.

230kV Corridor Route

This route would originate at the Robinson Summit substation site and traverse east into Smith Valley (Link 350) parallel to the Gondor to Machacek 230kV transmission line. In Smith Valley, the route would pass south of the Ely Maximum Security Prison and several rural residences. The route would continue east parallel to the 230kV transmission line south of Hercules Gap into Steptoe Valley passing north of a rural subdivision. At the Gondor Substation, northeast of Ely, the route would cross U.S. Highway 93 (Link 370) and begin to parallel two of the Gondor to Pavant 230kV and Gondor to IPP 230kV transmission lines. The route would traverse the eastern edge of the Steptoe Valley east of Ely. Before entering

the Humboldt National Forest through Cooper Canyon (Link 380), the route would pass adjacent to mining operations in the foothills of the Schell Creek Range.

Continuing parallel to the 230kV transmission lines, the route would cross east along Spring Creek and would cross the Snake Range through Weaver Creek adjacent to a proposed BLM primitive camping area (Link 460). The 230kV Corridor Route would pass to the north of Great Basin National Park and the surrounding portion of the Humboldt National Forest in Sacramento Pass (Link 460). The route would cross sage scrub range lands and U.S. Highway 6/50 twice in the Snake Valley. At the east side of the Snake Valley, the route would traverse to the south of Eskdale and into the Buckskin Hills.

From north of the Buckskin Hills to the Intermountain substation site, this route is the same as described for the Cutoff Route above.

Approximately 82 percent of the lands that would be crossed by this route are administered by the BLM. Of the lands remaining, about 8 percent are private land and about 5 percent are state-administered lands and 5 percent Forest Service lands.

The predominant land use along this route is range, with over 152 miles crossed. Approximately 1.2 miles of this route would cross irrigated prime and unique farmlands. In addition, there are approximately 2 miles of other cultivated lands that would be crossed.

This would cross approximately 29 miles of mining claims, primarily located in Nevada. The route would parallel approximately 34 miles of H-frame 69kV transmission line, about 160 miles of 230 transmission line and about 20 miles of 500kV transmission line.

Southern Route

The route would originate from the Robinson Summit substation site and head south along the east side of the Jakes Valley (Link 340). Then south of Duck Peak, the route would cross the White River Valley (Links 362, 364). The route would cross the Egan Range through Water Canyon and into Williams Creek passing south of the Ward Charcoal Ovens State Park (Link 364). At the southern end of the Steptoe Valley, the route would cross Cattle Camp Wash, and pass to the north of Cattle Camp Spring. The route would cross the proposed Horse and Cattle Camp Back Country Byway (Link 364) twice near the northern boundary of the Mt. Grafton WSA (Link 364). North of Lake Valley Summit in the Steptoe Valley, the route would cross U.S. Highway 93 (Link 420), a portion of designated scenic highway, and would pass near a site proposed in the Great Basin National Park Draft General Management Plan (GMP) for a wayside station.

After the highway crossing, the route would cross southeast across sage scrub range lands in Spring Valley to the north of the Fortification Range (Link 420). The route would then turn east around the southern end of the Snake Range. In Antelope Valley Wash, the route would cross Nevada State Highway 21 (Link 451) near a site proposed in the Great Basin National Park Draft GMP for a wayside station and pass to the north of the Mormon Gap Reservoir. Then northeast through Cowboy Pass, the route would cross the Ferguson Desert to Snake

Pass north of the Wah Wah Mountains WSA (Link 451). Passing around the southern tip of the King Top WSA (Link 451), the route would then turn sharply north into the Tule Valley, just south of the Barn Hills. The route would turn northeast near Skull Pass and would cross the Sevier Desert north of Sevier Lake before joining the IPP to Adelanto 500kV DC transmission line to the Intermountain substation site (Links 490, 510, 560, 571, 572, 572, 580, 581, 582). The route would pass through rural agricultural lands near Hinckley, Abraham, and Sugarville parallel to the existing transmission lines.

Approximately 94 percent of the lands that would be crossed by this route are administered by the BLM. Of the lands remaining, about 1 percent are private land and about 5 percent are state-administered lands. No Forest Service lands would be crossed by this route.

The predominant land use along this route is range, with 211 miles crossed. This route would not cross irrigated prime and unique farmlands. In addition, there are approximately 0.1 miles of other cultivated lands that would be crossed.

This would cross approximately 2 miles of mining claims, primarily located in Nevada. The route would parallel approximately 18 miles of H-frame 230kV transmission line and about 31 miles of 530kV transmission line.

Visual Resources

Introduction

The landscapes of the study area fall into the Columbia Plateau and Basin and Range physiographic provinces. Both provinces are characterized by relatively open, uninterrupted views and minimal overstory vegetation cover.

Northern portions of the study area, within southern Idaho and northeastern Nevada, are in the Snake River Plain section of the Columbia Plateau physiographic province. This section is a vast, relatively flat plain and young lava plateau, which is deeply dissected by the canyons of the Snake River and Salmon Falls Creek, the dominant landscape features within this area. The Snake River Plateau is bounded on the southwest by the South Hills. Irrigated agricultural lands, this area's main land use, are found clustered on the plateau north and south along the Snake River Canyon.

South on the Snake River Plain, agricultural areas extend to the bordering foothills and mountains in a transitional landscape between the Basin and Range and Columbia Plateau provinces. This transitional landscape includes foothills, plateaus, mesas, and buttes formed of eroded lava and sedimentary rock layers.

The majority of the study area, including northeastern and southern Nevada and western Utah, falls within the Basin and Range physiographic provinces. Topographically, this landscape is distinguished by isolated, roughly parallel mountain ranges separated by closed (undrained) desert basins or playas. The mountain ranges often run 50 to 75 miles in length

and are generally north-south trending. Surrounding the base of the mountains and extending into the basins, there are often distinctive alluvial areas.

Portions of the study area in western Utah also include a transition zone of the Basin and Range province into what is locally referred to as the "West Desert" landscape. This landscape includes portions of the Sevier Desert and Sevier Lake. The topography within this area is extremely flat and includes large playas or mud flat areas, that exhibit little landform diversity. Again, these areas are divided by rugged, rocky mountain ranges.

Methods

The visual resource study addresses the importance of the inherent aesthetics of the landscape, the public value of viewing the natural landscape, and the contrast or change to the landscape from the proposed SWIP 500kV transmission line.

A majority of the lands within the alternative routes are administered by the BLM, and to a lesser degree, the FS, and private, state, and military withdrawals. The current BLM 8400 series Visual Resource Management (VRM) Manual and the FS Visual Management System (VMS) formed the basis for developing a consistent methodology for the visual resource inventory, and to assess visual impacts of the SWIP alternatives. The VRM classes for BLM-administered lands and Visual Quality Objectives (VQOs) for National Forest System lands establish the guidelines for the level of acceptable visual change allowed in the landscape. There are no formal guidelines for managing visual resources on state or private lands.

