Devers-Palo Verde No. 2 Transmission Line Project

Project Refinements No. 2

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Contents

Figures

Other Attachments

- Water Well Locations
- California's Groundwater Bulletin 118

Acronyms and Abbreviations

APM	Applicant Proposed Measure
BLM	U.S. Bureau of Land Management
CAISO	California Independent System Operators
CEQA	California Environmental Quality Act
CPUC	California Public Utilities Commission
CRS	Colorado River Substation
CR-D	Colorado River Substation to Devers Substation line
DWR	Department of Water Resources (California)
DPV1	Devers-Palo Verde No. 1 Transmission Line
DPV2	Devers-Palo Verde No. 2 Transmission Line Project
DV1	Devers to Valley No. 1 Transmission Line
DV2	Devers to Valley No. 2 Transmission Line
EIR/EIS	Environmental Impact Report/Environmental Impact Statement
kV	kilovolt
NEPA	National Environmental Policy Act
Project	Devers-Palo Verde No. 2 Transmission Line Project
SCE	Southern California Edison

1.0 Introduction

The purpose of this document is to describe refinements that have occurred to the Devers-Palo Verde No. 2 Transmission Line Project (DPV2 or Project) since the Final Environmental Impact Report/Environmental Impact Statement (Final EIR/EIS) for the Project was certified by the California Public Utilities Commission (CPUC) in 2007 and subsequently modified as a California-only project by the CPUC (contingent upon California Independent System Operators or CAISO approval) in 2009. SCE previously submitted a Project Refinements document to the CPUC and BLM in August 2010, and this document adds to the Refinements described in the August 2010 document. In particular, this additional Project Refinements document addresses the following project refinements:

- Helicopter Landing Zones
- Telecom – Southeast Route
- Valley Construction Yard Update
- Septic system and leach field at the CRS
- Groundwater Well and water storage at the CRS

Refinement Summary **Helicopter Landing Zones: Summary and Conclusion**	
As discussed in the Project Refinements Document dated August 2010, seven helicopter landing zones are currently planned to support helicopter assembly of transmission line towers where tower sites have no road access and are restricted by terrain. The specific locations of these landing zones have been identified and are shown in the Figure 1 attachments. The seven helicopter landing zones would result in a minor increase in the amount of temporarily disturbed area than disclosed in the Final EIR.	
Details and Purpose	
Modification	Seven helicopter landing zones would be used for foundation installations, the assembly of tower sections to be flown to the locations and support of conductor installation operations in the remote areas, four landing zones along the Devers – Valley No. 2 transmission line (DV2) and three landing zones along the Colorado River to Devers transmission line (CR-D)[1]. The helicopter landing zones would be leased from private owners, County of Riverside or are SCE fee owned parcels

[1] The helicopter landing zones along the CR-D transmission line are denoted with a "DCR" ending.

and would be used for up to 16 months, depending on the number of towers they would support. Activities at helicopter landing zones would include:

- Transporting personnel, equipment and tools to tower sites and/or onto towers
- Transporting personnel performing environmental and cultural resource monitoring, construction quality control and site visits
- Constructing tower foundations,
- Constructing tower and insulator assemblies
- Installing wire stringing sheaves, pulling cables and wires

32 towers would be constructed using helicopters (23 along DV2 and 9 along CR-D).

Helicopter landing zone locations are shown in the Figure 1 Attachments.

The DV2 helicopter landing zones and associated towers are as follows:

Helicopter Landing Zone	Tower Number
H1A-DV and H1X-DV	1032
	1033
	1034
	1035
	1036
	1037
	1038
	1039
	1040
H2-DV	1041
	1042
	1043
	1044
	1045
	1046
	1047
	1048
	1049
	1050
H7-DV	1066
H8-DV	1107
	1108
	1109

The CR-D helicopter landing zones and associated towers are as follows:

	Helicopter Landing Zone / Tower Number H1-DCR: 2307, 2308, 2309, 2310 H4-DCR: 2412 H5-DCR: 2422, 2423, 2424, 2425
Primary Reason	There are numerous locations along the DPV2 transmission line routes that are located in steep terrain and not accessible by existing access roads. To minimize impacts to undisturbed areas of natural habitat, SCE would utilize helicopters to construct 32 towers. Use of helicopters for construction of towers without existing or readily available access roads would reduce air pollutant emissions associated with construction of new access roads and minimize disturbances to native habitat and potential impacts to cultural resources.
Other Considerations	Reduce the need to construct new access roads in mountainous areas devoid of vehicular access. Reduces potential impacts to biological resources compared with constructing new access roads to tower locations.
Environmental Impact Discussion	
Biological Resources	Ground-disturbing activities associated with the helicopter landing zones have the potential to temporarily impact natural vegetation communities and special-status species. No new significant or more severe impacts or mitigation than discussed in the FEIR/FEIS are anticipated.
Visual	The proposed helicopter landing zones would be temporary and would not noticeably change overall impacts on visual resources in their vicinities.
Land Use	SCE will lease land it does not currently own or control, and no permanent change in landownership or existing land uses would occur. There are no sensitive receptors in the vicinity of the helicopter landing zones.
Wilderness – Rec.	The helicopter landing zones are not located on wilderness or recreational lands.
Cultural	Ground-disturbing activities associated with the helicopter landing zones have the potential to temporarily impact cultural resources. No new significant or more severe impacts or mitigation than discussed in the FEIR/FEIS are anticipated.
Noise	The helicopter landing zones would cause increased noise in their vicinities and along the travel routes; however, they are situated close to the transmission right-of-way and no sensitive receptors are located nearby.

Traffic	The helicopter landing zones would cause negligible increases in truck traffic for transportation of tower steel and related materials; and the number of trips is not expected to adversely affect levels of service at intersections or ramps in the outlying area.
Safety	Since equipment and materials would be present at the helicopter landing zones, there could be a potential for hazardous materials spills. However, mitigation measure MM P-1d would be employed, consistent with the Final EIR/EIS.
Air Quality	Air pollutant emissions from helicopter trips would increase; however, the emissions from helicopter operations would be in lieu of emissions associated with constructing new access roads and truck travel on the new roads if helicopters were not used. The difference in air pollutant emissions is not expected to affect the underlying impact determinations of the Final EIR/EIS. Applicable DPV2 mitigation and APMs would be implemented.
Water	Helicopter landing zones would require water for dust control; however, the amount is expected to be less than if new access roads to the same towers pads were constructed and traveled. Ground-disturbing activities have the potential to temporarily impact jurisdictional aquatic resources regulated by the U.S. Army Corps of Engineers, California Department of Fish and Game, and State Water Resource Control Board. However, these impacts would be mitigated to less than significant levels through implementation of numerous FEIR/FEIS mitigation measures and compensatory mitigation as required by the resource agencies.
Geology	Helicopter landing zones would require minor ground disturbance in areas that pose no slope stability or mineral resource issues. Regarding the potential for erosion, APM G-7 and PM G-10 may apply.

65
66

Refinement Summary **Telecommunications System Refinements – Southeast Route**	
As discussed in Section 2.3 of the Project Refinements Document dated August 2010, a telecommunication line would extend from the CRS in a southeasterly direction along existing DPV1 tower and east and northerly in the Palo Verde Valley to the Blythe Service Center. The previous discussion and impact discussion still applies, and this Additional Refinement Document provides a more up-to-date graphic of the proposed telecom line (see Figure 2).	
Primary Reason	As part of the engineering process, the southeast telecom line alignment east of the DPV1 has been slightly modified. In addition, the northern telecom alignment that would extend directly north of the CRS will be implemented.

67

68

Refinement Summary **Valley Construction Yard Update**	
As discussed in Section 2.1 (Construction Yards) of the Project Refinements Document dated August 2010, Stephens kangaroo rat was discovered at the previous Valley Construction Yard, and SCE decided to find a new construction yard that would not adversely affect biological resources. SCE has since identified two alternative Valley Yard locations; one of these two yards will be selected.	
Environmental Impact Discussion	
Biological Resources	Once a suitable replacement location for the Valley Yard is identified and resource evaluations confirm that no biological resource impacts would be adversely affected, SCE will submit additional information to the CPUC on the new Valley Yard location, for approval.
Cultural	Once a suitable replacement location for the Valley Yard is identified and resource evaluations confirm that no cultural resource impacts would be adversely affected, SCE will submit additional information to the CPUC on the new Valley Yard location, for approval.

