

EXECUTIVE SUMMARY

Western Area Power Administration's (Western) Central Valley Project (CVP) transmission system forms an integral part of the interconnected Sacramento, California, area transmission grid. Regional growth has led to increased demand for electric power in the Sacramento area. Power system studies conducted by Sacramento power agencies, organizations, and utilities indicated that system reliability could be at risk due to voltage instability.

This Sacramento Area Voltage Support (SVS) Environmental Impact Statement (EIS), prepared under the National Environmental Policy Act of 1969 (NEPA), presents Western's analysis of the environmental effects from the voltage support system additions and improvements for the Proposed Action and alternatives. Western's SVS EIS consists of this Final EIS, which incorporates the entire Draft EIS (published November 2002) by reference. The Draft EIS underwent public review by government agencies, organizations, and individuals during a comment period that included public hearings in Lodi, Folsom, and Marysville, California. After considering comments received, Western prepared this Final EIS. Under the Council on Environmental Quality regulations (40 CFR 1503.9), Western decided to have the Final EIS present responses to comments (RTC) from the public review process and include substantive changes to the Draft EIS, rather than to rewrite and reprint the EIS. Therefore, the Draft and Final EIS constitute the complete EIS; and the Final EIS should be reviewed with the Draft EIS.

ES.1 WESTERN'S BACKGROUND

The Sacramento area is within the Sierra Nevada Region (SNR), which maintains and operates numerous substations and more than 1,200 miles of transmission lines. These transmission lines are interconnected to other Sacramento area utility transmission lines, including those owned and operated by the Sacramento Municipal Utility District (SMUD). By law, Western first markets power that is available after meeting Federal project use requirements to preference customers, such as Federal and state agencies, Native American tribes, electric cooperatives, municipal utilities, public utility districts, irrigation districts, and water districts.

Western sells wholesale electricity to more than 70 customers in central and northern California and Nevada generated from the CVP and the Washoe Project powerplants. Much of that power is allocated and delivered to five major customers: SMUD, Silicon Valley Power, and the cities of Redding, Roseville, and Palo Alto.

ES.2 PURPOSE AND NEED FOR A SOLUTION

Population growth and development in the Sacramento area have steadily increased demand, the need for generation interconnection, and operational flexibility for use of existing electrical transmission facilities. These factors have contributed to reduced security and reliability of the interconnected transmission system. Transmission lines have reached their maximum transfer limits for serving existing needs. Transmission upgrades are needed to maintain reliable operation of the interconnected system and maintain load serving capability.

Power system studies conducted by the Sacramento Area Transmission Planning Group and the River City Transmission Group concluded that transmission additions in the Sacramento area are needed to alleviate voltage sag and ensure power system reliability. This EIS analyzes environmental impacts of alternatives identified to improve electric system reliability and provide voltage support for the Sacramento area.

Findings from this EIS provide a basis for decisions on whether to proceed and, if so, how to proceed with the Proposed Action. Western would implement the decision under the Central Valley Project Act authority.

Need for the Proposed Action

Western's transmission system studies have identified a need for short-term transmission line enhancements to maintain CVP transmission security and reliability. Enhancements include a transmission system addition between O'Banion Substation and Elverta Substation and an upgrade of existing 230-kilovolt (kV) transmission lines in the Sacramento area. These transmission enhancements and additions should be implemented within the next five years.

Purposes for the Proposed Action

To continue to meet Western's mission, purposes for the Proposed Action include:

1. Maintaining CVP transmission system security and reliability.
2. Meeting Western's legislative and contractual requirements.
3. Meeting North American Electric Reliability Council (NERC) and Western Electricity Coordinating Council (WECC) operating criteria.

ES.3 PREFERRED ALTERNATIVE

Western has selected Proposed Action Option B as the Preferred Alternative for the SVS EIS. Proposed Action Option B provides the highest degree of security and reliability for voltage support, while having relatively low environmental impacts. Figure ES-1 and Table ES-1 show the alternatives and describe the activities for each alternative.

ES.4 PUBLIC INVOLVEMENT

Public involvement is a vital part of the decision-making process for this EIS. Western developed a public involvement program to provide multiple opportunities for comment during public scoping, alternative formulation, alternative evaluation, and decision-making. Appendix B of the Draft EIS describes the public involvement process.

Following EPA's publication of the Notice of Availability for the Draft EIS on November 15, 2002, the public was given 45 days to submit comments on the Draft EIS. Western continued to accept comments into March 2003. Three public hearings were held during the 45-day public comment period: December 9, 2002, in Lodi, California; December 11, 2002, in Folsom, California; and December 12, 2002, in Marysville, California. Public hearings were held to aid in selecting a Preferred Alternative from the Proposed Action and alternatives presented in the Draft EIS.

Public and government agency comments on the Draft EIS were made at the public hearings. Comments also were sent directly to Western and were received by comment card, mail, telephone, and e-mail. Western received 117 comments from 28 individuals, companies, and government agencies. Responses to individual comments are presented in Chapter 3.0 of the Final EIS.