VRM and VQO data were collected and mapped, where available, for a six-mile wide corridor along the SWIP alternatives. The level of visual resource data available for the study area from agency data sets varied in study scales and level of detail. Also, visual management classifications varied somewhat at jurisdictional boundaries between agencies, resources areas, and/or districts.

In designating visual management classes, the BLM and FS use a process that considers scenic quality (or visual quality for the FS), visual sensitivity of viewers, and visibility from sensitive viewpoints. In portions of the Egan Resource Area of the BLM's Ely District and the Stateline Resource Area of the BLM's Las Vegas District, VRM inventories have not yet been completed. In this area, it was necessary to derive project-level VRM classes to achieve a consistent inventory for analysis and impact assessment. To do this, computerized analytical models, developed on a GIS, were used to determine project visibility and other study components for the SWIP, based on the inventory and analysis procedures in BLM's 8400 series VRM manual.

Data gathered during the inventory were supplemented with other mapped and derived data included mapping of existing transmission lines and corridors, visibility from sensitive viewpoints, scenic quality, and visual contrast levels. The impact assessment models used these data to determine the potential impacts to scenic quality and sensitive viewers, and to determine compliance or noncompliance with agency management objectives (refer to Chapter 4).

Landscape character types are homogenous landscape units refined from the regional physiographic classifications. Landscape character types typically define dominant landforms and features (e.g., mountains, canyons). Each landscape character type was further divided into smaller units with similar visual characteristics. These homogeneous landscape units or scenic quality rating units were evaluated for scenic quality using BLM and FS criteria.

The locations and visibility of sensitive viewpoints are illustrated in the Map Volume. For more detailed descriptions of methods and results, refer to the technical report and data tables. The technical reports and data tables are available for review at the agency offices listed (refer to Appendix H for the locations where technical reports can be reviewed).

Scenic Quality

Scenic quality was developed by rating the homogeneous landscape units mapped from the landscape character types. BLM and FS criteria were used for all public and undeveloped urban lands. Agricultural, urban, and developed lands were evaluated using other visual criteria developed for the project (refer to Table VR-2 of the technical report).

To evaluate the impacts of the SWIP alternatives equally, it is assumed that all landscapes have some inherent scenic value. Landscapes with the greater diversity of features are typically considered to have greater aesthetic appeal (e.g., high scenic quality). Though the current BLM's VRM scenic quality inventory guidelines consider "cultural modifications" (e.g., communities, rural residences, travel routes, etc.) as enhancements or detractions from the scenic quality of the landscape, the system is not particularly sensitive to landscapes dominated by agriculture (e.g., Snake River Plain). The FS's VMS, on the other hand, does not work well with developed areas.

VRM and VMS use slightly different procedures to establish scenic quality or variety class ratings. The BLM uses a numerical rating system that incorporates several key elements in rating scenic quality. These elements include landform, vegetation, water, color, influence of adjacent scenery, scarcity of features, and cultural modifications. The aggregation of these values determines the scenic quality class. The FS system describes landscape character in terms of landform, vegetation, and waterform to determine variety classes. Both systems classify the landscape into three levels of scenic quality or variety:

- Class A - distinctive
- Class B - common
- Class C - minimal

The BLM scenic quality classes and FS variety classes are described in Table 3-4. Also, refer to Table VR-5 in the technical report for detailed results of the scenic quality evaluation.

Viewpoints

Potentially critical viewpoints that may have visibility of the project were identified and inventoried within a corridor three miles either side of the assumed centerlines for each alternative, and outside the study corridors where long distance views were identified as an issue during project scoping (e.g., Great Basin National Park). Viewpoints were identified through personal contacts with agency visual resource specialists and review of the land use inventory data. The viewpoints inventoried include:

- individual residences and communities
- parks, recreation, and preservation areas
- highways, byways, and recreation destination access roads
- sensitive cultural sites (also refer to the Land Use and Cultural Resources section)

Distance Zones

Distance zones were established based upon visual perception thresholds for perceiving change in form, line, texture, color, and other visual perception factors. With an increasing distance from a viewpoint, landscape elements tend to become less obvious and detailed. The elements of form and line become more dominant than color or texture at greater viewing distances. Distance thresholds or zones are generally defined by FS as foreground (0 to 1/4 to 1/2 mile), middleground (1/4 to 1/2 to 3-5 miles), and background (3-5 to 15 miles). BLM recognizes similar distance zones but combines foreground and middleground and defines the distance zone of seldom seen as areas not visible from sensitive viewpoints, or viewing distances beyond 15 miles.

The visible perception of a typical 500kV transmission line in the context of landscapes was considered in determining the division of the visible area into distance zones. For this study, the following five distance zones were used to establish project visibility from sensitive viewpoints (Jones & Jones 1976):

- 0 - 1/4 mile
- 1/4 mile - 1 mile
- 1 mile - 3 miles
- beyond 3 miles
- seldom seen

Visual Sensitivity

Both the BLM and the FS visual systems define visual sensitivity as a measure of viewer concern for potential perceptible changes in scenic resources. Though the BLM and the FS

vary in their individual methods of analysis for visual sensitivity, both systems consider similar criteria in their evaluations. The approach for this study incorporates criteria from both systems and draws from previous experience on visual studies conducted for transmission lines throughout the western United States on public lands and national forests. These criteria were distilled into two key parameters: user type/user attitude and use volume. These parameters were used to assign overall visual sensitivity levels to the inventoried viewpoints.

Visual sensitivity levels vary according to the types of users and their attitudes. Consideration of the local, regional, or national significance of a viewpoint or viewed area helped to establish the attitudes of viewers. For example, national park viewpoints are typically considered more sensitive than interstate highways. Residential, recreation, and roadway views were considered. Each viewpoint was assigned a value of high, moderate, or low based on the estimated level of concern that would be expected of particular viewer types (e.g., sightseers, commuters).

Views seen by large numbers of people may potentially be more sensitive. On the other hand, a high volume of viewers with a low concern for changes in the scenic resource would not necessarily warrant a high level of visual sensitivity. For example, an interstate highway with a large volume of commercial and destination-oriented traffic would not necessarily be highly sensitive. With this in mind, each viewpoint was assigned a value of high, moderate, or low based on the number of potential viewers.

The evaluations of user type/attitude and use volume were combined to produce an overall visual sensitivity level. For the purposes of determining significant impacts, only viewpoints with a high or moderate visual sensitivity were assessed for potential visual impacts in this study.

VRM/VQO Classes

Visual management objectives (VRM classes and VQOs) are designated in agency resource plans for most of the study area (e.g., BLM Resource Management Plans and Forest Plans). These objectives define the acceptable degree of visual change for the natural landscape. Both the BLM and FS derive visual management objectives for their lands by considering scenic quality (BLM) or variety class (FS), visual sensitivity, and visibility from sensitive viewpoints.

