

5. Environmentally Superior Alternatives

Introduction

The overall ranking of alternatives as presented in Draft EIR/EIS Section H (Comparison of Alternatives) has not changed in this Recirculated Draft EIR/Supplemental Draft EIS. The Environmentally Superior Alternative remains the New In-Area All-Source Generation Alternative. The BLM has not yet designated its Agency Preferred Alternative; that alternative will be identified in the Final EIR/EIS after consideration of all comments on the Draft EIR/EIS and on this Recirculated Draft EIR/Supplemental EIS.

The alternatives evaluated in the Draft EIR/EIS remain ranked, with impacts increasing from first to last, as shown in the list below. SDG&E's "Enhanced Northern Route," as defined in its comments on the Draft EIR/EIS, has been added to this list as the seventh ranked alternative.

1. New In-Area All-Source Generation Alternative
2. New In-Area Renewable Generation Alternative
3. LEAPS Transmission-Only Alternative
4. Environmentally Superior Southern Route (also called Southwest Powerlink (SWPL)) Alternative, as modified (see Section 5.2 below). UCAN's Modified Southern Route and its "Jacumba to Sycamore" Route would also be ranked in this position.
5. Environmentally Superior Northern Route Alternative Along the Proposed Project (as modified (see Section 5.1 below)
6. Proposed Project
7. SDG&E's "Enhanced Northern Route," which includes alternative components analyzed in the Draft EIR/EIS, primarily the Overhead 500 kV ABDSP within Existing 100-Foot ROW Alternative through Anza-Borrego Desert State Park
8. LEAPS Generation and Transmission Alternative

The No Project/No Action Alternative would have fewer impacts than those of the Proposed Project, SDG&E's "Enhanced Northern Route," the Southern Route Alternative, and the LEAPS Generation and Transmission Alternative. Its impacts are equivalent to the alternatives ranked first, second, and third above.

While the ranking of alternatives has not changed, certain revisions have been made to the transmission routes defined as the "Environmentally Superior Northern Route Alternative along the Proposed Project" and the "Environmentally Superior Southern Route (SWPL) Alternative" as a result of comments on the Draft EIR/EIS. The changes to the environmentally superior alternative were made as a result of new disclosures regarding the potential feasibility and environmental impacts of certain alternatives, and also to incorporate certain reroutes that would avoid or lessen significant impacts of the Proposed Project and alternatives, as described in detail in Section 3. Most of these reroutes were developed by SDG&E and presented in its comments on the Draft EIR/EIS. See Figure 5-1, Modified Environmentally Superior Northern and Southern Routes, for an overview of the two routes as modified in this Recirculated Draft EIR/EIS. Sections 5.1 and 5.2 below describe the changes that have been made since the Draft EIR/EIS.

5.1 Environmentally Superior Northern Route

Conclusion of the Draft EIR/EIS. The Northern Environmentally Superior Route as defined in the Draft EIR/EIS included the components described below. Eight segments of the Proposed Project would be retained, representing 79.4 miles out of the 150 miles of originally proposed route.

- Proposed Project from MP-0 to MP-3
- FTHL Eastern Alternative (replacing Proposed Project MP-3 to MP-8.8)
- Proposed Project from MP 8.8 to MP 11
- West Main Canal–Huff Road Modification Alternative (replacing the Proposed Project from MP 11 to MP 16)
- Proposed Project from MP 16 to MP 58.5 (San Felipe Substation)
- Partial Underground 230 kV ABDSP SR78 to S2 Alternative with the All Underground Option (replacing the Proposed Project from MP 58.5 to MP 90.5)
- Proposed Project from MP 90.5 to MP 100
- Santa Ysabel All Underground Alternative (replacing the Proposed Project from MP 100 to MP 109). If the Santa Ysabel All Underground Alternative is determined to be infeasible, the Mesa Grande Alternative with the Santa Ysabel Partial Underground Alternative would be constructed to replace the Santa Ysabel All Underground Alternative.
- Proposed Project from MP 109 to MP 111.5
- CNF Existing 69 kV Route Alternative (replacing the Proposed Project from MP 111.5 to MP 112.5)
- Proposed Project from MP 112.5 to MP 116.5
- Oak Hollow Underground Alternative (replacing the Proposed Project from MP 116.5 to MP 117.2)
- Proposed Project from MP 117.2 to MP 121.9
- Chuck Wagon Alternative (replacing the Proposed Project from MP 121.9 to MP 125.5)
- Proposed Project from MP 125.5 to MP 136.5 (Sycamore Canyon Substation)
- Coastal Link Upgrades (eliminating the need for the Proposed Project from MP 136.5 to the western terminus at MP 149.9)
- Top of the World Substation Site¹