69
70

Refinement Summary **Restroom Facilities and Septic System as the CRS: Summary and Conclusion**	
Although the CRS would be an unmanned substation, the substation would include restroom facilities for visitors and occasional workers. To support these facilities, a septic system and leach field would be installed. The septic system would be fully permitted and subject to conditions of the County of Riverside. The location of the septic tank and leach field will be determined as more detailed design of the substation is completed.	
Other Considerations	Installation of a restroom and septic system at the CRS would eliminate the need to maintain portable restrooms at the substation. In addition, the septic system is considered more sanitary than portable restrooms and more suitable, given the long-term unstaffed nature of substation operations.
Environmental Impact Discussion	
Biological Resources	The septic system is not expected to affect additional biological resources at the project site because it would be located within the disturbed area of the CRS site.
Visual	The proposed septic system would be underground and would not change or affect visual resources at the site or in the vicinity.
Land Use	The proposed septic system would be underground and would not change or affect land use at the site or in the vicinity.
Wilderness – Rec.	The proposed septic system would be underground and would not change or affect wilderness or recreational resource.
Cultural	The septic system is not expected to affect additional cultural resources at the project site because it would be located within the disturbed area of the CRS site.
Noise	The proposed septic system would be underground and would not cause

	operational noise. In addition, no sensitive receptors are located nearby.
Traffic	The proposed septic system would be underground and would not noticeably change or affect traffic to and from the CRS. It should be noted that the septic system would eliminate the need for future maintenance trips associated with portable restroom facilities, if such facilities are used instead.
Safety	The proposed septic system would be underground and is considered to be more sanitary than portable restrooms.
Air Quality	The proposed septic system would be underground and would eliminate the long-term need for maintenance trips and associated emissions compared to portable restrooms.
Water	The proposed septic system would utilize a minimal amount of water for operations (estimated to be approximately 750 gallons per month or approximately 0.03 acre-ft per year).
Geology	The proposed septic system would be underground but would not create unstable geologic conditions.

71

72

Refinement Summary

Water Well/Water Supply: Summary and Conclusion

SCE is proposing to construct and operate a water well and temporary water storage at the CRS site to provide water for dust control during construction and for non-potable uses during substation operation. The peak water draw from the well during construction is estimated at 300,000 gallons per day for an approximate period of 4 to 6 months during grading, and approximately 120,000 gallons per day for the remainder of construction (approximately 18 months). During substation operations, up to 750 gallons per month would be pumped from the water well for non-potable uses at the substation (restroom facilities and day-to-day non-potable water needs).

Based on the groundwater supply, it does not appear that installing and operating the water well and temporary water storage would result in a significant impact to the local groundwater supply.

Details and Purpose

Modification	The minimum well completion depth of the proposed water well would likely range from 450 to 600 feet below ground surface, but could be deeper depending on subsurface conditions. In order to be able to draw the estimated 300,000 gallons per day of water for peak dust control, a flow rate of at just over 200 gallons per minute would be required, and the well would be placed at a depth to deliver this rate. The well diameter would be up to 12-inches. The location of the water well and temporary water storage would be determined during detailed engineering of the substation, but would be located within the proposed site boundaries (disturbed area).

	The estimated peak water usage of 300,000 gallons per day would occur for a 4 to 6-month period when watering to control dust during substation site grading overlaps with watering of the access road to the site. Once grading is complete, water use is estimated at 120,000 gallons per day for the remainder of construction (approximately 18 months). The total water usage for dust control during CRS construction is estimated to be approximately 330 acre-feet. During substation operations, a minor amount of ground water would be used for non-potable uses. Up to approximately 750 gallons per month or approximately 0.03 acre-ft per year would be used for operations, including water for restrooms and wash facilities.
Primary Reason	The primary purpose of constructing and operating a water well and temporary water storage at the CRS is to provide adequate water during CRS construction to control dust and provide a source for long term but minimal operational needs.
Other Considerations	SCE considers the water well environmentally superior to the alternative of transporting water to the site from other sources due to the substantial number of daily truck trips required to transport water, and the associated air pollutant emissions.
Environmental Impact Discussion	
Biological Resources	The water well would be installed within the disturbed CRS site and would not result in additional impacts to biological resources.
Visual	The proposed water well would be placed underground and would not be visible from outside the substation.
Land Use	The proposed water well would be consistent with the use of the CRS site as a substation, and would not affect land uses.
Wilderness – Rec.	The water well would be installed within the disturbed CRS site and would not result in additional wilderness or recreational impacts.
Cultural	The water well would be installed within the proposed disturbed CRS site and would not result in additional impacts to cultural resources.
Noise	Construction of the water well would generate some noise; however, no sensitive receptors are located nearby.
Traffic	Construction of the water well would require the transportation of drilling equipment and well supplies, but would not generate a substantial amount of traffic on public roads or highways. Once operational, the well would not generate any traffic.
Safety	Neither construction nor operation of the water well would result in potential safety impacts.
Air Quality	Construction of the water well would generate some air pollutant emissions; however, the amount of pollutants would be minimal, especially when compared with the emissions from the alternative of transporting water to the site from other sources.
Water	The proposed CRS site is located slightly east of the boundary between the Chuckwalla Valley Groundwater Basin and the Palo Verde Groundwater Basin as mapped by the California Department of Water