The BLM has four VRM classes to manage the visual resources on public lands. VRM classes are determined by combining the visual resource elements mentioned above. Class I is a special designation applied to existing Wilderness areas, some natural areas and ACECs, and other areas where the management policy or legislative mandate is to restrict changes to the natural processes of the landscape.

The FS uses five VQOs to manage visual resources, which are determined based on the established FS VMS guidelines. As with Class I on BLM lands, Preservation is a special designation reserved for protected areas. VQOs have been mapped for the national forest

lands within the study corridors. For a description of VRM classes and VQOs, refer to Table 3-5. The Visual Resources maps in the Map Volume show the areas along the routes that would not comply with VRM Class I and Class II designations.

Results

Alternative Routes - Midpoint to Dry Lake

Route A

Scenic Quality/Variety Class - From the Midpoint Substation to Jackpot, Nevada, Class A areas occur primarily in Idaho along the Snake River Canyon (Link 41). The Salmon Falls Creek Reservoir (Link 71) located adjacent to Browns Bench is the largest Class B area inventoried in Idaho. Agricultural lands adjacent to the Snake River Canyon (Link 41) were also inventoried. The rural agricultural landscape contains diversity in form, line, texture, and color similar to what might be inventoried in the natural landscape as Class B scenery. In Idaho, Class C scenery occurs predominantly in the flat, open sagebrush desert land north and south of the Snake River in Idaho (Links 10, 20).

Within the study corridors from Jackpot, Nevada to the North Steptoe substation site, Class B scenery typically occurs in mountain and foothill landscapes including the Granite Range (Links 101, 102, 110), Windermere Hills (Link 1612), Currie Hills (Link 250) and the Schell Creek Range (Link 259). Class C is the predominant scenic quality rating for landscapes in Nevada, occurring primarily within the intermountain basin landscape character type.

From North Steptoe substation site to the Dry Lake substation site, Class A scenery occurs within the study corridor in the northern portion of the Pahrnagat Wash (Links 690, 700). Class B scenery occurs near Gap Mountain (Link 672) and Delamar Mountain (Link 675), and the Arrow Canyon Range (Links 700, 720).

Sensitive Viewpoints and Visibility - Views from rural residences and along the fringe of small communities between Midpoint Substation and Jackpot, Nevada were considered highly sensitive. In Idaho, these high sensitivity views occur near Hansen (Links 20, 41), Eden (Links 20, 41), Rogerson (Links 40, 50). In addition, there are sensitive residential views from Jackpot, Nevada (Links 713, 715, 101, 110). Foreground and middleground views from these residences would occur along this route.

Developed recreation sites and areas with high visual sensitivity identified along Route A in Idaho include foreground views from the Minidoka Relocation Center Interpretative Site (Link 20) northwest of Eden and middleground views from a private recreation development called Nat-Soo-Pah located over a mile from the assumed centerline. Several existing and proposed BLM campgrounds that would have middleground views are located within the Salmon Falls Reservoir (SRMA) were also inventoried as high sensitivity viewpoints. Views from these sites are located on or near the water line of the reservoir and are expected to be

screened. However, the roads that access these sites are also high sensitivity viewpoints. The route would be viewed in the foreground where it would cross these roads.

Route A would cross Interstate 84 (Link 41) in Idaho, inventoried as a moderate sensitivity travel route. The portions of U.S. Highway 93 within the study corridor of this route in Idaho and Nevada were inventoried as a moderate sensitivity travel route. These travel routes would be viewed from the foreground where it would cross these highways.

Foreground and middleground views from residences would occur between Jackpot, Nevada and the North Steptoe substation site, where Route A would encounter high sensitivity viewpoints near the residential community of Contact, Nevada (Links 713, 101, 102, 110) and isolated residences near Rock Creek in the Steptoe Valley (Link 270).

From the North Steptoe substation site and the Dry Lake substation site, Route A would affect high sensitivity recreation viewpoints within foreground view where it would cross the Pony Express Trail (Link 270) and the Kane Springs Back Country Byway (Links 690, 700). In addition, the route would be visible from the foreground and the middleground by dispersed recreation users in the southern end of the Pahrangat National Wildlife Refuge, the Evergreen WSA (Link 690), the Delamar WSA (Link 690), the Desert National Wildlife Refuge (Link 690), the Fish & Wildlife 1, 2, & 3 WSAs (Link 700), and the Arrow Canyon WSA (Links 700, 720).

The portion of the U.S. Highway 93 (Link 675) from Majors Place, Nevada south to Crystal Springs is a designated scenic route in Nevada and was inventoried as a high sensitivity viewpoint.

VRM - From the Midpoint Substation to Jackpot Nevada, Route A would affect approximately 1.8 miles of a VRM Class I area where it would cross the Salmon Falls Reservoir SRMA adjacent to Browns Bench (Link 70). The route would encounter VRM Class II areas for 0.4 miles (Link 41) southwest of Murtaugh, Idaho and for 0.6 miles near Eden where it would cross the Snake River Canyon (Link 41).

From Jackpot, Nevada to the North Steptoe substation site, Route A would cross VRM Class II areas for 3 miles in the foothills southwest of Jackpot (Links 711, 72) and 1 mile in the Windermere Hills (Link 1612) northeast of Wells. This route would also cross VRM Class II areas for .5 mile along the eastern toe of the Pequop Mountains (Link 211) and 0.5 miles west of Oasis and Bishop Creek (Link 162).

Class III areas that would be crossed along this route occur south of Contact, Nevada (Link 110) and south of Contact, Nevada (Link 130), adjacent to Interstate 80 (Link 211), and north of Contact, Nevada (Link 101).

From the North Steptoe substation site to the Dry Lake substation site, VRM Class II areas would be crossed for about 1.3 miles in the southern portion of the Arrow Canyon Range (Link 700) and for 1.3 miles east of the Pahrangat National Wildlife Refuge (Link 690). VRM Class II would also lie immediately adjacent and parallel approximately 12 miles along this portion of the route.

VRM Class III areas that would be crossed by Route A include areas in the Egan Range (Links 310, 340), south of Lages Station in the Schell Creek Range (Link 259), and the Steptoe Valley near Cherry Creek Station (Links 261, 263, 270). All other areas inventoried within the study corridors were VRM Class IV.

Route B

Scenic Quality/Variety Class - Route B is the same as Route A from Midpoint Substation to Jackpot, Nevada. From Jackpot, Nevada to the North Steptoe substation site, Class B scenery identified within the study corridors typically occurred in the mountains and foothills. Areas of Class B scenery include the Granite Range (Links 91, 92, 140), Toano Range (Link 222), and the Schell Creek Range (Link 259). From North Steptoe substation site to the Dry Lake substation site, the scenic quality affected by Route B would be that same as is that described for Route A.

