



# SDG&E Sunrise Powerlink Project



## CPUC/BLM Notice Regarding Conclusions on EIR/EIS Alternatives to the Proposed Sunrise Powerlink Project

### Results of the Second Scoping Process

On January 22, 2007, the Sunrise Powerlink EIR/EIS team mailed a notice announcing a second scoping period describing the 30 alternatives that were presented with preliminary recommendations for detailed EIR/EIS analysis and the remaining approximately 70 alternatives recommended for elimination from detailed analysis. Eight public scoping meetings were held between February 5 and 9, 2007; they were attended by 596 people. Oral comments were made by 156 individuals and 40 written comments were submitted at the meetings. Following the meetings, over 800 pages of written comments were also received.

Based on all of the feedback received from the public and agencies, along with additional research done by the EIR/EIS team, the California Public Utilities Commission (CPUC) and United States Department of the Interior Bureau of Land Management (BLM) have made final decisions on the alternatives that will be fully analyzed and the alternatives that will be eliminated from full consideration in the EIR/EIS. Those decisions are presented in this Notice.

No additional public comments will be accepted at this time. The next opportunity to comment will be following the release of the Draft EIR/EIS for a 90-day comment period. The anticipated schedule for release of the Draft and Final EIR/EIS is as follows:

Release of Draft EIR/EIS	July 13, 2007
Public Comment Period on Draft EIR/EIS	July 13, 2007 to October 12, 2007
Release of Final EIR/EIS	November 20, 2007

This Notice lists each alternative that has been considered by the EIR/EIS team, presents a brief description of the alternative, and states whether or not it is retained for EIR/EIS analysis. Several new alternatives were added as a result of comments received in the second scoping period; they are highlighted as “new.” Some new alternatives have been retained and others have been eliminated. Some alternatives that were defined in the January notice have been modified in response to comments or team research, and the preliminary conclusions regarding “retention” or “elimination” have been changed in some cases. Where these changes occur, the reasons for the changes are described. Please note that on Figures 1 through 7, alternatives that have been eliminated are shown as yellow lines and alternatives retained are shown in other colors.

### A. Background

San Diego Gas & Electric Company (SDG&E) filed an application (A.05-12-014, now consolidated with A.06-08-010) for a Certificate of Public Convenience and Necessity (CPCN) with the CPUC for a proposed 150-mile transmission line known as the Sunrise Powerlink (SRPL) Project. SDG&E has also filed an application for a Right-of-Way Grant with the BLM. The CPUC and the BLM have developed and signed a Memorandum of Understanding (completed on July 17, 2006) that will direct the preparation of a joint Environmental Impact Report (EIR) and an Environmental Impact Statement (EIS). The CPUC, as the lead agency under California law, and the BLM, as the federal lead agency, will prepare a Draft and Final EIR/EIS to comply with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

To this date, the EIR/EIS public process included issuance of a Notice of Preparation (NOP; September 2006) that announced a 30-day scoping period and the intent to prepare the Sunrise Powerlink EIR/EIS. The BLM published in the Federal Register a Notice of Intent (NOI) to prepare a joint EIR/EIS for Sunrise Powerlink (FR Vol. 71, No. 169, page 51848, August 31, 2006). In early October 2006, seven public scoping meetings were held and a Scoping Report was prepared to document comments received.

## **B. Description of the Proposed Sunrise Powerlink Project**

The transmission line and facility upgrades proposed by SDG&E are known as “Sunrise Powerlink” or “SRPL.” The entire project would span a total of 150 miles (over 800 new towers), including a 91-mile, 500 kilovolt (kV) transmission line (in Imperial County and eastern San Diego County) and a new 59-mile 230 kV line (in central and western San Diego County) that includes both overhead and underground segments. It would also include a new 500/230 kV substation in central San Diego County and upgrades at four existing substations. Detailed descriptions have been provided in previous notices, which are available on the project website.

## **C. Alternatives Screening Process**

In compliance with CEQA and NEPA, an EIR/EIS must describe a reasonable range of alternatives to the project or project location that could feasibly attain all or most of the basic project objectives and avoid or lessen any of the significant environmental impacts of the Proposed Project. Alternatives may include different routes for the transmission line or alternative methods of providing electric power to the SDG&E area. The No Project/No Action Alternative must also be analyzed in the EIR/EIS. The No Project/No Action Alternative will describe what would likely occur in the absence of Proposed Project implementation and is defined in Section D below. Further, the EIR/EIS must evaluate the comparative merits of the alternatives.

In the Proponent’s Environmental Assessment (PEA) for SRPL, SDG&E evaluated a variety of project alternatives, including alternative routes, alternative transmission projects, and non-transmission alternatives. The CPUC and BLM have re-evaluated the feasibility and potential impacts of SDG&E’s alternatives and have now made determinations on which of them meet CEQA and NEPA requirements for being carried to full analysis. In addition, the CPUC and BLM have evaluated a large number of alternatives suggested by members of the public and alternatives developed by the EIR/EIS team. As a result of the second scoping period, the public and agencies submitted information on other alternatives and modifications to alternatives.

In order to comply with CEQA and NEPA requirements, each alternative that has been suggested or developed for this project has been evaluated in three ways:

### **Does the alternative accomplish all or most of the 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; and
- Basic Project Objective 3: to accommodate the delivery of renewable energy from geothermal and solar resources in the Imperial Valley and wind and other sources in or outside of San Diego County.

### Is the alternative feasible?

The feasibility analysis considers whether an alternative can be constructed using existing technology and whether it can be permitted given applicable regulatory requirements. The State CEQA Guidelines (Section 15364) define feasibility as:

*. . . capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.*

The alternatives screening analysis is largely governed by what CEQA terms the “rule of reason,” meaning that the analysis should remain focused, not on every possible eventuality, but rather on the alternatives necessary to permit a reasoned choice. Furthermore, of the alternatives identified, the EIR is expected to fully analyze those alternatives that are feasible, while still meeting most of the project objectives. For the screening analysis, the feasibility of potential alternatives was assessed taking the following factors into consideration:

- Economic Feasibility
- Environmental Feasibility
- Legal Feasibility
- Regulatory Feasibility
- Social Feasibility
- Technical Feasibility

### Does the alternative avoid or substantially lessen any significant effects of the Proposed Project?

A key CEQA requirement for an alternative is that it must have the potential to “avoid or substantially lessen any of the significant effects of the project” (State CEQA Guidelines Section 15126.6(a)). If an alternative is identified that clearly does not have the potential to provide an overall environmental advantage as compared to the Proposed Project, it is usually eliminated from further consideration. At the screening stage, it is not possible to evaluate all of the impacts of the alternatives in comparison to the Proposed Project with absolute certainty, nor is it possible to quantify impacts. However, it is possible to identify elements of an alternative that are likely to be the sources of impact and to relate them, to the extent possible, to general conditions in the subject area. During evaluation of alternatives, a preliminary assessment of project impacts was made by the EIR/EIS team in order that an appropriate range of alternatives is developed.

### D. No Project Alternative

Both CEQA and NEPA require an evaluation of a No Project or No Action Alternative in order for decision-makers to compare the impacts of approving the project with the impacts of not approving the project. Consideration of the No Project Alternative is required by Section 15126.6(e) of the CEQA Guidelines, and NEPA requires the consideration of a No Action Alternative (40 C.F.R. 1502.14(c)). The analysis of the No Project Alternative must discuss the existing conditions at the time the Notice of Preparation was published (September 13, 2006), as well as: “what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services” [CEQA Guidelines Section 15126.6(e)(2)]. In other words, the analysis should provide a comparison of the environmental impacts that would occur if the Proposed Project is approved with those that would occur if it is not approved [CEQA Guidelines Section 15126.6(e)(1)]. The requirements also specify that: “If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this ‘no project’ consequence should be discussed” [CEQA Guidelines Section 15126.6(e)(3)(B)].

The No Action Alternative required under NEPA [40 C.F.R. 1502.14(c)] serves as a basis for comparison even if it would not satisfy the proposed action’s purpose and need. The definition of the No Action

Alternative depends on the nature of the project and in the case of the Proposed Project the No Action Alternative describes what would occur without the federal agency's (BLM) approval.

Any combination of the following scenarios could occur as part of the No Project Alternative.

- **Increased Dependence on Generation in San Diego.** Power plants in San Diego would continue to run or run more frequently to make up for the import deficiency under the No Project Alternative.
- **Accelerated Development of Other Major Transmission Projects or Upgrades.** Other major transmission projects and/or upgrades may be built to achieve objectives similar to those of the Proposed Project.
- **Accelerated Development of New Generation in San Diego.** New, relatively efficient generation may be built to meet the need for in-area capacity and to replace existing, less efficient generation.

Following are projects that would be expected to occur if the Sunrise Powerlink Project were not approved:

- LEAPS Project
- Crestwood/Boulevard Area Wind Power (would require SDG&E entering into Power Purchase Agreements with various generators similar to those identified in 2004 and 2005 RPS RFO process)
- Crestwood/Boulevard Area Transmission including Jacumba Substation (SDG&E system upgrades for in-area wind generators)
- New In-Area Thermal Power Plants: Repower South Bay or Encina or new ENPEX (also called San Diego Community Power) Project. Both would require SDG&E entering into Long-Term Power Purchase Agreement.
- Mexico Light 230 kV Upgrade and/or Path 44 Upgrade (would require SDG&E coordination with neighboring utilities in Mexico and Orange County to implement)

## **E. Conclusions on Alternatives**

Following is a list of all alternatives that were considered in the alternatives screening process and our final conclusions on alternatives as to whether they are retained for full analysis or eliminated.

