

## **SECTION 2.0 PROPOSED ACTION AND ALTERNATIVES**

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### **2.1 PROPOSED ACTION**

The Proposed Action is the amendment to the current SWIP ROW Grant. The amendment would provide for two ROW modifications: (1) the relocation of the southern terminus of the SWIP 500kV transmission line from the originally proposed Dry Lake Substation location to the existing Harry Allen Substation, and a corresponding extension of the transmission line ROW, and (2) a westward shift of the approved location for a substation in the Robinson Summit area to the new Thirtymile Substation site, and corresponding transmission interconnections with the SWIP – Southern Portion 500kV line and the now existing Falcon-to-Gonder 345kV line. The general location of these modifications is shown on Figure 1. BLM’s action would be to approve the ROW amendment application (SF-299) submitted by Great Basin requesting these modifications.

#### **2.1.1 Harry Allen Substation Area**

This modification includes a 3.8-mile extension of the SWIP 500kV transmission line ROW, from the originally approved terminus at the then-contemplated Dry Lake 500kV Substation to the existing Harry Allen 500kV Substation in Clark County (Figure 2). Since the completion of the SWIP EIS, the Harry Allen 500kV Substation has been constructed by Nevada Power Company and will serve as the southern interconnection point between the SWIP and the existing grid. The originally proposed Dry Lake Substation was never constructed. The same alignment that will be followed by the proposed extension was evaluated in the SWIP EIS but was not selected because the anticipated Dry Lake Substation was thought to be the most likely location for the southern terminus (Figure 3).

The proposed ROW Grant extension is 200 feet in width and approximately 3.8 miles in length. The 500kV alternating current transmission line within the extended ROW will consist of single-circuit, self-supporting, steel-lattice structures, ranging from approximately 90 to 175 feet in height (Figure 4) with tower-to-tower spans of approximately 1,200 to 1,500 feet. Construction will be completed as part of the SWIP – Southern Portion.

#### **2.1.2 Thirtymile Substation**

The proposed Thirtymile Substation is located approximately 18 miles northwest of Ely and approximately ½ mile south of U.S. Highway 50, immediately to the west of the SWIP alignment, approximately ¾ mile to the northwest of the Robinson Summit Substation site that was approved under the initial ROW Grant (Figure 5). The Thirtymile Substation is located within the Robinson Summit Substation siting area evaluated in the SWIP EIS, and the associated interconnections also fall within the corridor area(s) analyzed in the EIS (Figure 6). This 500/345kV substation will be constructed in lieu of the Robinson Summit Substation. This modified location (referred to as the Thirtymile Substation) will serve as an interconnection between the SWIP 500kV line and the existing Falcon-to-Gonder 345kV line (located

FIGURE 1

FIGURE 2

FIGURE 3

FIGURE 4

FIGURE 5

FIGURE 6

approximately ¼ mile south of the proposed substation site and just north of the Gonder-to-Machacek 230kV transmission line). When the SWIP ROW was granted in 1994, the Falcon-to-Gonder 345kV line did not exist, and the Robinson Summit Substation was intended to include an interconnection with the east-west (Ely-to-Delta) segment included as part of the original SWIP ROW Grant. Subsequent to the issuance of the ROW Grant, the Ely-to-Delta segment was dropped from consideration, and the Falcon-to-Gonder 345kV transmission line was built. An interconnection with the now-existing Falcon-to-Gonder line supersedes the originally contemplated interconnection with the Ely-to-Delta segment, which was never built.

The substation will occupy a site approximately 77 acres in size (see Figure 5). Typical equipment at this substation will include transmission line take-off structures, power circuit breakers, power transformers, switches, bus work, control house, communications equipment, and associated controls and instrumentation (Figure 7). The maximum height of these structures within the substation would be approximately 125 feet. In addition to the substation, transmission interconnections to the SWIP – Southern Portion 500kV line and the Falcon-to-Gonder 345kV line also will be constructed. Construction of the substation and transmission interconnections will be completed as part of the SWIP – Southern Portion.

## **2.2 COYOTE SPRINGS REALIGNMENT**

In addition to the Proposed Action, this EA also evaluates the relocation of the ROW within the Aerojet Corridor/Coyote Spring Valley. This relocation was mandated by Congress in Section 302(c) of the LCCRDA, enacted in 2004. The general location of this area is illustrated in Figure 1, and the adjustments to the original ROW Grant are described below.