Conclusion of the Recirculated Draft EIR/Supplemental Draft EIS. The alternative components of the Environmentally Superior Northern Alternative have not been changed. However, since publication of the Draft EIR/EIS, the Environmentally Superior Northern Alternative has been modified to include reroutes suggested by SDG&E. Each reroute and its impacts are described in detail and analyzed in Section 3. These reroutes have been analyzed because they present viable options that would reduce or avoid significant impacts identified in the Draft EIR/EIS. Following are the components of the Environmentally Superior Northern Alternative that are different from those included in the Draft EIR/EIS:

- N6 Private Land Revision (not analyzed in this document because no new impacts are created) would move a 0.9-mile segment of the Proposed Project route from private land to adjacent BLM land.

¹ The Top of the World Substation would not be required with use of the Partial Underground 230 kV ABDSP SR78 to S2 Alternative with the All Underground Option, which has been found to be superior to the Proposed Project in the Anza-Borrego Link.

- BLM Gifted Lands Reroute (Section 3.1.1) would remove a 1.75-mile segment of the Proposed Project and replace it with a slightly longer segment on adjacent private land in order to avoid a private parcel transferred to BLM as a gift and to avoid a Caltrans mitigation parcel.
- Around Narrows Substation Reroute (not analyzed in this document because no new impacts are created) would change the location of towers within the boundaries of the Narrows Substation in Anza-Borrego Desert State Park.
- Santa Ysabel All Underground Alternative (replacing the Proposed Project from MP 100 to MP 109). If the Santa Ysabel All Underground Alternative is determined to be infeasible, the Mesa Grande Alternative with the SDG&E Santa Ysabel Partial Underground Revision would be constructed to replace the Santa Ysabel All Underground Alternative (see discussion in Section 3.2.2).

Two alternatives that are components of the Environmentally Superior Northern Alternative have been modified as a result of SDG&E's reroutes:

- Top of the World Substation Ingress/Egress (Section 3.2.1) would modify the locations at which the 230 kV and 500 kV transmission lines would enter and exit the substation site in order to better accommodate existing terrain.
- Coastal Link System Upgrades Alternative Revision (Section 3.2.3) would add the reconductoring of the Sycamore Canyon-Scripps 69 kV transmission line to the initial description of this alternative.

The overall ranking of the Environmentally Superior Northern Alternative remains the same as it was in the Draft EIR/EIS, and the impacts of this alternative remain the same as those described in the Draft EIR/EIS.

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Figure 5-1. Environmentally Superior Northern Alternative and Modified Environmentally Superior Southern Alternative

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5.2 Environmentally Superior Southern Route

Conclusion of the Draft EIR/EIS. The Draft EIR/EIS identified the Environmentally Superior Southern Route as a route that would primarily utilize the Interstate 8 Alternative and incorporate the following segment options/alternatives:

- Interstate 8 Alternative from Imperial Valley Substation to MP I8-49, just east of the La Posta Reservation, with Campo North Option. If the Campo North Option is determined to be infeasible, the BCD Alternative with the BCD South Option would be constructed to replace the Interstate 8 Alternative from MP I8-40 to MP I8-51.
- Modified Route D Alternative beginning at its eastern connection with the Interstate 8 Alternative (MP I8-51) with the Modified Route D Alternative Substation and the Star Valley Option, reconnecting to the Interstate 8 Alternative at MP I8-74.
- Interstate 8 Alternative underground in Alpine Boulevard
- Chocolate Canyon Option (replacing Interstate 8 Alternative from MP I8-78.5 to MP I8-82)
- Interstate 8 Alternative from end of Chocolate Canyon Option to MP 131 of the Proposed Project
- Environmentally Superior Transmission Line Route Segment Alternative for the Proposed Project from MP 131 to its termination at the Sycamore Canyon Substation (MP 136.3)
- Coastal Link Upgrades Alternative.