Sensitive Viewpoints and Visibility - From Midpoint Substation to Jackpot, Nevada, the high and moderate sensitivity viewpoints for Route B are the same as those described for Route A, above.

From Jackpot, Nevada to the North Steptoe substation site the Pony Express Trail (Links 270, 280) and the California Trail Scenic Back Country Byway in the Elko District (Link 151) were identified as high visual sensitivity recreation viewpoints. Foreground views would occur in the locations where these trails would be crossed.

Route B would also encounter high sensitivity viewpoints in the foreground and middleground near the residential community of Contact, Nevada (Links 713, 101, 102, 110) and isolated residences near Rock Creek in the Steptoe Valley (Link 270).

This route would affect moderate sensitivity viewpoints where it would cross Interstate 80 at Silver Zone Pass and where it would parallel and cross U.S. Highway 93 Alternate from west of Wendover to the North Steptoe substation site. Near Robinson Summit, this route would cross U.S. Highway 50, the Loneliest Highway, east of Ely, Nevada, also inventoried as a moderate sensitivity viewpoint. The route would be viewed in the foreground where these crossings occur.

From the Robinson Summit substation site to the Dry Lake substation site, the high and moderate sensitivity viewpoints for Route B are the same as those described for Route A, above.

VRM - From the Midpoint Substation to Jackpot, Nevada, the VRM descriptions for Route B are the same as those for Route A.

From Jackpot, Nevada and the North Steptoe substation site, Route B would cross VRM Class II areas for approximately .5 mile adjacent to Salmon Falls Creek (Link 91), for 2.2 miles across the Interstate 80 low visibility corridor east of Wells (Link 222), and for 4 miles adjacent to the Goshute Mountains (Link 226).

Route B would cross VRM Class III areas in the Felt Wash (Link 222), adjacent to Trout Creek (Links 91, 92), in the Boone Springs Hills (Link 226), and adjacent to the Dead Cedar Wash east of the Goshute Mountains (Link 224).

From the Robinson Summit substation site to the Dry Lake substation site, the VRM designations affected by Route B are the same as those described for Route A, above.

Route C

Scenic Quality/Variety Class - Route C is the same as Route A from Midpoint Substation to Jackpot, Nevada. From Jackpot, Nevada to the vicinity of Oasis (Link 200), Nevada, the scenic quality for Route C is the same as that described for Route B. From the vicinity of Oasis to the Dry Lake substation site, the scenic quality affected by Route C would be the same as those described for Route A.

Sensitive Viewpoints and Visibility - From Midpoint Substation to Jackpot, Nevada, the high and moderate sensitivity viewpoints for Route C are the same as those described for Route A, above. And, from Jackpot to the vicinity of Oasis (Link 200), the high and moderate sensitivity viewpoints for Route C are the same as described for Route B. From the vicinity of Oasis to the Dry Lake substation site, the high and moderate sensitivity viewpoints for Route C are the same as described for Route A.

VRM - From the Midpoint Substation to Jackpot, Nevada, the VRM descriptions for Route C are the same as those for Route A. And, from Jackpot to the vicinity of Oasis (Link 211), the VRM descriptions for Route C are the same as described for Route B. From the vicinity of Oasis to the Dry Lake substation site, the VRM descriptions for Route C are the same as described for Route A.

Route D

Scenic Quality /Variety Class - Route D is the same as Route A from Midpoint Substation to HD Summit (Link 162), northeast of Wells, Nevada.

From HD Summit to the North Steptoe substation site, Route D would encounter areas of Class B scenery within the study corridors along the southern edge of the Windermere Hills (Link 180), in the Pequop Mountains (Link 190), and the Schell Creek Range (Link 259).

From the North Steptoe substation site to the Dry Lake substation site, the scenic quality affected by Route D would be the same as those described for Route A.

Sensitive Viewpoints and Visibility - From Midpoint Substation to HD Summit (Link 162), northeast of Wells, Nevada, the high and moderate sensitivity viewpoints for Route D are the same as those described for Route A.

From HD Summit to the North Steptoe substation site, high sensitivity viewpoints within foreground and middleground views of the route included residences in or near the communities of Contact (Links 712, 713, 101, 110), and Wells, Nevada (Link 180). High sensitivity recreation viewpoints within the study corridors include the Pony Express Trail (Links 270, 291). The Kane Springs Back Country Byway in the BLM Las Vegas District is also considered a high sensitivity viewpoint (Links 690 and 700). The route would be viewed within the foreground where these crossings occur. In addition, foreground and middleground views from dispersed recreation users in the Goshute Canyon WSA (Link 241) were also considered highly sensitive. The portions of Interstate 80 (Link 180) and U.S. Highway 93 (Link 190) that would be crossed by this route were also inventoried as high sensitivity viewpoints and would occur within foreground views.

VRM - From the Midpoint Substation to HD Summit (Link 162), the VRM descriptions for Route D are the same as those for Route A.

From HD Summit to the North Steptoe substation site, Route D would cross VRM Class II areas for 5.3 miles across the Interstate 80 low visibility corridor east of Wells (Link 180) and for 5 miles, west of Bishop Creek (Links 165, 166, 1611, 162).

The route would cross VRM Class III areas in the Pequop Mountains (Link 190), west of the Wood Hills (Link 180), south of Contact (Links 102, 110, 130) and in the Steptoe Valley (Links 241, 243, 245).

From the North Steptoe substation site to the Dry Lake substation site, the VRM descriptions for Route D are the same as described for Route A.

Route E

Scenic Quality/Variety Class - From Midpoint Substation to the vicinity of Oasis (Link 200), Nevada, the scenic quality for Route E is the same as described for Route A. From the vicinity of Oasis to the Dry Lake substation site, the scenic quality for Route E is the same as those described for Route B.

Sensitive Viewpoints and Visibility - From Midpoint Substation to the vicinity of Oasis (Link 200), Nevada, the high and moderate sensitivity viewpoints for Route E are the same as those described for Route A. From the vicinity of Oasis to the Dry Lake substation site, the high and moderate sensitivity viewpoints for Route E are the same as those described for Route B.

VRM - From Midpoint Substation to the vicinity of Oasis (Link 200), Nevada, the VRM descriptions for Route E are the same as those described for Route A. From the vicinity of Oasis to the Dry Lake substation site, the VRM descriptions for Route E are the same as those described for Route B.

Route F

Scenic Quality/Variety Class - From the Midpoint Substation to Jackpot, Nevada, the only Class A scenery affected by this route is Salmon Falls Creek Canyon (Link 64) in Idaho.