### **Imperial Valley Link Alternatives**

Figure 1 illustrates Imperial Valley alternatives.

#### **SDG&E Desert Western Alternative**

**From Alternatives Scoping Notice:** Would replace proposed route from MP 4.0–54.2. Avoids agricultural lands and more heavily traveled highways, but located near wilderness areas and wildlife habitat. Retained pending further consultation between the Imperial Irrigation District and the Department of Defense regarding regulatory feasibility constraints due to airspace restrictions limiting height of transmission towers.

**Conclusion:** Uncertain because discussions are still ongoing with the Department of Defense to clarify feasibility. If feasible, could be retained due to potential environmental benefit over the proposed route due to shorter length and reduction in agricultural resources and land use impacts as well as impacts to BLM Flat-Tailed Horned Lizard (FTHL) Management Area.

### SDG&E Alternative Segments 3, 3B, 3D

**From Alternatives Scoping Notice:** These three segments are variations of the SDG&E Desert Western Alternative above that were considered as routes for connecting the SWPL corridor with the existing IID 92 kV corridor along the western Imperial Valley floor. Eliminated because of potential conflicts with existing land uses, greater biological impacts, and regulatory feasibility of crossing through the Desert Range height restriction and/or obstruction-free zones.

**Conclusion:** No change (eliminated).

### Imperial Valley FTHL Alternative

**From Alternatives Scoping Notice:** Travels north-northwest from Imperial Valley Substation and skirts western edge of agricultural lands. Retained because it would avoid BLM Flat-Tailed Horned Lizard Management Area.

**Conclusion:** Eliminated due to IID 230 kV planned transmission upgrades, proposed residential development in the area, and potential agricultural conflicts. Replaced with FTHL Eastern Alternative (shown below), which would avoid these impacts.

### FTHL Eastern Alternative \*\*NEW ALTERNATIVE\*\*

**Added After Second Scoping Notice:** This route was suggested during scoping and would diverging from the proposed route at MP 3 to travel north following section lines through agricultural lands to MP 8.75 where it would rejoin the proposed route.

**Conclusion:** Retained because it would reduce impacts to BLM FTHL Management Area.

### SDG&E Imperial Valley FTHL Modification Alternative \*\*NEW ALTERNATIVE\*\*

**Added After Second Scoping Notice:** This alternative was suggested by SDG&E and is similar to the Imperial Valley FTHL Alternative except it would follow the east side of the Westside Main Canal, crossing I-8 to Stevens Road where it would turn west, cross the canal, and follow Strobel Road to rejoin the proposed route one structure north of I-8 at MP 6.1.

**Conclusion:** Eliminated due to conflicts with planned Imperial Irrigation District 230 kV upgrades along the Westside Main Canal.

### SDG&E West of Dunaway Alternative \*\*NEW ALTERNATIVE\*\*

**Added After Second Scoping Notice:** This alternative was suggested by SDG&E and approved by the proposed land use developer in the area. The route would diverge from the Proposed Project at MP 4 and would follow SWPL for approximately 1.7 miles farther west than the proposed project. The route would turn north paralleling Dunaway Road approximately 0.25 to the west and would traverse BLM land to the Arizona and San Diego Railroad ROW. South of the railroad ROW, the route would turn east and parallel the tracks for 1.25 miles before turning briefly north to cross the tracks and Evan Hewes Highway and then northeast to rejoin the proposed route at MP 7.9.

**Conclusion:** Retained because it would avoid a major proposed land development project.

### SDG&E Bullfrog Farms Alternative:

**From Alternatives Scoping Notice:** Diverges from the Proposed Project at MP 13.5 and would continue east then north across agricultural land following the property lines. Eliminates operational impacts to Bullfrog Farms dairy.

**Conclusion: Eliminated due to new information on impacts to planned development and dairy calving operations. Replaced with SDG&E West Main Canal – Huff Road Modification Alternative suggested by SDG&E (see below); this route would follow the IID Westside Main Canal to the east-northeast and then Huff Road to the north.**

#### Huff Road Bullfrog Farms Alternative

**From Alternatives Scoping Notice:** Diverges from the Proposed Project at MP 13.8 to parallel Payne Road to the east and then Huff Road to the north. Eliminates operational impacts to Bullfrog Farms dairy.

**Conclusion: Eliminated due to new information on impacts to planned development and dairy calving operations. Replaced with SDG&E West Main Canal – Huff Road Modification Alternative route suggested by SDG&E during scoping that would follow IID Westside Main Canal to the east-northeast and then Huff Road to the north.**

#### SDG&E West Main Canal – Huff Road Modification Alternative **\*\*NEW ALTERNATIVE\*\***

**Added After Second Scoping Notice:** SDG&E suggested a modification to the two Bullfrog Farms Alternatives described above, in which the transmission line route would diverge from the proposed route at MP 11 and follow the IID Westside Main Canal to the east-northeast, and then turn north on Huff Road. This route would avoid direct effects to the Bullfrog Farms and also to the Raceway development.

**Conclusion: Retained for analysis.**

#### New River Alternative **\*\*NEW ALTERNATIVE\*\***

**Added After Second Scoping Notice:** This alternative was suggested during scoping and would diverge from the Proposed Project around MP 11 and briefly following section lines to the New River, which roughly runs southwest to northeast across the valley. The route would follow the north side of the river (adjacent to but not on the agricultural land) in the northeast direction to its intersection with the existing IID transmission corridor where it would turn northwest and would rejoin the proposed project around MP 20.5.

**Conclusion: Eliminated due to risk of installing a major transmission line in an active riverbed with year-round flow. Flowing water can undermine tower footings and riverbed soils can be unstable, presenting challenges to engineering.**

### Anza-Borrego Link Alternatives

Figure 2 illustrates alternatives within Anza-Borrego Desert State Park.

#### Partial Underground 230 kV ABDSP SR78 to S2 Alternative

**From Alternatives Scoping Notice:** Expand IID San Felipe Substation to 500/230/12 kV and construct underground 230 kV line from substation to SR78. Continue underground within SR78 to one mile east of SR78/S2 intersection where the line would transition overhead for crossing of the Earthquake Valley Fault zone, requiring several towers within State-designated wilderness. Transition back to underground at the SR78/S2 intersection within Highway S2 for three miles, then transitioning to overhead along the east side of the highway at the second crossing of the Earthquake Valley Fault zone. Follow Highway S2 to Central East Substation area and rejoin proposed route. It is recommended for retention because it would reduce visual impacts within ABDSP, and would reduce effects on State-designated wilderness, avoid cultural resources in Grapevine Canyon, and avoid need for construction

of Central East Substation. If towers at the fault crossing are required to be located within State Wilderness, this alternative would also require a re-designation of Wilderness Area and a State Park Plan Amendment, thus facing potential regulatory infeasibility and the potential delay of the in-service date.

This alternative would also present a challenge in the future phases of the project (see discussion of future phases under Section F above). Additional 230 kV circuits could be required underground and overhead in SR78/S2 or underground through Borrego Springs, if feasible (an overhead route along S22 would be within State Wilderness). All future phases would require complete CEQA/NEPA review when proposed. The potential future phase 230 kV line through Borrego Springs may be able to be installed underground. A new 230/69 kV substation associated with this future phase could allow removal of several existing transmission lines in ABDSP and in the Borrego Valley, as well as the Narrows Substation.

**Conclusion: Retained but modified based on input from the Park and SDG&E with a revised underground route out of San Felipe Substation. Rather than following Old Kane Springs Road west to Highway 78, the underground route would follow Split Mountain Road to Highway 78 to reduce impacts to residential receptors, as well as geologic and hydrologic resources.**

#### Overhead 500 kV ABDSP Within Existing 100 Foot ROW

**From Alternatives Scoping Notice:** In order to stay within the existing 100-foot ROW, more towers would be required in order to follow the route of the 69 kV line. More towers would create more severe visual impacts, and substantially more ground disturbance. In addition, a major cultural site within Grapevine Canyon would be directly affected. However, this alternative is retained because it would not result in direct effects on State-designated wilderness and would not require a State Park Plan Amendment.

**Conclusion: Retained as described above, but an option suggested by SDG&E has been added east of Tamarisk Grove Campground in which the alternative would follow the Proposed Project route in the 150-foot alignment, and not the existing 100-foot ROW.**

#### SDG&E Segment A/Northern Borrego Springs via S22 Alternative

**From Alternatives Scoping Notice:** Overhead 500 kV line that would follow highways SR86 and S22. Eliminated because it would pass through more populated areas (Borrego Valley) and would be constructed within bighorn sheep habitat adjacent to Highway S22. It would also create a new transmission corridor within four State Wilderness areas along Highway S22, requiring a re-designation of Wilderness Area and a State Park Plan Amendment, thus facing potential regulatory infeasibility and the potential delay of the in-service date.

**Conclusion: No change (eliminated).**

#### SDG&E Segment 1/Imperial Valley via 92 kV Alternative

**From Alternatives Scoping Notice:** A 500 kV line would exit Imperial Valley Substation following existing IID 92 kV transmission line to Narrows Substation. Eliminated because would affect more agricultural land, pass through Desert Range Military Facility (which has tower height restrictions), and would traverse a much greater distance through Flat-Tailed Horned Lizard Designated Management Areas.