Conclusion of the Recirculated Draft EIR/Supplemental Draft EIS. The revised Environmentally Superior Southern Route Alternative would eliminate the following two previously incorporated route segments:

- The **Interstate 8 Alternative between McCain Valley Road and La Posta Road** (MP I8-40 to I8-51). This segment of the Interstate 8 Alternative has been replaced by the BCD/BCD South Option Reroute. In a comment on the Draft EIR/EIS, the Campo Kumeyaay Nation stated that it opposes the Interstate 8 Alternative through the Campo Reservation because of its “adverse direct financial impact on present and proposed tourism based businesses near the freeway.” As a sovereign nation, the Campo has the authority to prohibit the transmission line across its land, and neither SDG&E nor the CPUC or BLM have the power to condemn the easements that would be necessary to cross this land. Given the Campo Kumeyaay Nation’s stated opposition to this route, it is no longer considered a potentially feasible alternative. Because a route modification to avoid Campo land would also avoid La Posta Reservation lands, the Environmentally Superior Southern Route no longer would affect any tribal lands. Therefore, barring approval from the Campo and La Posta tribes, the Environmentally Superior Southern Route has been modified as described herein.
- If found to be acceptable by the Viejas Band of Kumeyaay Indians, the entire **Star Valley Option** (MP SV0 to SV-3) would no longer be included as part of the Environmentally Superior Southern Route. As described in Section 4.1.3, research into the site descriptions and boundaries of the cultural site previously identified as being within Alpine Boulevard shows that the site does not extend south of Interstate 8, so would not be affected. Therefore, the original Modified Route D Alternative would be used, with the 230 kV transmission line continuing north from the Modified Route D Substation, then transitioning to underground at the east end of Alpine Boulevard. As a result, the Star Valley Option, which would have significant visual impacts, as described in Section E.4.3.4 of the Draft EIR/EIS, would not be included as part of the Environmentally Superior Southern Route. However, the Star Valley Option (as modified by SDG&E reroutes described in Section

3.3.8, Star Valley Option Revision) could still be used if additional concerns about the eastern end of Alpine Boulevard are identified through any additional tribal consultation prior to construction based on preliminary cultural resources investigations.

The entire Environmentally Superior Southern Route Alternative, as illustrated in Figure 5-1, would incorporate the following segment options, reroutes, and alternatives:

- Interstate 8 Alternative between the Imperial Valley Substation and MP I8-40 (where the BCD Alternative diverges), including the following reroutes requested by SDG&E in its comments on the Draft EIR/EIS:
 - SWPL Archaeological Site Reroute (not addressed in this document because it would not create new impacts), which would avoid impacts to a newly discovered archaeological site
 - Jacumba SWPL Breakaway Point Revision, which would reduce impacts to private land by eliminating one tower.
- BCD Alternative with the BCD South Option (both modified by SDG&E reroutes described in Section 3.3.2 BCD Alternative and BCD South Option Revision). The reroutes reduce impacts on the Cleveland National Forest by eliminating several pull sites and access roads.
- Modified Route D Alternative, including the Modified Route D Alternative Substation, as modified to incorporate the following SDG&E reroutes:
 - Cameron Reroute (as described in Section 3.3.5), which adjusts the route on private land near the town of Campo
 - Pacific Crest Trail Reroute (as described in Section 3.3.6) would be primarily on BLM land at the crossing of the Pacific Crest Trail
 - Western Modified Route D Alternative (MRDA) Reroute (described in Section 3.3.7), which would reduce impacts on the Cleveland National Forest, and includes modification of the Modified Route D Alternative Substation in order to improve transmission line interconnections.
- Chocolate Canyon Option (with a modified crossing of Interstate 8 to reduce visual impacts)
- Interstate 8 Alternative from the end of the Chocolate Canyon Option to where it joins the Proposed Project route at MP 130, incorporating the following SDG&E reroutes:
 - High Meadows Reroute (see Section 3.3.3), where the route has been modified to reduce visual impacts by installing towers slightly lower on the hillside
 - Highway 67 Hansen Quarry Reroute (see Section 3.3.4), where the route has been modified to avoid active and future quarry operations.
- Proposed Project from MP 130 to the Sycamore Canyon Substation
- Coastal Link System Upgrades Alternative Revision (Section 3.2.3), which would add the reconductoring of the Sycamore Canyon–Scripps 69 kV transmission line to the initial description of this alternative.