Class B scenery in Idaho is primarily associated with the Snake River Canyon, Salmon Falls Creek Canyon, and Salmon Falls Creek Reservoir (Links 61, 64, 70). Class C landscapes occur throughout Idaho and Nevada within the intermountain basin landscape character type, and are the predominant scenic quality class.

From Jackpot, Nevada, to the vicinity of Oasis, Nevada (Link 200), the scenic quality for Route F is the same as those described for Route A. From the vicinity of Oasis to the Dry Lake substation site, the scenic quality for Route F is the same as those described for Route B.

Sensitive Viewpoints and Visibility- From Midpoint Substation to Jackpot, Nevada, foreground and middleground views from rural residences and along the fringe of small communities were considered highly sensitive. Route F would be visible from residences in the communities of Hagerman, Idaho (Links 61, 62) and Jackpot, Nevada (Link 72).

In Idaho, high sensitivity recreation viewpoints within foreground and middleground views identified along this route include Malad Gorge State Park, the visitors center near Hagerman, the Hagerman Fossil Bed National Monument, and the proposed visitor center on the Snake River in Idaho (Links 61, 62, 64). The viewpoint from the visitor center would be from the east side of the Snake River, a much lower elevation. Where visitors would look to the west and up the river bluffs, the route would be visible against the skyline. Foreground views of the route within the Balanced Rock State Park (Link 64) are also treated as high sensitivity viewpoints.

U.S. Highway 30 (Link 61) through Hagerman, a designated scenic route, was the only high sensitivity travel route identified in Idaho. Moderate sensitivity travel routes include Interstate 84 near Hagerman (Link 61) and U.S. Highway 93 in Idaho and Nevada. Foreground views of the route would occur where these travel routes would be crossed.

From Jackpot, Nevada to the vicinity of Oasis, Nevada (Link 200), the sensitive viewpoints described for Route F are the same as those described in Route B. From the vicinity of Oasis to the Dry Lake substation site, the sensitive viewpoints described for Route F are the same as those described in Route A.

VRM - From the Midpoint Substation to Jackpot, Nevada, VRM Class I areas occur adjacent to Salmon Falls Creek (Link 64, 70), within the Hagerman Fossil Beds National Monument (Link 64), south of this national monument around a rutted portion of the Oregon Trail, and along portions of the Snake River Canyon (Link 61) north of Hagerman.

Areas of VRM Class II occur in the foothills southwest of Jackpot (Link 72) and along Salmon Falls Creek (Link 61). VRM Class III areas occur northeast of Hagerman, Idaho (Link 61) and just west of the Midpoint Substation (Link 61).

From Jackpot, Nevada to the vicinity of Oasis, Nevada (Link 200), the VRM descriptions for Route F are the same as those described for Route B. From the vicinity of Oasis to the Dry Lake substation site, the VRM descriptions for Route F are the same as those described for Route A.

Route G

Scenic Quality/Variety Class - Route G is the same as Route A from the Midpoint Substation to Jackpot, Nevada. From Jackpot to the vicinity of Oasis, Nevada (Link 200), Class B scenery typically occurs in mountain and foothill landscape character types and includes portions of the Granite Range (Links 101, 102, 110) and Windermere Hills (Link 151). Class C is the predominant scenic quality rating for landscapes in Nevada, occurring primarily within the intermountain basin landscape character type.

From the vicinity of Oasis (Link 200) to the North Steptoe substation site, Route G would encounter areas of Class B scenery within the study corridors along the southern edge of the Windermere Hills (Link 180), in the Pequop Mountains (Link 190) and in the Steptoe Valley (Link 241).

From the North Steptoe substation site to the Dry Lake substation site, scenic quality along Route G is the same as that described for Route B.

Sensitive Viewpoints and Visibility - From the Midpoint Substation to Jackpot, Nevada, the high and moderate sensitivity viewpoints for Route E are the same as those described for Route A.

From Jackpot, Nevada to the North Steptoe substation site, Route G would pass within foreground view of the Winecup Ranch, a high sensitivity viewpoint. This route would also affect U.S. Highway 93 where it would cross the highway and be viewed within the foreground.

From the North Steptoe substation site to the Dry Lake substation site, the high and moderate sensitivity viewpoints for Route G are the same as those described for Route A.

VRM - From Midpoint Substation to Jackpot, Nevada, the VRM descriptions for Route G are the same as those described for Route A. From Jackpot to the North Steptoe substation site, VRM descriptions for Route G are the same as those described for Route A. From the North Steptoe substation site to the Dry Lake substation site, VRM descriptions for Route G are the same as those described for Route D.

Alternative Routes - Ely to Delta

Direct Route

Scenic Quality/Variety Class - No designated Class A scenery would be affected by this route. Class B scenery in Nevada occurs primarily in the mountains and foothills landscape character type. Class B scenery occurs along this route in the Schell Creek Range (Link 263) and adjacent to Kern Mountain (Link 266).

The predominant scenic quality class in the intermountain basin landscape character type in Nevada and Utah is Class C. No Class A or Class B scenery would be affected by this route in Utah.

Sensitive Viewpoints and Visibility - Views from residences on the fringe of rural communities were considered high sensitivity viewpoints. This route would be viewed in the middleground from a ranch at the base of the Schell Creek Range (Link 262). Foreground views from residences would occur near Sugarville, Utah (Link 580), north of the Delta area.

High sensitivity recreation viewpoints identified along this route include the Pony Express Trail (Links 265, 266) near Stonehouse, Nevada, at the southern portion of the Antelope Range. The route would be viewed in the foreground where it would cross portions of this trail. In addition, the route would be visible in the foreground and middleground by dispersed recreation users in the Fish Springs and Swasey Mountain WSAs (Link 630).

VRM - No VRM Class II areas would be affected by this route. The Direct Route would cross areas of VRM Class III in the Little Hills (Link 266) and where it would cross the Schell Creek Range from Steptoe Valley (Links 262, 263). The remainder of the lands that would be crossed by this route are VRM Class IV.

Cutoff Route

Scenic Quality/Variety Class - This route would cross through Marjum Canyon, an area of designated Class A scenery, parallel to two existing 230kV transmission lines. Class B scenery occurs primarily in the mountains and foothills landscape character type. Class B scenery in Nevada occurs where the route would cross the Schell Creek Range (Link 263) and adjacent to Kern Mountain (Link 266). Class B scenery in Utah occurs in the Middle Range (Link 462) and Sawtooth Range (Link 462).

The predominant scenic quality class in the intermountain basin landscape character type in Nevada and Utah is Class C. The majority of the study area in Utah is Class C scenery consisting of areas in the "West Desert".

Sensitive Viewpoints and Visibility - Views from residences on the fringe of rural communities were considered high sensitivity. This route would be viewed in the

foreground and middleground from residences in the areas of Sugarville (Link 580) and Delta, Utah (Link 580). Other isolated rural residences in the agricultural lands around Delta would view this route in the middleground.