**Conclusion: No change (eliminated).**

#### SDG&E SR78 West of Anza Alternative

**From Alternatives Scoping Notice:** Follows SR78 from the east into ABDSP. Eliminated because would it be highly visible along the main entrance to ABDSP, would pass by residential and commercial receptors, and would need to be relocated due to FAA regulations to avoid Ocotillo Wells Airport.

**Conclusion:** No change (eliminated).

#### SDG&E Segment 4/ABDSP via S2 Alternative

**From Alternatives Scoping Notice:** Follows 500 kV Southwest Powerlink (SWPL) from Imperial Valley Substation and then parallels Highway S2 through ABDSP to SR78/S2 junction. Eliminated because of the high-value scenic viewshed, greater amounts of bighorn sheep habitat, and a greater length of new transmission corridor within State-designated wilderness. A new corridor in State Wilderness would require a re-designation of Wilderness Area and a State Park Plan Amendment, thus facing potential regulatory infeasibility and the potential delay of the in-service date.

**Conclusion:** No change (eliminated).

#### SDG&E ABDSP North Side of SR78 Alternative

**From Alternatives Scoping Notice:** At MP 61.9 the alternative would travel north to SR78 and would follow the north side of SR78. Eliminated because longer, would establish a new highly visible transmission line corridor along SR78, and would not reduce any significant impacts of the proposed route.

**Conclusion:** No change (eliminated).

#### SDG&E Borrego Valley Alternative

**From Alternatives Scoping Notice:** New overhead 500 kV line and new Borrego Springs 500/12 kV Substation in Borrego Springs, allowing removal of existing Narrows and Borrego Substations and the existing Narrows-IID San Felipe 92 kV, Narrows-Borrego 69 kV, and Narrows-Warner 69 kV transmission facilities. This route would result in a shorter length of transmission line through ABDSP. It was eliminated because it would create new transmission corridor within State-designated Pinyon Ridge Wilderness Area, requiring a re-designation of Wilderness Area and a State Park Plan Amendment, thus facing potential regulatory infeasibility and the potential delay of the in-service date. In addition, the route would be within very valuable bighorn sheep habitat, would be highly visible in the Borrego Valley and from Highway S22 scenic overlooks, and would pass near residences in both Borrego Springs and Ranchita.

**Conclusion:** No change. The SDG&E Borrego Valley Alternative has been eliminated for the following reasons:

- This alternative would also pass through Anza-Borrego Desert State Park, requiring creation of a new utility corridor within State-designated Wilderness.
- The U.S. Fish and Wildlife Service has provided information on the high value of the Peninsular bighorn sheep population in Tubb Canyon and has stated its strong opposition to transmission line routes that could affect this federally-listed Endangered species.
- Other severe impacts created by this alternative include degradation of spectacular views from the Montezuma Grade and throughout the Borrego Springs and Ranchita areas, and the introduction of a major industrial facility (500/12 kV substation) in a low density residential community.



### SDG&E Borrego Valley Underground Alternative **\*\*NEW ALTERNATIVE\*\***

**Added After Second Scoping Notice:** This alternative was suggested by SDG&E and would begin at an expanded 500 kV/230 kV San Felipe Substation. The 230 kV underground line would travel north in Split Mountain Road and then west in SR78 to Borrego Valley Road/S3. The route would continue in Highway S3 to a new 230 kV/12kV substation in Borrego Springs. From there, the route would travel within Tubb Canyon Road to the base of the escarpment where it would transition overhead and would follow the SDG&E Borrego Valley Alternative overhead route, as described above, but at 230 kV. Would allow removal of existing Narrows and Borrego Substations and the existing Narrows-IID San Felipe 92 kV, Narrows-Borrego 69 kV, and Narrows-Warner 69 kV transmission facilities.

**Conclusion:** Eliminated due to similar significant impacts as the Borrego Valley overhead route discussed above.

### SDG&E SR78 Julian Alternative

**From Alternatives Scoping Notice:** Follows SR78 through Julian to Santa Ysabel. Eliminated because would require difficult construction due to steep, rocky slopes along Banner Grade, would create a new transmission line corridor through Grapevine Mountain Wilderness Area, and would pass by Julian High School, residences, and through the center of the Town of Julian.

**Conclusion:** No change (eliminated).

### SDG&E Overhead ABDSP SR78 to S2 Central Alternative

**From Alternatives Scoping Notice:** Follows SR78 and S2 in new transmission corridors, within State-designated wilderness adjacent to highways. Eliminated due to establishment of a new transmission line corridor through designated wilderness, and SR78 and S2 are more heavily traveled roadways through the scenic and currently undeveloped San Felipe Valley. Note that components of this overhead alternative are included in an overhead/underground alternative along these same highways, retained for analysis and described above.

**Conclusion:** No change (eliminated).

### Overhead 230 kV ABDSP Alternative

**From Alternatives Scoping Notice:** Expand San Felipe Substation and construct only a double-circuit 230 kV transmission line from that point, following proposed route. This alternative would eliminate need for the Central East Substation. Eliminated because impacts of the proposed route would not be noticeably reduced, and because future 230 kV expansion would require additional disturbance within ABDSP.

**Conclusion:** No change (eliminated).

### HVDC Light Underground Alternative

**From Alternatives Scoping Notice:** Installation a proprietary transmission line system called HVDC Light (developed by ASEA Brown Boveri/ABB) with converter stations (converting alternating current [AC] power to direct current [DC] power) at a new location near IID's existing San Felipe Substation and a second set of converter stations (DC to AC) at the location of the proposed Central East Substation. Three HVDC Light circuits, each with approximately 350 MW capacity would be installed underground in roadways through ABDSP and along Highway S2, with potential overhead segments at fault crossings. This alternative would reduce impacts of the Proposed Project by avoiding Grapevine

Canyon, but it would increase project costs by at least \$500 million due to the high costs of the converter stations. Although the ability to place HVDC Light transmission cables underground for extended distances offers the ability to avoid the impacts of the proposed 500 kV overhead lines through ABDSP, the higher costs of this alternative make it infeasible using CEQA guidelines.

**Conclusion: No change (eliminated).**

### **Central Link Alternatives**

The following alternatives are illustrated on Figure 3:

#### **SDG&E Central East Substation to SR79 Alternative**

**From Alternatives Scoping Notice:** Begins at Central East Substation and would travel west and northwest approximately 5.0 miles to rejoin the proposed route at MP 97.4. Eliminated because it does not reduce impacts of the Proposed Project and Vista Irrigation District, the landowner, prefers the proposed route because of its limited visibility and it avoids disturbance to existing land uses.

**Conclusion: No change (eliminated).**

#### **SDG&E Warners S2 to SR79 Alternative**

**From Alternatives Scoping Notice:** Parallels S2 from Central East Substation area, and then along SR79 to rejoin the proposed route at MP 100. Eliminated due to much greater visual impacts than proposed route.

**Conclusion: No change (eliminated).**

#### **Santa Ysabel Existing ROW Alternative**

**From Alternatives Scoping Notice:** Overhead route following existing transmission line right-of-way along west then east side of SR79. Retained because it would reduce visibility of new 230 kV lines through Santa Ysabel Valley by locating the 230 kV line along the base of the hills on the east side of the valley, parallel to the existing 69 kV line and because it would reduce agricultural impacts. Locating the new line closer to SR79 may reduce fire risk in comparison to Proposed Project.

**Conclusion: Retained, but modified to be located slightly farther west for approximately 0.8 miles to reduce impacts to residential receptors around MP 1.1 of the alternative route.**

#### **Santa Ysabel Partial Underground Alternative**

**From Alternatives Scoping Notice:** Overhead 230 kV line would diverge from Proposed Route at MP 100, following the existing 69 kV transmission line right-of-way west of SR79. It would transition to underground south of Elsinore Fault zone crossing, at the point where the existing 69 kV line crosses SR79. The underground line would be located within SR79 and then turn west within SR78, transitioning to overhead to rejoin proposed route at MP 108.3 (the point where the proposed route crosses SR78). Retained because it would greatly reduce and/or eliminate visibility of new 230 kV lines through Santa Ysabel Valley, would reduce agricultural impacts, underground route would reduce fire risk, and would allow use of an existing transmission corridor.

**Conclusion: Retained because visual impacts of the new line in Santa Ysabel Valley would be reduced. However, the alternative has been modified from the route described above, which would have followed the existing 69 kV corridor from SR76 to the point the line crosses SR79. Based on input from SDG&E and the public, the modified alternative route would follow the**

overhead proposed project route to MP 105.3. The alternative would transition underground at the base of the hill along Mesa Grande Road and would then be installed within Mesa Grande Road to SR79 where it would turn south and continue to follow the original underground alternative to SR78. The original underground route is also modified south of Santa Ysabel and SR78, where it was to be installed beneath ranch roads. It would now follow property lines to minimize land use impacts. The underground segment would also extend the underground route to rejoin the proposed route at approximately MP 109.5.

#### Santa Ysabel SR79 All Underground Alternative

**From Alternatives Scoping Notice:** Transition underground at MP 98, two miles north of SR76/SR79 intersection, and travel south underground within SR79 to intersection of SR78, transitioning overhead and rejoining proposed route at MP 108.3. Eliminated due to technical infeasibility of an underground crossing of the active Elsinore Fault zone which parallels SR79 for about 5 miles just south of its intersection with SR76. Underground transmission lines would be severely damaged in a major earthquake along this fault, which is a state-designated active Alquist-Priolo fault zone.