	Resources (DWR). However, the proposed water well site is located at the eastern margin of the Chuckwalla Valley Groundwater Basin. Groundwater flow in the Chuckwalla Valley Groundwater Basin is towards the Palo Verde Groundwater Basin. According to the most recent information from the California DWR, (see "California's Groundwater Bulletin 118" attached), the Chuckwalla Groundwater Basin has a storage capacity of approximately 9,100,000 acre-ft, with the volume of recoverable water at 15 million acre-ft. The upper 100 feet of saturated sediments is estimates to have 900,000 acre-ft of groundwater in storage. Based on likely-case scenario of requiring 300,000 gallons per day over a full 6 month site grading duration, total withdrawal for the grading effort is expected to be about 165 acre-ft. The subsequent construction activities would require a similar total amount (i.e. 120,000 gallons per day over 18 months), resulting in a combined total of approximately 330 acre-ft. This small amount of water usage is insignificant with respect to groundwater in storage (i.e., approximately 0.004% of the total estimated Chuckwalla Groundwater Basin storage capacity). After project construction, long-term, non-potable water use at the substation will likely be only approximately 750 gallons per month or approximately 0.03 acre-ft per year. This water demand is also insignificant with respect to groundwater in storage. Regarding water quality, the United States Geological Survey (USGS) National Water Information System database contains some ground water quality information for the project area. One ground water sample from Well 7S/21E – 5F1 located approximately 3,000 feet of the project site had a total dissolved solids (TDS) concentration of 5,530 PPM (milligrams per liter - mg/L) in 1979. The wells shown on the attached graphic closest to the proposed well site are reported by the USGS as being inactive. A ground water sample collected from well 6S/20E – 33L1 located approximately 4.75 miles west of the project site had a TDS concentration of 2,330 mg/L also in 1979. Ground water in well 7S/22E – 9P1 located approximately eight miles northeast in the Palo Verde Groundwater Basin had a TDS concentration of 1,670 mg/L in 2006. Sodium and chloride were encountered in all three ground water samples. Actual TDS levels in the groundwater below the CRS site would be determined during installation of the well; however, since the water would be used for non-potable uses only, significant impacts related to water quality are not anticipated.
Geology	Construction of the water well would involve installation of a well casing, which would ensure that surrounding soil would be properly supported. Significant impacts related to geology are not anticipated.

73

2.0 References

California Public Utilities Commission Energy Division (CPUC) 2006. *Environmental Impact Report/Environmental Impact Statement for the Devers-Palo Verde No. 2 Transmission Line Project*. Final. October 24. ftp://www.cpuc.ca.gov/Environment/info/aspen/dpv2/toc-feir.htm. Accessed on December 4, 2009.

California Public Utilities Commission Energy Division (CPUC). 2007. *[Final] Decision 07-01-040, Granting a Certificate of Public Convenience and Necessity for the Devers-Palo Verde No. 2 Transmission Line Project*. January 25.

California Public Utilities Commission Energy Division (CPUC). 2009. *Decision Modifying Decision 07-01-040 Granting A Certificate of Public Convenience And Necessity*. November 20.

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Insert Figure 1 Attachments: Helicopter Landing Zones

100 Insert Figure 2: Telecom

101 Insert Well Graphic

Insert California's Groundwater Bulletin 118 Graphic