The LCCRDA includes a provision (Section 302(c)) that directed the BLM to relocate a portion of the SWIP ROW Grant in the Coyote Spring Valley area from the east side to the west side of US Highway 93, for approximately 25 miles (Figure 8). Congress specified that the relocation “be conducted in a manner that . . . minimizes engineering design changes” and “maintains a gradual and smooth interconnection” with the SWIP designated utility corridor, which was also moved to the west side of the highway by LCCRDA. Due to the new location of the designated SWIP utility corridor (pursuant to Section 301(a) of LCCRDA) the new SWIP alignment on the west side of the Highway is approximately 1.5 miles longer than the pre-shift alignment on the east side of the Highway. The transmission line that will be constructed in this area will consist of facilities similar to those previously described for the extended transmission line in the Harry Allen Substation area (see Figure 4).

Because relocation of the SWIP ROW in the Coyote Springs area was directed by Congress under LCCRDA, BLM retains no discretionary authority for that action. However, BLM concluded that assessment of the impacts of the relocated ROW would be of value in determining the design and mitigation measures to be included in the Construction, Operation, and Maintenance Plan (COM Plan) for this part of the transmission line, and so included the realignment area in this EA.

FIGURE 7

FIGURE 8

## **2.3 NO ACTION ALTERNATIVE**

Under the No Action Alternative, the proposed SWIP ROW amendment would not be approved, and the SWIP transmission line would not be constructed, due to the inability to interconnect with the existing grid at the southern terminus and the difficulty of interconnecting with the Falcon-to-Gonder 345kV line, which bisects the currently approved substation site.

## **2.4 ALTERNATIVES CONSIDERED BUT ELIMINATED**

Transmission line alternatives in the Dry Lake-Harry Allen Substation area and alternative substation sites in the vicinity of the Thirtymile Substation were evaluated in the previous SWIP EIS, and have been eliminated from consideration in this EA. These alternatives are described below.

### **2.4.1 Transmission Line Alternatives**

In the SWIP EIS, four potential substation sites were considered for the location of the southern terminus of the SWIP transmission line, all within the Dry Lake Substation Siting Area. These included Site 18 (located in the northern part of the substation siting area), Site 19 (about 4 miles farther south, at the current site of the Harry Allen 500kV Substation), as well as Sites 17 and 20 (see Figure 3). The EIS noted that the actual location of a substation site and transmission line route in the Dry Lake area would depend upon the “routing decision for the future Marketplace-Allen Transmission Project (MAT) proposed by Nevada Power Company to connect from this area south to the area of the McCullough Substation.” All four sites in the Dry Lake Substation siting area and their associated transmission line routes were determined by the EIS to be environmentally acceptable.

The ROD approved the use of Sites 17, 18, or 20 because they were considered the most likely intersection points with the future MAT line. Site 19, which corresponds to the location of the Harry Allen Substation, was not specifically approved, although the EIS noted that Site 19 would be appropriate, if a route was chosen for the future MAT Project that extended south/southeast through the siting area, to the Sunrise Mountain and Henderson areas (which is the route of the Harry Allen-to-Mead transmission line that has recently been constructed, and which has effectively superseded the MAT Project).

Consistent with the ROD, the BLM granted the SWIP ROW with a southern termination point at Site 18. Since that time, the MAT Project has been replaced by the Harry Allen-to-Mead 500kV Transmission Line. As a result, the only practical interconnection point for the SWIP is now at Site 19, at the Harry Allen Substation, since the other alternatives would not meet the purpose and need for the SWIP.

### **2.4.2 Substation Alternatives**

The new substation location is within the Robinson Summit Substation Siting Area, including other options that were previously evaluated in the SWIP EIS (see Figure 6). As approved in the SWIP ROD and the ROW Grant, the substation in this area would be located just to the east of

the proposed 500kV transmission line, while the modified substation site that is now being proposed would be located just to the west.

The modified location (referred to as the Thirtymile Substation) will serve as an interconnection with the existing Falcon-to-Gonder 345kV transmission line. It could also serve as a point of interconnection for the future transmission lines associated with the proposed WPES and Ely Energy Center (EEC). The modified substation location presents significant engineering advantages over the previously approved (granted) site due to existing access, reductions in grading and ground disturbance, the ability to span the now existing Falcon-to-Gonder 345kV and Gonder-to-Machacek 230kV transmission lines, and facilitating the interconnection of future transmission lines to avoid multiple high-voltage crossings. In addition, the Falcon-to-Gonder 345kV line was built through the middle of the granted ROW area for the substation, making it difficult to design an acceptable substation to accommodate the required interconnections. For these reasons, the original location of the substation in this area has been eliminated from consideration in this EA. The Thirtymile location also is superior to the previously studied Site 9 due to proximity to the granted SWIP ROW (see Figure 6).