High sensitivity recreation viewpoints that would be affected by this route include the Pony Express Trail (Link 266), where portions of this trail would be crossed and viewed within the foreground. Views from dispersed recreation users in the Notch Peak WSA (Link 462), the Swasey Mountain WSA (Link 470), and the Howell Peak WSA (Link 462) were also considered high sensitivity.

The high sensitivity travel routes affected by this route are recreation destination roads that provide access into WSAs mentioned above. Moderate sensitivity travel routes include U.S. Highway 50 adjacent to Kings Canyon (Link 462).

VRM - No VRM Class II areas would be affected by this route. The Cutoff Route would cross areas of VRM Class III in the Little Hills (Link 266) and where it would cross the Schell Creek Range from Steptoe Valley (Links 262, 263). In addition, the route would cross VRM Class III areas in the Little Valley (Link 267) and in the Marjum Canyon (Link 462). The remainder of the lands that would be crossed by this route are VRM Class IV.

230kV Corridor Route

Scenic Quality/Variety Class - Like the Cutoff Route, this route would cross through Class A scenery in Marjum Canyon parallel to two existing 230kV transmission lines.

Class B scenery in Nevada primarily occurs in the mountains and foothills landscape character type. Class B scenery occurs on this route in the Egan Range (Link 350), the Humboldt Creek Range (Link 380) and the Snake Range (Link 460). Class B scenery in Utah occurs in the Middle Range (Link 462) and Sawtooth Range (Link 462).

In addition, this route would cross through areas of variety Class B scenery where the route would parallel two existing 230kV transmission lines through the Cooper Canyon area, at the southern end of the Schell Creek Range within the boundaries of the Humboldt National Forest.

Class C scenery in Nevada and Utah occurs in the intermountain basin landscape character type, and is the predominant scenic quality class. The majority of the study area in Utah is Class C scenery consisting of areas within the "West Desert".

Sensitive Viewpoints and Visibility - A number of high sensitivity views from residences occur in the vicinity of Ely, Nevada. Several residences in Smith Valley (Link 350), along the north edge of the Cross Timber Subdivision west of the Hercules Gap (Link 350), the east edge of the Sweetwater Estates Subdivision on the east edge of the Steptoe Valley (Link 370) would view the route in the foreground and middleground.

In Utah, this route would be visible in the foreground from two isolated ranches at the west edge of the Snake Valley (Link 462), south of the community of Baker. This route would also be viewed in the foreground and middleground from residences in the areas of Sugarville (Link 580). Other isolated rural residences in the agricultural lands around Delta would view this route in the middleground.

The route would be visible in the foreground from a proposed BLM primitive campground at Weaver Creek (Link 460). Other high sensitivity recreation viewpoints in Nevada, viewed in the middleground or background, include Cave Lake State Recreation Area (Link 380), the Swamp Cedar Instant Study Area (Link 380), the Osceola Arch (Link 460), and a proposed BLM campground in Sacramento Pass (Link 460).

The 230kV Corridor Route would be visible in the background from viewpoints within Great Basin National Park (Links 460, 461). The viewpoints include Mahogany Overlook, Lehman Creek Overlook, Wheeler Peak, Lehman Caves Visitor Center, Baker Ridge Visitor Center. Though these viewpoints are located outside the study corridors, they were included in these studies because of concerns raised during public scoping, concerns of the National Park Service, and their unique viewing conditions.

In addition, four interpretive sites located on approach routes to the Great Basin National Park were also inventoried as high sensitivity viewpoints. The sites are outside of the study corridor and would be located in the background. Two of these sites are located north of Lehman Creek approximately 2.5 miles east of Bald Mountain and two are located approximately 5 miles west of Baker and south of Lehman Creek. The locations of these interpretive sites are also identified in the Great Basin National Park Draft General Management Plan and DEIS (1991). The site locations are preliminary and were used for the purposes of these studies only.

In Nevada, the route would cross a portion of the Success Loop (Links 380), a high sensitivity travel route. This road, located southeast of Ely, also provides access to Cave Lake State Recreation Area. This route would also cross the recreation destination roads that provide access to the Swasey Mountain WSA (Link 470). Moderate sensitivity travel routes include U.S. Highway 93 (Links 352, 370), U.S. Highway 50/6 (Links 380, 460), and other secondary roads that access rural residential areas in the vicinity of Ely (Links 350, 370). This route would be visible in the foreground where these travel routes would be crossed.

High sensitivity travel routes in Utah, which would have foreground views of this route, include recreation destination roads that provide access to the Notch Peak WSA (Link 462), the Howell Peak WSA (Link 462), and the Swasey Mountain WSA (Link 470). Moderate sensitivity travel routes which are moderate sensitivity viewpoints include U.S. Highway 50 (Links 461, 462) and secondary roads in the agricultural area in the vicinity of Delta (Links 572, 580).

VRM - No VRM Class II areas would be affected by this route. The route would cross VRM Class III areas at the north end of the Egan Range (Link 350), north of Ely in the Steptoe Valley (Links 350, 351, 352), and areas east of Ely at the base of the Shell Creek Range (Link 370). In addition, the route would cross VRM Class III areas southeast of the Steptoe Creek

(Link 380), north of Majors Place outside the east boundary of the Humboldt National Forest (Link 380), the Sacramento Pass area (Link 460), and in the Marjum Canyon area (Link 462).

VQO - The route would cross areas with VQOs of Modification and Maximum Modification where the route would pass through Cooper Canyon in the Humboldt National Forest (Link 380).

Southern Route

Scenic Quality/Variety Class - No designated Class A scenery occurs along this route. Class B scenery in Nevada primarily occurs in the mountains and foothills landscape character type. Class B scenery would be crossed near the Egan Range (Link 340), the White River Valley (Links 362, 364), the Hamblin Valley Wash (Link 450), the Tunnel Spring Mountain (Link 451) and in the Confusion Range (Link 451).

Class C scenery in Nevada and Utah typically occurs in the intermountain basin landscape character type, and is the predominant scenic quality class. The majority of the study area in Utah is Class C scenery consisting of areas within the "West Desert".

Sensitive Viewpoints and Visibility - Views from residences on the fringe of rural communities were considered high sensitivity. This route would be viewed in the foreground and middleground from residences in the areas of Sugarville (Link 580) and Delta, Utah (Link 580). Other isolated rural residences in the agricultural lands around Delta would view this route in the middleground.

In Nevada, the Southern Route would be visible in the middleground to background from Ward Charcoal Ovens State Historic Site (Link 364), a highly sensitive recreation viewpoint. The route would cross the proposed Horse and Cattle Camp Back Country Byway (Link 364). Highly sensitive viewpoints from dispersed recreation users would occur along Link 451 in the Wah Wah Mountain, King Top, and Notch Peak WSAs.