5.3 Route Configurations Suggested in Comments on the Draft EIR/EIS

Two commenters on the Draft EIR/EIS suggested different routing combinations that would result in new versions of the environmentally superior northern and southern transmission line routes. These routes are composed of segments of alternatives that were fully evaluated in the Draft EIR/EIS and represent different ways of assembling the alternatives to create a complete route. These configurations are discussed in Sections 5.3.1 and 5.3.2.

5.3.1 SDG&E's "Enhanced Northern Route"

In SDG&E's fourth comment letter on the Draft EIR/EIS (April 11, 2008), it requested that the following alternatives, defined and analyzed in the Draft EIR/EIS, replace the equivalent segments of the Proposed Project route (i.e., between the same mileposts). This new combination of routing alternatives is now SDG&E's preferred route in the north, and is illustrated on Figure 5-2. The components are as follows:

- FTHL Eastern Alternative (between MP-3 and MP-9), to minimize effects on flat-tailed horned lizard critical habitat.
- West Main Canal–Huff Road Modification Alternative (between MP-11 and MP-16), to avoid direct effects on dairy operations.
- Overhead 500 kV ABDSP Within 100-foot ROW Alternative (between MP-62 and MP-84), to avoid direct effects on State-designated Wilderness lands.
- CNF Existing 69 kV Route Alternative (at MP-12), to avoid creation of a new transmission corridor on private land.
- Oak Hollow Road Underground Alternative (at about MP-17) to minimize effects on private land just east of Mount Gower Preserve.

SDG&E's "Enhanced Northern Route" would also incorporate several of the reroutes that SDG&E submitted with its comment letter on the Draft EIR/EIS as components of its "Enhanced Northern Route:"

- N6 Private Land Revision (between MP-20 and MP-21; not addressed in this document because it does not create new impacts)
- Around Narrows Substation (at MP-70; not addressed in this document because it does not create new impacts)
- Overhead 500 kV ABDSP within Existing 100-Foot ROW Alternative Revision (to eliminate direct impacts on wilderness between MP-62 and MP-84; not addressed in this document because it does not create new impacts)
- Northern Grapevine Canyon Reroute (between MP-83.5 and 88; addressed in Section 3.1.2)
- Central East Substation ingress/egress (at MP-91).

Because each of these alternatives and reroutes was fully evaluated in the Draft EIR/EIS or in this Recirculated Draft EIR/EIS, the CPUC and BLM decisionmakers have the ability to consider the "Enhanced Northern Route" as SDG&E has defined it. However, SDG&E's "Enhanced Northern Route" would have greater impacts than the Environmentally Superior Northern Route because it requires construction of an overhead 500 kV transmission line through Anza-Borrego Desert State Park with direct effects on important cultural resources in Grapevine Canyon. The Proposed Project as defined in the Draft EIR/EIS would avoid direct effects on cultural resources, but would be located partially within State designated wilderness areas. In contrast, the Environmentally Superior Northern Route would result in new transmission line within Anza-Borrego Desert State Park being located entirely underground.

Many of the impacts created by this alternative are significant and unmitigable, and are especially severe in terms of visual, biological, recreation and wilderness, and cultural resources.