**Conclusion:** Retained because the route has been modified and can avoid the active fault zone (change in determination--was previously eliminated). The underground route would now be west of SR79, outside of the active fault zone. The alternative route would diverge from the proposed route at MP 100 and would follow the existing 69 kV ROW overhead for approximately 1,800 feet south until the line would be west of the Alquist-Priolo Fault Zone. At an unpaved dirt road, the line would transition underground and would travel south in ranching roads that parallel SR79, but are 400 to 1,500 feet to the west of the highway and fault zone, but east of the existing 69 kV ROW. The alternative route would enter SR79 south of Elsinore Fault zone crossing, near the point where the existing 69 kV line crosses to the east side of SR79.

Also, as described under the “Santa Ysabel Partial Underground Alternative” (above), the southern end of this alternative would be modified south of Santa Ysabel and SR78, where it was to be installed beneath ranch roads. It would now follow property lines to minimize land use impacts. The underground segment would also extend the underground route to rejoin the proposed route at approximately MP 109.5.

#### SDG&E Mesa Grande Alternative **\*\*NEW ALTERNATIVE\*\***

**Added After Second Scoping Notice:** This alternative to a portion of the proposed overhead 230 kV route was proposed by the landowner and also by SDG&E in order to reduce visibility of the overhead line west of Mesa Grande Road. The route would diverge from the proposed route at MP 102.2 and would turn southwest along the lower portion of the northwesterly facing slope of small valley running from the northeast to the southwest to cut the angle and rejoin the proposed project at MP 103.5, on the southerly side of Mesa Grande Road.

**Conclusion:** Retained because of reduced visual resources impacts, fewer access roads required, and landowner preference.

#### SDG&E San Dieguito Park Alternative

**From Alternatives Scoping Notice:** Begin at MP 103.5 and travels south through San Dieguito River Valley Regional Open Space Park and east of the Mesa Grande Reservation, following parcel and agency boundaries to rejoin the Proposed Project at MP 110.5. Eliminated because would place the transmission line in a new corridor on pristine County Park land that is highly visible to recreationists,

would cross Santa Ysabel Open Space Preserve, and would cross two parcels of the Santa Ysabel Reservation, which could create legal feasibility issues as well.

**Conclusion: No change (eliminated).**

#### **Volcan Mountain Alternative**

**From Alternatives Scoping Notice:** This alternative would diverge from the “Partial Underground 230 kV ABDSP SR78 to S2 Alternative” described in the Desert Link above, at the intersection of SR78 and Highway S2. From this point, it would continue underground within SR78 and then turn north-northwest across BLM land and west across Volcan Mountain to Santa Ysabel. Rejoins the Proposed Project at MP 110. Eliminated because it would transfers impacts from ABDSP to an equally sensitive preserve area, and because it would create a new corridor across Volcan Mountain Open Space Preserve and Santa Ysabel Open Space Preserve. These areas are areas rich in biological and cultural resources and are important watershed areas. The line would be visible from a portion of SR78 and SR79, from the preserves which have many hiking trails, and from around the town of Julian.

**Conclusion: No change (eliminated).**

#### **Inland Valley Link Alternatives**

The following alternatives are illustrated on Figure 4:

##### **CNF Existing 69 kV Route Alternative**

**From Alternatives Scoping Notice:** At MP 111.3 the alternative would remain in the existing 69 kV ROW heading southwest through Cleveland National Forest for approximately 0.5 miles, rather than following the proposed route around the Forest on private land. May require amendment of Forest Plan. Retained because route would be shorter and less visible to nearby residences, no new access roads would be required, and relocation of the existing 69 kV transmission line would not be required.

**Conclusion: No change (retained).**

##### **Oak Hollow Road Underground Alternative**

**From Alternatives Scoping Notice:** Transitions underground farther east of the Gun Stage Road transition point and travels through a fenced pasture to follow Oak Hollow Road. Retained because it would eliminate visual impacts to residents in the valley area east of Mt Gower Open Space Preserve.

**Conclusion: No change (retained).**

##### **SDG&E Segment 10/Inland Valley SR78 Alternative**

**From Alternatives Scoping Notice:** Begins at proposed route MP 108.3 and would parallel SR78 to the west and then south to the existing Creelman Substation. Eliminated because it would establish a new transmission line corridor along SR78, which is heavily traveled and a main route into Ramona, would be longer, and would pass a greater number of residences, through agricultural land, and through designated critical habitat.

**Conclusion: No change (eliminated).**

### SDG&E Creelman Alternative

**From Alternatives Scoping Notice:** Replaces proposed route from MPs 117.1–123.3. Avoids use of paved roadways (Gunn Stage Road and San Vicente Road) and follows existing transmission rights-of-way. Eliminated because it would transfer the impacts without reducing any impacts of the Proposed Project due to its longer length, greater ground disturbance, and location in more sensitive habitat.

**Conclusion:** No change (eliminated).

### West of San Vicente Road Underground Alternative

**From Alternatives Scoping Notice:** Would extend the underground segment in San Vicente Road approximately two miles further to the west, to MP 123.3 and then would continue west underground in SDG&E's 69 kV ROW for 1.0 mile to MP 124.3 where it would transition overhead and turn south along the proposed project route. Eliminated because underground construction would be required through the Barnett Ranch Open Space Preserve, resulting in much greater ground disturbance and effects to important biological resources. Also eliminated due to topography and construction/erosion impacts of installing underground line on steep slopes.

**Conclusion:** Eliminated as originally defined, but an alternative has been developed that would extend the underground segment (and move the transition structures) approximately 0.3 miles farther west to minimize visibility of the transition from San Vicente Road and reduce land use disturbance.

### Chuck Wagon Road Alternative \*\*NEW ALTERNATIVE\*\*

**Added After Second Scoping Notice:** This route was suggested by Mr. Lynch (a member of the public) and has been slightly modified by the EIR/EIS team to follow existing roads and transmission rights of way. The underground transmission line would turn south in Chuck Wagon Road, diverging from the proposed route at MP 121.7. The alternative route would continue underground south in Chuck Wagon Road until it passes existing residences, then it would join the existing 69 kV Creelman to Los Coches line ROW, transitioning to overhead. The alternative would turn west to rejoin the proposed route at MP 125.6.

**Conclusion:** Retained because this route would reduce visual impacts of the transition poles, avoid the Barnett Ranch Open Space Preserve, be a shorter overall route, reduce visibility of the new 230 kV line from residences, and eliminate an overhead crossing of San Vicente Road.

## Coastal Link Alternatives

Coastal Link Alternatives are illustrated on Figure 5 (alternatives retained) and Figure 6 (alternatives eliminated).

### Pomerado Road to Miramar Area North – Combined Underground Alternative and Underground/Overhead Alternative

**From Alternatives Scoping Notice:** This is a hybrid alternative combining two alternatives suggested by the public. Retained because it offers substantial avoidance of impacts to residents in Rancho Peñasquitos and Los Peñasquitos Canyon Preserve. Research is ongoing at the City of San Diego to determine whether adequate space exists within the City streets where the line would be buried.

**Conclusion:** Research has been completed and it appears that adequate space in roadways exists. No change (retained).

### MCAS Miramar – All Underground and Underground /Overhead Alternative

**From Alternatives Scoping Notice:** This would be a hybrid alternative combining two alignments recommended by members of the public during scoping. Preserves design flexibility and could be underground or overhead as needed and remains located on the base the entire distance. Retained pending coordination with MCAS Miramar to determine feasibility and permitting requirements, because it could offer enhanced land use compatibilities, avoid impacts to Rancho Peñasquitos residential areas, and reduce impacts on biological resources compared to the Proposed Project.

**Conclusion:** Eliminated due to MCAS Miramar statement that alternatives on the base could not be permitted in order to preserve its National Defense Mission capabilities without degradation

### Rancho Peñasquitos Boulevard Bike Path Alternative

**From Alternatives Scoping Notice:** This alternative would diverge from the Proposed Project at the Chicarita Substation and would relocate transition structure to the south. It would avoid impacts to riparian area within View Park West. Retained pending coordination with City of San Diego to determine feasibility (width of ROW and other underground utilities). The alternative would move the line away from residences and would avoid a portion of SDG&E's vacant right of way used by residents as open space.

**Conclusion:** Eliminated because the bike path ownership is in the process of being transferred from City of San Diego to Caltrans (supposed to be upon completion of SR56) and Caltrans does not allow longitudinal encroachments within its restricted highways. Due to political and liability issues, this land has not yet been transferred; however, the City still intends to transfer this land and it is the City's position that locating the SRPL within this bike path would further jeopardize the ability of the City to transfer the land to Caltrans.

### Carmel Valley Road Alternative

**From Alternatives Scoping Notice:** This alternative would diverge from the proposed route at the Chicarita Substation, avoiding undergrounding through the Los Peñasquitos Canyon Preserve proximity to residences. Initially recommended for retention because the line would be located farther from residences and would avoid impacts to the Los Peñasquitos Canyon Preserve.

**Conclusion:** Eliminated because it is substantially longer than the segment of the proposed route that it would replace and would shift impacts from one residential area to another.

### Los Peñasquitos Canyon Preserve and Mercy Road Alternative

**From Alternatives Scoping Notice:** This alternative would follow the Project to the intersection of Mercy Road transitioning to underground continuing under Mercy Road under I-15, continuing northward under Black Mountain Road. The line would connect with the Project alignment underground at Black Mountain Road and Park Village Drive. Visual impacts minimized as more of the line would be buried. On-going research with the City of San Diego to determine if space exists in the roadways. Pending the outcome of coordination with the City of San Diego regarding utilities in the affected roadways, this alternative is recommended for detailed EIR/EIS analysis because it offers a viable route to avoiding Los Peñasquitos Canyon Preserve and reduces land use impacts within a residential community.