ES.5 ALTERNATIVES

The results of public scoping meetings, workshops, meetings with agencies, and earlier studies by Western and interested area utility groups helped to develop a range of alternatives that were analyzed in the Draft

EIS. Each alternative is identified by route segments (Segments A through J) that represent specific activities. Three types of project activities would be conducted for the Proposed Action and alternatives:

- Reconductoring would consist of replacing the existing transmission line conductors (wires) with higher capacity conductors. In general, the existing rights-of-way (ROW) would be used, and fewer new structures would be needed.
- New construction of transmission lines would

include designing and building new structures and installing new conductors. New construction would occur on existing ROW, where possible, or require acquisition of new ROW in parallel with existing ROW.

- Realignment would include route deviations from Western's existing transmission lines at two locations. The first realignment would avoid encroachment of the Pleasant Grove Cemetery, and the second realignment would avoid residential areas.

Based on comments on the Draft EIS, Western added an option that includes realignment modification for the Proposed Action and Alternative 2. The Draft EIS Proposed Action and Alternative 2 have been relabeled as "Proposed Action Option A" and "Alternative 2 Option A." The modified alternatives are labeled "Proposed Action Option B" and "Alternative 2 Option B." The differences between Options A and B are described below and depicted on the insets shown in Figure ES-2. Figures ES-1 and ES-2 illustrate the seven alternatives analyzed and their locations within the study area. For clarification, Segments A and E refer to reconductoring. Segments A₁ and E₁ refer to new construction. Project activities associated with each of the seven alternatives are summarized in Table ES-1 and are described below:

- Proposed Action Option A is the original alignment of the Proposed Action. It would consist of: (1) reconductoring a double-circuit, 230-kV transmission line from Elverta Substation to Tracy Substation; (2) constructing a new double-circuit, 230-kV transmission line from O'Banion Substation to Elverta Substation; and (3) realigning the transmission line near Pleasant Grove Cemetery, between the O'Banion Substation and Elverta Substation and Option A of the Cottonwood–Roseville single-circuit, 230-kV transmission line.
- Proposed Action Option B modifies the alignment of the Proposed Action. It would consist of (1) reconductoring a double-circuit, 230-kV transmission line from Elverta Substation to Tracy Substation; (2) constructing a new double-circuit, 230-kV transmission line from O'Banion Substation to Elverta Substation; and (3) realigning the transmission line near Pleasant Grove Cemetery, between the O'Banion Substation and Elverta Substation and Option B of the Cottonwood–Roseville single-circuit, 230-kV transmission line. This modified realignment of the Cottonwood–Roseville line would extend about 2 miles east of the original alignment then, traverse south.

- Alternative 1—Reconductoring O’Banion Substation to Tracy Substation would consist of reconductoring a double-circuit, 230-kV transmission line from O’Banion Substation to Tracy Substation.
- Alternative 2 Option A—New Transmission - O’Banion Substation to Elverta Substation is the original alignment of Alternative 2. It would consist of constructing a new double-circuit, 230-kV transmission line from O’Banion Substation to Elverta Substation and realigning the transmission line near Pleasant Grove Cemetery and Option A of the Cottonwood–Roseville single-circuit, 230-kV transmission line.
- Alternative 2 Option B—New Transmission - O’Banion Substation to Elverta Substation includes the modified alignment of Alternative 2. It would consist of constructing a new double-circuit, 230-kV transmission line from O’Banion Substation to Elverta Substation and realigning the transmission line near Pleasant Grove Cemetery and Option B of the Cottonwood–Roseville single-circuit, 230-kV transmission line. This modified realignment of the Cottonwood–Roseville line would extend about 2 miles east of the original alignment then traverses south.
- Alternative 3—New Transmission - Elk Grove Substation to Tracy Substation would consist of constructing a new double-circuit, 230-kV transmission line from Elk Grove Substation to Tracy Substation.
- No Action Alternative—Under the No Action Alternative, existing transmission line system operation would continue unchanged. Western would not develop or build additional transmission lines or substation facilities in the study area relative to voltage support.

ES.6 IMPACTS

Environmental impacts would be similar for all the action alternatives. Generally, new construction would result in more impacts than reconductoring because of the requirement for new structures and access roads.

The Proposed Action, Options A and B affect more overall miles than the other action alternatives; however, only a portion is new construction. Alternative 3, which is all new construction, may have a greater potential for impact.

Air quality is the only resource area that may have a significant impact for the action alternatives. However, more detailed air quality analysis would be necessary after a project is selected to move forward. Significant impacts would be mitigated to the point that they would be less than significant. The No

Action Alternative appears to have the fewest day-to-day impacts for the operation and maintenance of the existing transmission line; however, it does not meet the need for power system security and reliability. A comparison of the impacts associated with each alternative is presented in Table ES-2.