5.3.2 SDG&E's Modified Southern Route

SDG&E's Southern Route Defined in Comments on Draft EIR/EIS. In SDG&E's fourth comment letter on the Draft EIR/EIS (April 11, 2008), it proposed a new combination of alternatives along the southern route and explained that this new combination is its preferred route in the southern area. The following components of SDG&E's Modified Southern Route were defined and analyzed in the Draft EIR/EIS:

- Interstate 8 Alternative from Imperial Valley Substation to McCain Valley Road, the point where the BCD Alternative would diverge at MP I8-40
- BCD Alternative (as revised by SDG&E; see Section 3.3.2, Figure 3-7)
- BCD South Option (as revised in response to U.S. Forest Service comments; see Section 3.3.2, Figure 3-7)
- Modified Route D Alternative (as revised in response to U.S. Forest Service comments; see Sections 3.3.5, 3.3.6, and 3.3.7 and Figures 3-10, 3-11, and 3-12)
- Modified Route D Substation
- Star Valley Option
- Interstate 8 Alternative to its intersection with the Proposed Project at MP 130
- Proposed Project to the Peñasquitos Substation.

SDG&E's Southern Route Incorporating Reroutes and Revisions. SDG&E's "Modified Southern Route" would also incorporate several of the reroutes that SDG&E submitted with its comment letter on the Draft EIR/EIS as components of its "Modified Southern Route." This route is the same as the Environmentally Superior Southern Route (as illustrated in Figure 5-1) except for the Star Valley Option which would be included in the SDG&E route but not in the Environmentally Superior route. Components of SDG&E's Modified Southern Route are:

- SWPL Archaeological Site would reduce impacts to a newly discovered cultural resources area (not considered in this document because no new impacts are created).
- Jacumba SWPL Breakaway Point Reroute would eliminate one tower on private land (see Section 3.3.1 and Figure 3-6)
- BCD Alternative Revision (as revised; see Section 3.3.2, Figure 3-7)
- BCD South Option Revision (see Section 3.3.2, Figure 3-7)
- Cameron Revision (see Section 3.3.5; Figure 3-10)
- Modified Route D Substation Ingress/Egress
- Western MRDA Revision (see Section 3.3.7 and Figure 3-12)
- Chocolate Canyon Option
- High Meadows Revision (see Section 3.3.3 and Figure 3-8)
- Highway 67 Hansen Quarry (see Section 3.3.4 and Figure 3-9)

Figure 5-2. SDG&E Enhanced Northern Route and UCAN Modified Southern Route
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Because each of these alternatives and reroutes was fully evaluated in the Draft EIR/EIS or in this Recirculated Draft EIR/EIS, the CPUC and BLM decisionmakers have the ability to consider the “Modified Southern Route” as SDG&E has defined it. This route is very similar to the route identified in Section 5.2 above as having the least impacts overall of the southern route alternatives (i.e., the Environmentally Superior Southern Route). The primary difference between SDG&E’s Modified Southern Route and the Environmentally Superior Southern Route is the use of the Star Valley Option. If acceptable to the Viejas Band of Kumeyaay Indians, the Star Valley Option (or Star Valley Revision) would no longer be included in the Environmentally Superior Southern Alternative due to the significant visual impacts of this route (as described in Section E.4.3.4 of the Draft EIR/EIS) and additional research on the feasibility and cultural resources impacts of the eastern end of the Alpine Boulevard route (as described in Section 4.1.3).

5.3.3 UCAN’s Modified Southern Routes

On April 8, 2008, the Utility Consumers’ Action Network (UCAN) submitted a comment letter on the Draft EIR/EIS that describes two variations of the Environmentally Superior Southern Route Alternative. The first variation is a Southern Route Alternative that is made up of different route segments than those selected for the Draft EIR/EIS’s Environmentally Superior Southern Route. The second is essentially a method of phasing construction of a 500 kV transmission line by first constructing the 500 kV line only from Jacumba to Sycamore Canyon. Each of these variations is described below.

UCAN’s Modified Southern Route Alternative

UCAN proposed a new combination of routing alternatives along the southern route. It is illustrated on Figure 5-2 and its components would be as follows:

- Interstate 8 Alternative for the first 40 miles west from the Imperial Valley Substation.
- BCD Alternative for its entirety, replacing the Interstate Alternative from MP I8-40 to I8-58 (19 miles)
- Interstate 8 Alternative west for 13 miles from MP I8-58 to I8-71
- Modified Route D route south for 2 miles from Modified Route D MP MD-36 to MD-34, with the Modified Route D Substation
- Star Valley Option for 3 miles
- Interstate 8 Alternative from MP I8-74 to Sycamore Canyon Substation
- Coastal Link System Upgrades Alternative to avoid any further new transmission line construction west of Sycamore Canyon Substation.