**Conclusion: Research has been completed and while Black Mountain Road contains numerous underground utilities with moderate to heavy utility congestion, it appears that adequate space in the roadway exists. No change (retained).**

#### Black Mountain to Park Village Road Underground Alternative

**From Alternatives Scoping Notice:** This alternative would deviate from the proposed alignment where the line approaches Black Mountain Road, and would be installed underground in the road rather than in the vacant ROW. It would be located farther from residences. Retained pending the outcome of coordination with the City of San Diego regarding utilities in roadways, for consideration in the EIR/EIS because it reduces land use impacts in the Rancho Peñasquitos community by moving more of the alignment into a roadway further away from residences.

**Conclusion: Research has been completed and while Black Mountain Road contains numerous underground utilities with moderate to heavy utility congestion, it appears that adequate space in the roadway exists. No change (retained).**

#### Coastal Link System Upgrade Alternative

**From Alternatives Scoping Notice:** This includes three optional approaches to the project segment between the Sycamore Canyon and Peñasquitos Substations. Findings based on 2004 STEP report. CAISO is studying options for upgrades within this segment that could benefit SDG&E. Retained for further analysis of feasibility of the recommended upgrades because it would eliminate all impacts associated with the project segment between Sycamore Canyon and Peñasquitos Substations.

**Conclusion: No change (retained). Still undergoing analysis by the California Independent System Operator; however, modeling results have been received for one of the three alternatives and it appears to be feasible and fulfills system reliability needs in the year 2015.**

#### SDG&E Northwest Corner Alternative

**From Alternatives Scoping Notice:** This alternative would replace proposed route in Rancho Peñasquitos area from MP 143.8–146.7. It would follow existing SDG&E easement, avoiding use of Park Village Drive and undergrounding in Los Peñasquitos Canyon Preserve. Eliminated because of potential conflicts with existing vernal pool complex and other biological resources impacts.

**Conclusion: No change (eliminated).**

#### SDG&E Mannix-Dormouse Road Alternative

**From Alternatives Scoping Notice:** This alternative (considered in combination with Northwest Corner Alternative) would replace proposed route in Rancho Peñasquitos area from MP 143.8–146.7. It would follow an existing SDG&E easement and would avoid use of Park Village Drive and Los Peñasquitos Canyon Preserve. Eliminated because of potential impacts to vernal pools and conflicts with existing residential land uses.

**Conclusion: No change (eliminated).**

#### SDG&E Segment 12 Poway Substation to Peñasquitos Substation Alternative

**From Alternatives Scoping Notice:** This alternative would be considered in combination with either Segment 14 or 15 which deviate from the Proposed Project route west of Ramona. Overhead route would avoid Los Peñasquitos Canyon Preserve. Eliminated as it would require acquisition of

significant new right of way in undeveloped areas and greater land use incompatibilities would be expected particularly in developed areas of the City of Poway.

**Conclusion: No change (eliminated).**

#### **SDG&E Segment 13 Scripps Ranch Alternative**

**From Alternatives Scoping Notice:** This route is an alternative to the Proposed Project between Creelman and Peñasquitos Substations and would be entirely above ground. Portions of this route are within an existing SDG&E transmission line ROW and portions of the line would require new ROW. From the Sycamore Canyon Substation the line parallels an existing ROW to Pomerado Road. The line continues parallel to Pomerado Road through Scripps Ranch which is a narrow and heavily traveled portion of the roadway and where no existing ROW exists. Eliminated because of residential land use conflicts, visual impacts, potential effects on MCAS Miramar as well as proximity to Alliant International University.

**Conclusion: No change (eliminated).**

#### **SDG&E Segment 14 Poway Alternative**

**From Alternatives Scoping Notice:** This alternative would be considered in connection with SDG&E PEA Alternative Segment 15 and would connect with Segment 12, creating a straight east-west alignment. Eliminated due to the potential for increased biological resources impacts due to the presence of critical habitat with potential effects on special status species. This alternative would also potentially affect natural resources within County of San Diego's Blue Sky Canyon Ecological Preserve.

**Conclusion: No change (eliminated).**

#### **SDG&E Segment 15 Warren Canyon Alternative**

**From Alternatives Scoping Notice:** This alternative would be considered in connection with SDG&E PEA Alternative Segment 14 and would connect into Segment 12 at or near the existing Poway Substation. This route would require acquisition of new ROW. Eliminated due to potential effects on the County of San Diego and local open space and parks, and potential for increased biological resources impacts due to the presence of critical habitat in the general vicinity of the alignment.

**Conclusion: No change (eliminated).**

#### **SDG&E Segment 16 North of Peñasquitos Alternative**

**From Alternatives Scoping Notice:** This alternative would rely heavily on the use of Route SR78. Reaches further north and west than any other alternative and is longer than the Project route. Eliminated because of the regulatory, environmental and legal hurdles, as well as, the inability to substantially reduce potentially significant impacts on aesthetics, hydrology floodplains, and traffic with little environmental benefit.

**Conclusion: No change (eliminated).**

#### **Pomerado Road to Miramar Area North – Combination Underground/Overhead Alternative**

**From Alternatives Scoping Notice:** This alternative would follow Proposed Project route to MP 138 at Pomerado Road then deviate to the south-southwest along city streets and through existing operating sand and gravel operation located in Carroll Canyon. Eliminated because of conflicts with an existing sand and gravel quarry operating in Carroll Canyon.



**Conclusion: No change (eliminated).**

**MCAS Miramar–Combination Underground/Overhead Alternative**

**From Alternatives Scoping Notice:** This alternative would be a hybrid combining sections of the Pomerado Road to Miramar Area North–Combination Underground/Overhead Alternative and MCAS Miramar–All Underground and Underground/Overhead Alternative. Coordination with MCAS Miramar representatives is on-going to verify whether the alternative is feasible, but this alternative is recommended for elimination because it is redundant with a similar alternative that is recommended for retention.

**Conclusion: No change (eliminated due to redundancy with Pomerado Road to Miramar Area North Alternative above).**

**MP 146.5 to Peñasquitos Substation Underground and Consolidation Alternative**

**From Alternatives Scoping Notice:** This alternative would follow the Proposed Project route but would remain underground the entire length from Chicarita to Peñasquitos Substation. Includes undergrounding/consolidation of existing electrical transmission lines and additional ground disturbances to biological and cultural resources, soil, and erosion water quality. Eliminated as legally infeasible because it would require burial of existing transmission lines not affected by the project. Also, topography of existing ROW (steep slopes) would result in substantial erosion from undergrounding.

**Conclusion: No change (eliminated).**

**Scripps-Poway Parkway to State Route 56 Alternative**

**From Alternatives Scoping Notice:** This alternative would follow the Proposed Project alignment but line would be buried under roads, within SR56, and would include burial within an existing overhead transmission corridor. Avoids use of Los Peñasquitos Canyon Preserve. Eliminated as regulatorily infeasible because of Caltrans regulations prohibiting longitudinal encroachments within limited access freeways.

**Conclusion: No change (eliminated).**

**Scripps Poway Parkway – Pomerado Road Underground Alternative**

**From Alternatives Scoping Notice:** would follow the Proposed Project route from the Sycamore Canyon Substation to Pomerado Road heading north and west underground toward Chicarita Substation along Pomerado Road to Scripps Poway Parkway, rejoining the Project alignment overhead. Requires a new right of way through highly developed and constrained area. Eliminated because it would require new ROW in close proximity to an existing ROW, would cause greater short term traffic impacts and would result in increased visual impacts from the additional transition structures adjacent to residential units. Additionally, has questionable aesthetic benefit because the existing lines would remain in place, offsetting any perceived visual benefit from burial of a new line.

**Conclusion: No change (eliminated).**

**State Route 56 Alternative**

**From Alternatives Scoping Notice:** diverges from the Project at the Chicarita Substation. From this point the line continues overhead transitioning to underground near Rancho Peñasquitos Boulevard at the SR56 overpass. The line would remain buried and enter the median of SR56 continuing west until it reaches the existing overhead lines north of the western terminus of Park Village Drive. The line

would continue overhead and south along this ROW until it rejoins the Project at MP 146.5 Avoids Los Peñasquitos Canyon Preserve and Park Village Drive. Eliminated because it is regulatorily infeasible as longitudinal encroachments into limited access freeways are prohibited by Caltrans regulations.

**Conclusion: No change (eliminated).**

### **Substation Alternatives**

The following substation alternatives are illustrated on Figure 3.

#### **SDG&E Central South Substation Alternative:**

**From Alternatives Scoping Notice:** Located about one mile south of the community of Santa Ysabel. Provides visual resources advantages, would be within an existing 69 kV right-of-way, and Santa Ysabel Substation would be removed.

**Conclusion: Retained, but modified based on landowner discussion. New alternative site is approximately 3 miles south along the Proposed Project route.**

#### **Mataguay Substation Alternative**

**From Alternatives Scoping Notice:** Located east of SR79 near MP 98 on land owned by Vista Irrigation District. Existing access roads would be used and less grading and earthwork would be necessary, resulting in less temporary and permanent habitat impacts and less of a potential to encounter known and unknown cultural and archaeological resources.