Moderate sensitivity travel routes include U.S. Highway 50 (Link 451), Utah State Highway 21 (Link 451), and secondary roads in the vicinity of Delta.

VRM - The route would cross a VRM Class II area south of John Henry Wash near Majors Place in Nevada (Link 364). No VRM Class II areas would be affected by this route in Utah.

This route would cross VRM Class III areas in the Egan Range (Link 340), and in areas south of John Henry Wash (Link 420).

Socioeconomics

Introduction

The demographic, economic, and fiscal attributes of the areas where alternative routes occur were inventoried to characterize and evaluate potential socioeconomic effects of the proposed project. From a socioeconomic perspective, areas of concern in transmission line siting include nearby communities, which could be affected by the influx of construction workers, and potentially affect economic activities and land uses, particularly livestock grazing, crop production, suitable timber areas, mining activities, residential developments, and tourist areas. Since the area of concern for socioeconomics is the county in which the project is located rather than a specific corridor, the socioeconomic inventory describes key features of those counties crossed by the alternatives. Counties crossed by the alternative routes include:

- Gooding, Jerome, Twin Falls, and Cassia counties in Idaho
- Elko, White Pine, Nye, Lincoln, and Clark counties in Nevada
- Millard and Juab counties in Utah

Methods

The major component of the research for the socioeconomic evaluation are the demographic and economic features of the region. The demographic topics include population size, age distribution, ethnicity, migration trends, and projected population. The economic subjects include current labor force and occupational distribution, employment levels, personal income, and economic base characteristics. Other fiscal characteristics included were tax code areas, tax rates, and assessed valuation.

Data and information were gathered primarily from secondary (existing) sources and through personal communications with selected community representatives. Secondary source materials included comprehensive plans, county statistical compendia, economic base analyses, and county profiles. These provide past, current, and projected demographic and economic information on the areas of interest. The sources include:

- Bureau of Economic Analysis, Department of Commerce
- the Nevada Employment Security Department, Department of Administration, Department of Taxation
- the Idaho Department of Employment Security, Department of Commerce, Division of Economic and Community Affairs
- the Utah Office of Planning and Budget, Department of Commerce/Bureau of the Census, Department of Employment Security
- numerous county departments

In areas where little secondary data were available, information was collected through a series of personal visits and telephone conversations. These discussions occurred with county and local planners, Chamber of Commerce personnel, and state officials responsible for economic development.

Results

A summary of demographic and economic characteristics by county is presented in Table 3-6. Fiscal characteristics are listed in Table 3-7, and population data for study area communities are listed in Table 3-8.

Alternative Routes - Midpoint to Dry Lake

Route A

Idaho - Route A would cross through Jerome and Twin Falls counties, and a small portion of Cassia county. Jerome County is a small and sparsely populated county of 601 square miles. The average population density is 25.2 persons per square mile. According to the U.S. Bureau of Census, the population of Jerome County decreased from 14,840 in 1980 to 14,600 in 1988. Since 1988, the population has increased to 15,138 in 1990 and state projections anticipate a further increase to 18,240 in 1995. Study area communities range in size from Eden with a 1990 population of 355 to Jerome with a population of 6,891 in 1990. Approximately 94 percent of the population is caucasian.

Primarily an agricultural county, there were 909 farms comprising 205,315 acres, an average of 226 acres per farm in 1987. The market value of farm products sold was \$129,096,000. Other principal economic activities revolve around agricultural and ranching interests. Farm employment declined from 1,628 in 1980 to 1,582 in 1987, but still represented the largest employment sector. Employment in construction and trade sectors also declined between 1980 and 1987 while transportation, communications and public utilities, services, and government employment increased. There is no mining or lumber activity in Jerome County. Unemployment rose from 6.3 percent in 1980 to 8.4 percent in 1988. Since then it has fallen to 5.9 percent in 1990.

Twin Falls County, with 1944 square miles, is more than twice the size of neighboring Gooding and Jerome counties. The population density of Twin Falls County is 32.2 persons per square mile. Approximately 42 percent of the county's residents live in Twin Falls, which housed a population of over 26,209 in 1990, compared with a county total of 62,580. State projections for the county anticipate a population of more than 74,520 by 1995 and more than 93,000 by 2010. Similar to its neighbors to the north, the population of Twin Falls County is about 95 percent caucasian, with relatively small populations of other races.

In 1987, the county's 1,576 farms accounted for more than 552,000 acres of land, roughly half the acreage in the county. The market value of farm products sold was \$161,656,000. Based

traditionally in agriculture and agriculture-related industries, the economy of Twin Falls County has diversified somewhat in recent years with new non-agricultural manufacturing activities and the promotion of tourism. Farm employment, which declined from 3,325 in 1980 to 2,528 in 1987, still represents the fifth largest employment sector in the county. The largest employment sector, services, increased more than 30 percent between 1980 and 1987. The unemployment rate of 4.8 percent for the county for fiscal year 1990 is lower than the both 1980 rate of 8.39 percent and the 1988 average of 5.8 percent.

Nevada - Route A crosses through Elko, White Pine, Lincoln, Nye, and Clark counties. Encompassing 17,135 square miles, Elko County is very large but sparsely populated. On the average, there are only two persons per square mile of land. With the recent resurgence in metals mining in Nevada, Elko County is again experiencing a mining boom. The county population has climbed from 17,269 in 1980 to 33,530 in 1990 and is expected to rise to 46,720 by 1995 (Office of the State Demographer, 1/16/91). Comprising over two-thirds of the county's population, the City of Elko grew from a population of 10,980 in 1986 to 14,736 in 1990. Approximately 85 percent of the population is caucasian and about 8.5 percent is Native American.

In 1989, principal employment sectors in Elko County were services (40.5 percent), trade (19.8 percent), government (14.6 percent), and construction (8.6 percent). The unemployment rate was 4.9 percent. Major influences on the local economy include the gaming industry, mining, and recreation.

Similar to Elko County, White Pine County's history mirrors the booms and busts of the mining industry. In the late 1970s and early 1980s, the county's population showed dramatic declines as a result of the closure of the Kennecott Mine in 1976 and later closure of the McGill smelter in 1983. Between 1970 and 1980, the population declined 21 percent to 8,167 people. Further declines brought the population to 7,560 in 1985. More recently, the population has increased, with a resurgence in the mining industry, to 9,264 in 1990. With a 1990 population of 4,756, Ely comprises approximately half of the county population. Ely, and the nearby communities of McGill and Ruth comprise a population of approximately 8,400, or about 90 percent of the county population. Population projections for the county vary according to assumptions about the mining economy. According to the 1991 estimate from the state demographer, the county's population will rise to 12,850 in 1995. A new prison constructed in the Ely area has brought an additional 1,000 new residents.