The primary difference between this UCAN route and the Environmentally Superior Southern Route is that the UCAN route would use the entire BCD Alternative and the Interstate 8 Alternative from near Pine Valley to the Descanso area, whereas the Environmentally Superior Southern Route would use the BCD South Option and the Modified Route D Alternative to stay within land use zones acceptable to the Forest Service. The UCAN alternative segments would both pass nearly entirely through National Forest land in areas that the Forest Service has determined are inconsistent with its Land Use Plan. The Forest Service’s comment letter on the Draft EIR/EIS (April 11, 2008) stated that the Interstate 8 Alternative in this segment would not be eligible for consideration of a Special Use Permit.

The UCAN Modified Southern Route would not use the BCD South Option and the Modified Route D Alternative. As stated in the U.S. Forest Service comment letter on the Draft EIR/EIS, these routes are

the only alternative segments for which the Forest Service would issue a Special Use Permit, so they are included in the Environmentally Superior Southern Route. Therefore, the UCAN Modified Southern Route would not be regulatorily feasible.

Jacumba to Sycamore Canyon

UCAN's comment letter suggests the following:

A Southern Route alternative would also create the option of phasing construction, with the Jacumba-Sycamore Canyon section built first if increased Mexican generation precedes increased IV renewable generation, as the ISO queue suggests will be the case. (page 9)

This route is essentially a shorter version of the Interstate 8 Alternative identified in the Draft EIR/EIS. It would be the same as the UCAN Modified Southern Route, but it would exclude the 35 miles of new 500 kV line between the new Jacumba Substation and the Imperial Valley Substation (see Figure 5-2). Since this route is shorter, UCAN is correct that it would cost less than constructing the additional 35 miles east to the Imperial Valley Substation. Significant impacts that would be avoided by selecting this shorter Southern Route Alternative are the following:

- Impact B-7A: Direct or indirect loss of flat-tailed horned lizard or direct loss of habitat (Class I)
- Impact B-7C: Direct or indirect loss of burrowing owl or direct loss of habitat (Class I)
- Impact V-58: Inconsistency with BLM VRM Class III Management objective due to introduction of structure contrast, industrial character, view blockage and skylining when viewed from Key Viewpoint 46 at the Plaster City West OHV Staging Area (VRM) (Class I)
- Impact G-2: Unique geologic features would be damaged due to construction activities (Class II)

In addition, other impacts would be less severe due to the reduced length of new transmission line in desert terrain. In particular, impacts to bighorn sheep habitat and migration would be reduced.

This alternative would have fewer impacts than the Environmentally Superior Southern Alternative because it would eliminate 35 miles of that transmission line route, but it has not been designated as the Environmentally Superior Southern Alternative because it would not meet most project objectives. In the Draft EIR/EIS (Section A.2.2), the CPUC and BLM identified the following three basic project objectives:

- Basic Project Objective 1: to maintain reliability in the delivery of power to the San Diego region.
- Basic Project Objective 2: to reduce the cost of energy in the region.
- Basic Project Objective 3: to accommodate the delivery of renewable energy to meet State and federal renewable energy goals from geothermal and solar resources in the Imperial Valley and wind and other sources in San Diego County.

Wind generation is intermittent, so wind alone cannot provide improved system reliability; solar power generates more reliably during the afternoon when load is at its peak. Therefore, this variation would not go far enough maintain reliability in the delivery of power to San Diego County (Basic Project Objective No. 1).

This alternative would allow interconnection of wind generation in San Diego County and Mexico, but no solar or geothermal development is pending in the southeastern area of the County. Because the alternative would not accommodate or encourage development of geothermal or solar resources in the Imperial Valley, it would not fully meet Basic Project Objective No. 3.