**Conclusion: Eliminated due to new information about unmitigable impacts to Stephens' kangaroo rat, visual impacts to Boy Scout camp and Highway S2, resulting in more significant impacts than the proposed Central East Substation site. Replaced with an alternative site that would be west of the proposed Central East Substation on Vista Irrigation District land (see Top of the World Alternative).**

#### **Top of the World Substation Alternative \*\*NEW ALTERNATIVE\*\***

**Added After Second Scoping Notice:** This site was suggested by the landowner, Vista Irrigation District, and would be located approximately one mile west of the proposed Central East Substation. The transmission line routes into the substation would be modified to enter from the north in order to reduce visibility of the transmission lines.

**Conclusion: Retained because there would be a reduction of visual, geologic, and biological impacts in comparison with the proposed Central East Substation site, and less grading would be required.**

#### **SDG&E Warner West Substation Alternative**

**From Alternatives Scoping Notice:** Located southwest of the proposed Central East Substation and Lake Henshaw between two boundaries of the Santa Ysabel Reservation. Eliminated because of increased transmission line length required, numerous private parcel owners, high density of historical and archaeological sites, and agricultural and residential land-use constraints.

**Conclusion: No change (eliminated).**

#### **Warners Substation Alternative**

**From Alternatives Scoping Notice:** Includes expansion of existing Warners 69 kV Substation, which is located at the intersection of SR79 and S2. Eliminated because located on Vista Irrigation District

preserve land in flat open space and so would be highly visible to travelers on SR79 and for a far distance across the valley. Longer transmission line would be required as well, with increased ground disturbance.

**Conclusion: No change (eliminated).**

### **Southwest Powerlink Alternatives**

Southwest Powerlink (SWPL) alternatives are those that would require a 500 kV line parallel to some portion of the existing SWPL within Imperial and San Diego Counties. All SWPL alternatives are illustrated on Figure 7. Four alternative routes were evaluated and were initially recommended for detailed analysis in the EIR/EIS. Since publication of the January 2007 notice, the EIR/EIS Team has completed an analysis of fire risk and the resulting likelihood of a double line outage (in which both the SWPL and the Sunrise Powerlink would be out of service at the same time) in the event that both lines are sited in the same corridor. Data from this detailed study indicate the following:

- The **Route D Alternative** and the **West of Forest Alternative** would be collocated with the SWPL for 52 miles, including about 15 miles of an area with moderate or high fire risk where there is a likelihood that a fire-related outage could affect both 500 kV lines more often than once every 30 years. Therefore, the southern segments of these two alternatives (south of Interstate 8) have been eliminated.
- The **Interstate 8 Alternative** and the **BCD Alternative** would be collocated with the SWPL for 36 miles, entirely through an area with low fire risk. The fire history in the area shows that there is only a minimal risk that a fire would cause both lines to be out of service, and this risk could be mitigated with planned/controlled dropping of load. Therefore, these alternatives are retained for analysis in the EIR/EIS. These alternatives will be analyzed in combination with the northern segments of the Route D Alternative and the West of Forest Alternative, as described below.

#### **Route D Alternative**

**From Alternatives Scoping Notice:** This route was modified from the Route D identified by SDG&E in its application, which followed existing 69 kV lines. The original route followed a transmission line passed through many residential areas in which there was not adequate room for a 500 kV line. The line would diverge from the SWPL at SWPL Milepost 52, turning north along the eastern boundary of the Hauser Mountain Wilderness Area, then paralleling an existing SDG&E 69 kV corridor for 15 miles. In the Japatul Valley and Descanso areas, the route would be located west of the existing 69 kV lines in order to avoid residences. Much of the northernmost 12 miles of this route would be parallel to the existing 69 kV line. This route would be about 6 miles shorter than the proposed route and is recommended for retention primarily because it would avoid Anza-Borrego Desert State Park.

**Conclusion: Eliminated south of Interstate 8 due to risk that wildfires would cause double line outage (eliminating Mileposts D-0 to D-84). Retained north of Interstate 8 (Mileposts D-84 to modified Central South Substation Alternative (see Substation discussion above), which has been relocated further south to minimize land use effects. The route north of Interstate 8 has also been modified in response to property owner comments.**

#### **Interstate 8 Alternative**

**From Alternatives Scoping Notice:** This route was suggested by numerous members of the public and several agencies. It would follow the SWPL for over 35 miles, then turn northwest to meet the I-8 just east of Boulevard. It would then follow the I-8 to the west for over 32 miles, crossing the freeway 5

times. It could turn north following the Route D Alternative through Boulder Creek, or it could cross the freeway one more time, then continue east as a 230 kV line to join the West of Forest Alternative at the point where it crosses the I-8. This alternative would be approximately 16 miles shorter than the proposed route and is recommended for retention because it follows an existing linear corridor and would avoid Anza-Borrego Desert State Park.

**Conclusion: Retained and modified as follows:**

- **Increased distance from freeway in certain locations to reduce visibility.**
- **Route options added to avoid conflict with hang gliding landing area: (a) overhead route west of Buckman Springs, and (b) underground segment east of Buckman Springs rest area.**
- **500/230 kV substation added southeast of Descanso allowing 230 kV underground segment through Alpine under Alpine Boulevard.**
- **Extended along original West of Forest Alternative route, northwest from I-8 to proposed project route at Milepost 131 (about 5 miles east of the Sycamore Canyon Substation). This segment also has an option for an underground segment to avoid conflict with hang gliding landing zone west of El Capitan Reservoir.**
- **Other route changes on tribal land may result from ongoing consultation with Campo and La Posta Bands.**

**BCD Alternative**

**From Alternatives Scoping Notice:** This route was developed by SDG&E in response to a request from the EIR/EIS team that it develop a southern route that would avoid residential areas. It would follow the SWPL for over 35 miles, then turn northwest to cross the I-8 just east of Boulevard. It would continue north, through primarily BLM land, then west through BLM and National Forest land, crossing the I-8 twice and passing south of the community of Descanso, then joining the Route D Alternative. This route would be about 15 miles shorter than the proposed route and is recommended for retention because it would avoid Anza-Borrego Desert State Park, and it would avoid most residential areas.

**Conclusion: Retained, but modified (as shown on Figure 7) as follows:**

- **Shortened to eliminate overlap with the Interstate 8 Alternative.**
- **Moved west to avoid the In-Ko-Pah Area of Critical Environmental Concern and south to avoid visibility from the Carrizo Overlook.**

**West of Forest Alternative**

**From Alternatives Scoping Notice:** This alternative would cross primarily private property, and was developed in response to public concerns that park and forest land were being targeted for transmission line development. It passes through primarily through private lands and rugged open space, avoiding most residential areas. It would diverge from the Route D Alternative at Milepost D-16, passing through unincorporated San Diego County and southwest of the community of Boulevard. It would pass northeast of Lakeside, then turn north along SR67, joining the proposed route where it would cross SR67. This alternative would be about 28 miles shorter than the Proposed Project and is recommended for retention because it would avoid Anza-Borrego Desert State Park, as well as National Forest lands and other protected areas.

**Conclusion: Eliminated due to moderate risk of wildfire that could result in double line outage. The 12-mile segment north of Interstate 8 is retained as a portion of the Interstate 8 Alternative (described above).**

#### SDG&E Route B Alternative

**From Alternatives Scoping Notice:** This route would diverge from the SWPL after 39 miles, and would follow county Highway S1 in a highly scenic area through a portion of Anza-Borrego Desert State Park, the Cleveland National Forest, and pass through the center of Julian. Recommended for elimination because of the high scenic value (Highway S1 is a National Scenic Byway), residences around Julian, likely infeasibility of constructing a 500 kV transmission through central historic Julian, and because it would pass through a portion ABDSP.

**Conclusion: No change (eliminated).**

#### SDG&E Route Segment C:

**From Alternatives Scoping Notice:** This route would follow existing SDG&E 69 kV transmission lines and would pass through the communities of Campo, Pine Valley, and Descanso, and many residences would be located adjacent to the corridor. Recommended for elimination because of the large number of residences along the corridor.

**Conclusion: No change (eliminated).**

#### SDG&E Route Segment BC

**From Alternatives Scoping Notice:** This route segment would connect the Route B Alternative with the Route C Alternative, and would run from the area of Boulevard to an area north of Campo. It would follow an existing SDG&E 69 kV transmission line, roughly parallel to but south of I-8, passing through many residential areas. Recommended for elimination because of the large number of residences along the corridor.

**Conclusion: No change (eliminated).**

#### West of Forest/Route D Western Origination Segments

**From Alternatives Scoping Notice:** Two alternative segments were considered in which a 500 kV line would be collocated with the SWPL from either SWPL Milepost 63 or SWPL Milepost 73 before diverging to the north. These routes are recommended for elimination because they would pass through more residential areas along the SWPL (in the vicinity of Highway 94) and because they would require a longer collocation of 500 kV lines within “Very High Fire Risk” areas, reducing the reliability value of the new line.

**Conclusion: No change (eliminated).**

#### Non-Wires Alternatives

Potential non-wires alternatives to the project consist of energy efficiency, demand response, renewable generation, distributed generation, and clean fossil-fired generation. These alternatives are all located within the SDG&E service territory, which allows them to help meet SDG&E’s reliability targets (e.g., 192 MW in 2010 and 482 MW in 2016).<sup>1</sup> The renewable resources help SDG&E comply with the

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<sup>1</sup> Sunrise Powerlink Transmission Project Purpose and Need, Volume 2, p. II-47, August 4, 2006.