The primary employment sectors in White Pine County are mining followed by trade and government, services, construction, and transportation. Mining activity is high at this time. Operating mines include a large mine in Dry Gulch at the east edge of Spring Valley, the Crystal Queen mine, and several smaller mines at the base of the Schell Creek Range southeast of Ely. There is also high activity in claim staking in the county. The average county unemployment rate in 1989 was 6.2 percent.

Lincoln County is a large county of more than 10,000 square miles with a population density of far less than one person per square mile. With a population of 3,775 in 1990, Lincoln County has the smallest population of the study area counties. The county's population is expected to grow to 5,070 in 1995. In 1990, the population is 94 percent caucasian and about 1.5 percent Native American. The economy in Lincoln County is based on primarily

agricultural with a little mining activity and the Nevada Test Site in the southwestern portion of the county.

Compassing over 18,000 square miles, Nye County is the second largest county in the United States in land area. Like Lincoln County, Nye is sparsely populated with less than one person per square mile. The county's population is expected to rise from 17,781 in 1990 to 19,030 in 1995. Approximately 92 percent of the population is caucasian and about 2.8 percent Native American. The only incorporated town in Nye County is Gabbs at the far northwestern corner of the county with a population of 667 in 1990. The county seat, Tonopah, had a population of 1952 in 1980.

Encompassing approximately 8,000 square miles, Clark County has a population density of over 90 persons per square mile. The population of Clark County grew from 463,087 in 1980 to 741,459 in 1990. One of the fastest growing areas in the county, the Las Vegas Valley, including Las Vegas, North Las Vegas, and Henderson, accounted for over 95 percent of the county's population in 1980. In 1989, the county's population was 81 percent caucasian, 9.5 percent black, and 3.5 percent Asian/Pacific Island.

Route B

Since Route B is the same as Route A in Idaho, the inventory for Route A applies also to Route B. In Nevada, Route B would cross through the same counties as Route A. Refer to the description of the affected environment for Route A.

Route C

Since Route C is the same as Route A in Idaho, refer to the description of Route A above. In Nevada, since Route C would cross through the same counties as Route A, refer to the description of the affected environment for Route A.

Route D

Since Route D is the same as Route A in Idaho, refer to the description of the affected environment for Route A above. Since Route D would cross through the same counties as Route A in Nevada, refer to the description of the affected environment for Route A above.

Route E

Since Route E is the same as alternative A in Idaho, refer to the description of the affected environment for Route A above. Since Route E would cross through the same counties as Route A in Nevada, please refer to the description of the affected environment for Route A above.

Route F

Route F crosses through Jerome, Twin Falls and Gooding counties in Idaho. Twin Falls and Jerome counties are described under Route A above. Similar to Jerome County, Gooding County is both small and sparsely populated. With a total land area of 728 square miles, the average population density is approximately 16 persons per square mile. From the 1980 census count of 11,870, the population of Gooding County declined to 11,633 in 1990. State projections anticipate that the population will rise to 17,610 in 2010. Communities are small, ranging between Bliss with a 1990 population of 208 to Gooding, the county seat, with a population of 2,949. While there are small populations of black, Native American, Asian/Pacific Island and other races, about 93.5 percent of the county's population is caucasian.

The economy of Gooding County is based primarily on agriculture. In 1987, there were 729 farms comprising 239,328 acres. The average farm size is 328 acres. The market value of farm products sold was \$112.7 million. As with Jerome County, the principal employment sector is farming, although farm employment declined from 1,428 in 1980 to 1,306 in 1987. Manufacturing, construction, and trade also declined during this period while transportation, communication and public utilities, finance, insurance, real estate, and services employment increased. The annual average unemployment rate rose from 4.8 percent in 1980 to 7.2 percent in 1984, and has declined to 4.3 percent in fiscal year 1990.

Since Route F would cross through the same counties as Route A in Nevada, refer to the description of the affected environment for Route A above.

Route G

Since Route E is the same as Route A in Idaho, refer to the description of the affected environment for Route A above.

Since Route G would cross through the same counties as Route A in Nevada, refer to the description of the affected environment for Route A above.

Alternative Routes - Ely to Delta

Direct Route

Nevada - The Direct Route would cross through the northeastern portion of White Pine County in Nevada through the Antelope Mountains to the Nevada-Utah state line. There are no sizeable communities near this portion of the route. Refer to Route A for general information on the socioeconomic characteristics of White Pine County.

Utah - The Direct Route would cross Millard and Juab counties in Utah. Prior to 1980, Millard County experienced a moderate growth rate of 2 to 3 percent annually. In the early 1980s, the Intermountain Generating Station was constructed, bringing the county's annual growth rate to 10 to 20 percent. The population of the county increased from 9,050 in 1980 to 14,200 in 1985. With reduction in construction employment for the Intermountain Generating Station, the population of Millard County dropped to 11,333 in 1990. Most of the population of the county is centered in the 10 incorporated communities, with the largest now being Delta. The population of Delta has dropped to 2,998 in 1990 from 7,400 in 1988 as a result of reductions in construction employment associated with the Intermountain Generating Station. The 1995 population for Millard County is projected to be 13,400.

Prior to development of the Intermountain Generating Station, the Millard County economy was primarily based on agriculture with some mining. Most of the agriculture in the county is irrigated. As of June 1986, the socioeconomic monitoring report for the Intermountain Generating Station reports a total of 2,602 relocatees or weekly commuters. Unemployment within the county is expected to vary somewhat with fluctuations in demands for construction and operation employees at the Intermountain Generating Station. The unemployment rate in the county rose from 4.6 percent in 1980 to 5.6 percent in 1988. Since then it has fallen to 4.2 percent in 1990.

Juab County, located to the north of Millard County, is primarily a rural county with a population density of less than two persons per square mile. The county's population has declined from 6,250 in 1985 to 5,817 in 1990. The 1995 population of Juab County is projected to be 5,900 in 1995. Unemployment has been high in Juab County. In 1989, the annual average unemployment rate was 9.6 percent. Since then it has fallen to 6.4 percent in 1990. Principal employment sectors are government and trade.

Cutoff Route

In Nevada, the Cutoff Route is the same as the Direct Route in White Pine County. The affected environment for the Direct Route is described above.

In Utah, the Cutoff Route would cross into Millard County along a different course than the Direct Route but both routes pass through sparsely populated country. The closest communities to the Cutoff Route are Gandy, Robinson Ranch, Hinckley, and Delta. This route converges with the 230kV Corridor Route east of the Conger Range. A description of the socioeconomic characteristics of Millard County is presented under the Direct Route.

230kV Corridor

The 230kV Corridor would pass through White Pine County parallel to two existing 230kV transmission lines. Refer to the Direct Route descriptions for socioeconomic characteristics of White Pine County. This route would originate west of Ely, Nevada, at the Robinson Summit substation site and would pass approximately one mile north of Great Basin National Park near Baker, Nevada.