Renewable Portfolio Standard targets (e.g., 20% of sales met by renewables in 2010 with a long-term goal of serving 33% of sales from renewables in 2020).<sup>2</sup>

### New In-Area Renewable Generation

**From Alternatives Scoping Notice:** An aggressive program of renewable resource procurement and development can meet SDG&E's reliability goals for 2010 and 2016. This alternative would include the elements listed in the following table (corrections to the notice are shown with underline and ~~strikeout~~):

Year	2010	2016
Solar Thermal	0	<del>290</del> <u>232</u>
Rooftop Solar PV	<del>240</del> <u>105</u>	84.5
Wind	48	96
Biomass/Biogas	50	100
Total	<del>492</del> <u>203</u>	512.5

Table Notes:

- Values in table are incremental firm on-peak capacity relative to capacity included in SDG&E's reliability targets. Firm on-peak capacity is equal to nameplate capacity multiplied by Effective Load Carrying Capability (ELCC) of each resource.
- Solar Thermal assumed to have an Effective Load Carrying Capability (ELCC) of 80%.
- Rooftop Solar Photovoltaics (PVs) assumed to have an ELCC of 50%. SDG&E assumes rooftop solar provides firm capacity of 10 MW in 2010 and 150 MW in 2016.
- Wind assumed to have an ELCC of 24%

**Conclusion: Retained, but see corrections to the data in the table above.**

### New In-Area All-Source Generation

**From Alternatives Scoping Notice:** In addition to the Renewable Generation Alternative presented above, there are various other generation options available to SDG&E to meet its reliability targets. The All-Source Generation Alternative adds distributed generation (DG) and clean, fossil-fired central station generation to the Renewable Generation Alternative. In addition to the renewable resources discussed above, this alternative would include 70 MW of incremental distributed generation by 2015 and conventional gas-fired generation (i.e., 620 MW from the South Bay Replacement Project that is assumed to come online in 2010 and 250 MW of peaking power generators that is assumed to come online in 2008). The peaking generators could be sited at several locations (Encina Power Plant site, MMC Escondido, MMC Chula Vista, NRG Kearny Mesa, or several SDG&E substations).

**Conclusion: Retained, but modified to add the ENPEX project, which will be evaluated in addition to the South Bay Replacement Project. Both will be considered as potential new baseload plants.**

### Resource Bundle 1: In-Area All-Source Generation Plus Demand Response

**From Alternatives Scoping Notice:** This alternative would add 231-249 MW of demand response between 2010 and 2016, respectively, to the New In-Area All-Source Generation Alternative presented above. The demand response levels are consistent with the CPUC's demand response goals and SDG&E's recent long-term plan.<sup>3</sup>

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<sup>2</sup> 2006 Integrated Energy Policy Report Update, p. E-2

<sup>3</sup> R.06-02-013, Volume 1, p. 189.

**Conclusion: No change (retained).**

**Resource Bundle 2: In-Area All-Source Generation, Demand Response, and Renewable Energy Certificates (RECs)**

**From Alternatives Scoping Notice:** This alternative would be the same as “Resource Bundle 1” above, but would also include the use of RECs, which were defined in Senate Bill 107, authorizing the CPUC to allow utilities to use RECs for meeting renewable portfolio standards. Use of RECs would allow meeting Renewable Portfolio Standards without requiring delivery of renewable generation to the grid of the California Independent System Operator.

**Conclusion: No change (retained).**

**In-Area Generation Plus Transmission Upgrades**

**From Alternatives Scoping Notice:** LS Power, a party to the CPUC proceeding suggested that new in-area generation (i.e., repowering South Bay) alone may not be sufficient to replace the function of the Sunrise Powerlink Project’s renewable project objectives, and that some smaller transmission upgrades may be required. The EIR/EIS Team is investigating this alternative to determine whether it is a feasible alternative that would meet project objectives.

**Conclusion: Eliminated because in-area generation and transmission upgrades will be considered, as required, as part of the alternatives defined above.**

**Demand Response**

**From Alternatives Scoping Notice:** Eliminated as a standalone alternative. This alternative would reduce electricity usage when energy costs are at their highest. It is recommended for elimination because demand reduction programs alone would not meet anticipated demand growth. However, Demand Response is included as a component of the alternative “bundles” that have been recommended for retention in the EIR/EIS.

**Conclusion: No change (eliminated).**

**Energy Efficiency**

**From Alternatives Scoping Notice:** Eliminated as a standalone alternative because reductions in demand resulting from efficiency measures would not meet regional demand growth. Also, the levels of energy efficiency in SDG&E’s PEA are considered to accurately portray expected future levels of cost-effective energy efficiency impacts.

**Conclusion: No change (eliminated).**

**Solar Thermal, Solar Photovoltaics, Wind, Ocean Energy, Biomass, and Geothermal Power**

**From Alternatives Scoping Notice:** These renewable generating technologies are eliminated as standalone alternatives because they could not meet future demand requirements on their own, but several are components of the New In-Area Renewable Resource Alternative and the other resource alternative “bundles” that have been recommended for retention in the EIR/EIS.

**Conclusion: No change (eliminated).**

## Non-Renewable Distributed Generation

Eliminated as a standalone alternative because this technology alone would not achieve the amount required by regional demand growth. Included as a component of alternative bundled that have been recommended for retention in the EIR/EIS. Also part of the New In-Area All-Source Generation Alternative discussed above.

**Conclusion: No change (eliminated).**

## System Alternatives

“System Alternatives” rely on different transmission line upgrades and interconnections. Within the project area, these alternatives include upgrades to the existing transmission infrastructure, different voltage configurations of the proposed lines, interconnections to points other than the Imperial Valley Substation, or alternative transmission technologies. Three alternatives are recommended for retention in the EIR/EIS for detailed analysis.

### LEAPS Project or Serrano/Valley-North 500 kV Alternative

**From Alternatives Scoping Notice:** Approximately 30 miles of new 500 kV transmission line between a new Lee Lake Substation (or Serrano/Valley 500 kV Substation) and a new Camp Pendleton Substation (North or Talega/Escondido 500/230 kV Substation), and a new transmission connection to SDG&E’s existing Talega-Escondido 230 kV line. The Lake Elsinore Advanced Pumped Storage (LEAPS) Project Alternative would include a pumped storage reservoir and generator capable of producing 500 MW of power, as proposed by the Nevada Hydro Company. The Serrano/Valley-North 500 kV Alternative would include only the transmission components of the LEAPS Project. The LEAPS Project is the subject of a Draft EIS published by U.S. Forest Service and Federal Energy Regulatory Commission (FERC Project No. 11858, FERC/EIS-0191D, February 2006), with a Final EIS and decision currently expected to occur before May 2007. The LEAPS Project appears to meet the reliability and cost objectives. Although impacts would occur to the lands in Riverside and rural northern San Diego Counties, including the Cleveland National Forest’s Trabuco Ranger District, this route would be substantially shorter than the Proposed Project and it would avoid impacts to Anza-Borrego Desert State Park as well as San Felipe and the central Santa Ysabel Valley.

**Conclusion: No change (retained).** Since the publication of the second notice, the Final EIS was released on February 7, 2007. The EIR/EIS team will analyze “staff’s preferred alternative” transmission route from the LEAPS Final EIS as the route alternative to the proposed Sunrise Powerlink EIR/EIS. For purposes of the Sunrise Powerlink EIR/EIS, two options will be considered.

The LEAPS Option A Alternative (transmission only) is described as follows:

- A new 34-mile 500 kV transmission line connecting SDG&E’s Talega-Escondido circuit with SCE’s Serrano-Valley circuit.
- A second 230 kV circuit in the SDG&E Talega-Escondido corridor and installation of a new wood pole 69 kV line in that corridor.
- A new 500 kV switching station (Lee Lake Substation) to interconnect with SCE’s existing Serrano-Valley 500 kV line and a new 500/230 kV substation (Camp Pendleton Substation) either within Camp Pendleton or along SDG&E’s existing Talega-Escondido 230 kV line, including two phase-shifting transformers.



- System voltage support including static synchronous compensators at SDG&E's existing Mission, Miguel, Sycamore Canyon, Talega, and Escondido Substations and possibly similar upgrades at SCE's Valley, Devers, and Serrano Substations as needed and determined by CAISO.

The LEAPS Option B Alternative (generation plus transmission) would add the following components to the transmission components described above:

- A lined upper reservoir (Decker Canyon reservoir) with a usable storage volume of 5,500 acre-feet, a 240-foot-high main dam, and a perimeter dike up to 50 feet high, with a surface area of about 80 acres.
- Two parallel high-pressure water conduits each consisting of a 9,190-foot-long concrete-lined channel and tunnel transitioning to a 250-foot-long, 12-foot-diameter steel penstock; two 1,950-foot-long, 20-foot-wide, and 20-foot-high concrete-lined tailrace tunnels.
- An underground powerhouse (Santa Rosa Powerhouse) with two reversible pump-turbine units capable of generating 500 MW and use of the existing Lake Elsinore as a lower reservoir.

#### Mexico Light 230 kV Alternative

**From Alternatives Scoping Notice:** Build a short 230 kV transmission line in Mexico between circuits that are normally disconnected, to provide an optional path for export-designated generators through the Comisión Federal de Electricidad (CFE) grid rather than through the existing SWPL (Imperial Valley-Miguel 500 kV line). This also involves upgrading the two 230 kV lines connecting La Rosita generators to CFE's La Rosita 230 kV Substation. Amenable conditions would need to be reached with the CFE regarding ownership and operation of the associated facilities. Objectives would not fully be met because an incremental increase of approximately 140 MW would provide only a short-term solution to SDG&E's need for additional import capacity, but this alternative is recommended for retention because it may be part of the No Project Alternative or another combination alternative.

**Conclusion:** No change (retained).

#### Path 44 Upgrade Alternative

**From Alternatives Scoping Notice:** Build upgraded transmission corridor in SCE territory to increase the import rating of Path 44 (South of SONGS) into SDG&E territory by approximately 300 MW. CAISO is studying options for upgrades within Orange County that could benefit SDG&E. Objectives would not fully be met because an incremental increase of approximately 300 MW would provide only a short-term solution to SDG&E's need for additional import capacity, but this alternative is recommended for retention because it may be part of the No Project Alternative or another combination alternative.

**Conclusion:** No change (retained).

#### SDG&E Southwest Powerlink (SWPL) No. 2 Alternatives

**From Alternatives Scoping Notice:** The SWPL No. 2 Alternative would require building a new 500 kV transmission line between the existing 500 kV Imperial Valley Substation and the existing Miguel Substation, forming a second Southwest Powerlink or Imperial Valley-Miguel 500 kV transmission line in new or expanded right-of-way parallel to the existing line. Other options for the existing SWPL corridor include: **Convert SWPL to Direct Current (DC);** and **Upgrade Series Capacitors along SWPL.** These alternatives would not meet objectives, and there are numerous technical feasibility

issues. The reliability objective would not be met because there would be few options to prepare for a simultaneous loss of an expanded SWPL. The objective to reduce energy costs would not be met because of congestion problems around the Miguel Substation and north of Miguel, which would require prohibitively costly upgrades to resolve. Finally, construction of additional lines out of the Miguel Substation would be extremely challenging and expensive due to the need to re-design the existing lines within this heavily used and constrained corridor. If feasible, these new lines would create potentially significant impacts on the many developed areas adjacent to the Miguel-Mission transmission corridor.

**Conclusion: No change (eliminated).**

#### **SDG&E 230 kV CFE Alternative**

**From Alternatives Scoping Notice:** Build new 230 kV lines from Imperial Valley to Mexico's CFE La Rosita Substation and from La Rosita to Tijuana and then to SDG&E's Miguel Substation. Although technically feasible, the CFE 230 kV system is already interconnected with SDG&E's system and under CFE control. This alternative involves uncertain timing and potentially insurmountable regulatory and legal feasibility issues. CFE is not subject to the FERC so there would be no overriding authority to direct the outcome of negotiations.

**Conclusion: No change (eliminated).**

#### **Serrano/Valley-Central 500 kV Alternative**

**From Alternatives Scoping Notice:** Build a new 500 kV interconnection from SCE's Serrano-Valley 500 kV transmission line through the Cleveland National Forest, Trabuco Ranger District in Riverside County, then along SDG&E's existing Talega-Escondido 230 kV corridor, via the Rincon and Valley Center area and parallel SR-76 to the Warner Springs area. Because it would create a new corridor through highly sensitive areas of the Cleveland National Forest, resulting in substantial ground disturbance and visual impacts. This alternative would have environmental impacts as severe as those of the Proposed Project.

**Conclusion: No change (eliminated).**

#### **Valley-Rainbow 500 kV Alternatives**

**From Alternatives Scoping Notice:** These alternatives would either build a new single-circuit 500 kV line from SCE's Valley Substation to a new 500/230 kV Rainbow Substation in northern San Diego County or implement a Valley-Rainbow alternative that was evaluated in the November 2002 Interim Preliminary Report on Alternatives Screening for the SDG&E Valley-Rainbow 500 kV Interconnect Project (the V-R Alternatives Report). Valley-Rainbow was the subject of SDG&E's filing for a CPCN and a PEA on March 23, 2001, and the CPUC denied the CPCN in December 2002 with the view that a reliability need had not been demonstrated. In the vicinity of Temecula, the Great Oak Ranch property, and the Pechanga Indian Reservation, a feasible corridor for Valley-Rainbow does not exist. Other Valley-Rainbow 500 kV Alternatives recommended for elimination include: **Devers-Pala, Devers-Ramona, Coachella-Ramona-Miguel, Devers-Miguel via Northern San Diego County, and Devers-Miguel via Imperial County.** Due to potential land use impacts to national monuments, Roadless Areas on national forest lands, Indian reservations, the Beauty Mountain Wilderness Study Area, and ABDSP, no corridors are available that would reduce impacts in comparison to those of the Proposed Project.

**Conclusion: No change (eliminated).**

### V-R Serrano-Talega Alternative

**From Alternatives Scoping Notice:** Build a new 500 kV interconnection along the existing transmission corridor between SCE's Serrano Substation in the Anaheim foothills south of SR-91 through the urbanized portion of Orange County to SDG&E's coastal 230 kV system at the existing Talega or SONGS Substations. This alternative was also identified in the 2002 V-R Alternatives Report, but the feasibility of this alternative succeeding in the regulatory process is doubtful. The feasibility of using this route is highly questionable because surrounding urban development constrains the corridor with little or no space for addition of new 500 kV towers at reasonable cost.

**Conclusion:** No change (eliminated).

### Valley-Central 500 kV Alternative

**From Alternatives Scoping Notice:** Build a new single-circuit 500 kV line from SCE's Valley Substation to the proposed 500/230 kV Central East Substation. This alternative could travel south from the Hemet area to become generally parallel to SR-79, north of the Agua Tibia Wilderness Area, then follow SR-79 to Warner Springs. Due to potential land use impacts to the Southwest Riverside County Multi-Species Reserve and communities of Winchester, Hemet, and Temecula, a feasible corridor for this alternative has not been identified.

**Conclusion:** No change (eliminated).

### SDG&E 500 kV Full Loop or Full Loop North Alternatives

**From Alternatives Scoping Notice:** Full Loop Alternatives would build a new 500 kV transmission line from the existing Imperial Valley Substation to either the Proposed Project's new Central East Substation or to another new substation in northern San Diego County (e.g., Rainbow Substation), then continue the new 500 kV line to a new substation in SCE's territory between the existing Serrano and Valley Substations. Other, partial implementations of the Full Loop Alternatives recommended for elimination include: **Imperial Valley-Ramona 500 kV**; **Imperial Valley-Rainbow 500 kV**; and **Imperial Valley-East of Escondido 500 kV**. These alternatives do not pose an option to, but rather an expansion of the Proposed Project. By expanding the Sunrise Powerlink Project to include a 500 kV link to Ramona, or further west, or an interconnection with the SCE system, these alternatives would enhance the Proposed Project's ability to meet reliability and import capability objectives. However, these alternatives would add to the impacts of the Proposed Project due to the additional construction and ROW required.

**Conclusion:** No change (eliminated).

### Northern Service Territory Upgrades Alternatives

**From Alternatives Scoping Notice:** Build a new 500 kV line as in the V-R Serrano-Talega Alternative described above, with a new Talega-Escondido 230 kV #2 line on existing poles and a new 230 kV line from Talega or SONGS to San Luis Rey Substation to create a fourth South of SONGS 230 kV line, and loop one of SCE's four existing North of SONGS 230 kV lines into SDG&E's Talega Substation. Northern Service Territory Upgrades recommended for elimination include **SONGS Light** and **SONGS Heavy 230 kV Alternatives** that were studied by CAISO and found to be infeasible. CAISO concluded that SCE's Barre-Ellis 230 kV would require upgrades in order to improve SDG&E's import capability (i.e., the **Path 44 Upgrade Alternative**, which is recommended for retention). The feasibility of using the Serrano-Talega route is highly questionable because surrounding urban development constrains the

ROW. The existing Serrano-Talega corridor has little or no space for addition of new 500 kV towers at reasonable cost.

**Conclusion: No change (eliminated).**

#### **SDG&E Imperial Valley-Central 230 kV ("Four 230 kV Circuits") Alternative**

**From Alternatives Scoping Notice:** Build four new 230 kV circuits from the existing Imperial Valley Substation to the proposed Central East Substation in San Diego County. This alternative would involve a combination of overhead and underground facilities for the Imperial Valley-Central segment. Although this alternative may satisfy most of the project objectives, albeit at higher construction and operating costs, the environmental impacts of the additional towers needed with this alternative would be more severe than those of the Proposed Project, and they would outweigh the environmental advantages of placing portions of the Imperial Valley-Central segment underground.

**Conclusion: No change (eliminated).**

#### **HTLS Composite Conductor Alternative**

**From Alternatives Scoping Notice:** Install high-temperature low-sag (HTLS) composite material conductors along the Proposed Project alignment instead of the proposed industry-standard aluminum-core steel-reinforced (ACSR). To date there are no examples of 500 kV HTLS conductor in use or being installed. However, HTLS conductors could provide slightly greater span lengths and a marginal reduction in the number of towers required. The same ROW width would be required. Although HTLS conductors could be used elsewhere in the SDG&E system to improve the capacity of existing transmission lines that operate near thermal limits, installing HTLS along the Proposed Project would dramatically increase project costs while resulting in impacts similar to those of the Proposed Project. The higher costs of this alternative make it prohibitive.

**Conclusion: No change (eliminated).**

#### **All Underground 230 kV or 500 kV Alternative**

**From Alternatives Scoping Notice:** Build all of the components of the Four 230 kV Circuits Alternative (described above) so that no overhead transmission would occur. Placing 500 kV segments underground is generally not feasible except for very short line segments in areas where ground disturbance impacts would not be severe. This alternative would involve higher construction and operating costs. Under-grounding all of the multiple 230 kV circuits included in the Four 230 kV Circuits Alternative would involve ground-disturbing impacts that would outweigh the environmental advantages.

**Conclusion: No change (eliminated).**