ES.7 CUMULATIVE IMPACTS

Cumulative impacts result from the incremental effect of the action, decision, or project when added to other past, present, and reasonably foreseeable future actions. Western examined actions that have environmental impacts on the same resources affected by this proposal and similar projects. Western also reviewed other proposed projects, including major linear projects that would potentially create impacts on the same resources. For past actions, Western included existing transmission lines in the study area. Impacts from these past projects were considered for each resource area.

ES.7.1 Reasonably Foreseeable Projects

Western reviewed 65 projects that could have a reasonable likelihood of being implemented by 2005. The proposed projects included: bridge repair, development, pipeline, road expansion, remediation system, transportation, and water and wastewater projects. These projects are listed in Table 4-2.

ES.7.2 Cumulative Effects

Cumulative effects for environmental justice (EJ), floodplains, geology, soils, health and safety, land use, noise, and wetlands are expected to be negligible. A description of cumulative effects is provided below for air quality, biological resources, cultural resources, electric and magnetic fields, paleontological resources, socioeconomics, visual resources, and water resources.

Air Quality

Within the Sacramento area, particulate emissions, volatile organic compounds (VOC), and nitrogen oxides (NO_x) from construction activities, rice field and agricultural burning, industrial operations (aggregate mining), and vehicle equipment may all impact air quality. Constructing new transmission lines or reconductoring existing lines add to these emissions, but only for the short term. Western would use environmental protection measures (EPM) to reduce particulate emissions, VOCs, and NO_x. Therefore, cumulative impacts from the Proposed Action and alternatives, coupled with other area projects, would be considered unavoidable short-term impacts. Long-term operation under the Proposed Action or any alternative, along with other projects in the general area, would not generate significant amounts of air pollution emissions.

Biological Resources

For the short term, the Proposed Action Options A and B, Alternative 2, and Alternative 3 would affect nonurban areas or areas not developing rapidly containing sensitive biological habitat. Much of the study area is rural and is expected to remain rural for the near term. Although the frequency of bird strikes with transmission lines would continue, the use of transmission line marking devices and locating new lines next to existing lines would result in lower additive cumulative impacts. Cumulative impacts resulting from the Proposed Action Options A and B, Alternative 2, or Alternative 3, and other area projects would be considered insignificant.

The impacts to vegetation as a result of Alternative 1, reconductoring, would be temporary, because these areas would be replanted following the completion of work. As a result, cumulative impacts to biological resources would be minimal.

Cultural Resources

Impacts from the alternatives would be limited to incremental physical impacts to cultural resources located within the existing ROW. Most new transmission lines would be located in areas with other transmission lines where the visual effects would also be incremental. Western should be able to satisfactorily avoid or mitigate impacts on prehistoric and historic archaeological sites. The potential to avoid or mitigate impacts on traditional cultural properties is less clear, although tribal groups would be involved in assessing impacts and identifying and implementing avoidance or mitigation measures.

With adherence to the EPMs, it is likely that the Proposed Action Options A and B, Alternative 2, and Alternative 3, all of which include building new transmission lines, would only add slightly to the cumulative impacts on the cultural resources of the region. Alternative 1, which only includes reconductoring, would not add to the cumulative impacts on the cultural resources of the region.

Electric and Magnetic Fields

In discussions with planning agencies, Western determined that no new permanent, occupied buildings are planned within 100 feet of Western's ROW. Additionally, because EMFs diminish rapidly with distance from the transmission line, and there is no planned encroachment on the ROW, there would be minimal electric and magnetic field (EMF) cumulative impacts to human health or the environment.

Paleontological Resources

Impacts to paleontological resources could result if fossil materials are destroyed during excavation of 10 feet deep or more. Continued development, extending farther into the Central Valley, could disturb more fossil-bearing sedimentary deposits and threaten paleontological resources. Cumulative impacts result from increased disturbance or removal of fossil-bearing rocks. Proper site monitoring would minimize the potential for loss of paleontological resources during construction and cumulative impacts would be negligible.

Socioeconomics

Under No Action, the current strain on electric power supply and distribution would continue, which could result in power supply shortfalls and disruptions as power demand increases to support future development. These supply and distribution difficulties could decrease the efficiency of business operations in the study area and have an adverse effect on the overall economy. Spending in local markets would temporarily benefit the economy.

Visual Resources

Past, existing, and future development have and would continue to visually alter the landscape. Negative effects to the visual quality of the area from development include existing utility lines and associated cleared ROW, commercial development, major roads, abandoned buildings, industrial land uses, aggregate mining, and sand and gravel pits. Where the alternative would be located near one of these existing negative visual features, the impacts would result in an additive adverse effect to the existing visual impacts. However, locating the proposed transmission line next to an existing utility corridor would typically be preferable to locating the line in a previously undisturbed landscape. The additive cumulative impacts for any of the alternatives would not be significant.

Water Resources

Growth and development in the Sacramento area would increase water demand. Construction activities projected for the Proposed Action and alternatives would cause slight increases in surface-water sediment load and water use. These effects would be transitory. Incremental increases in surface-water sediment load from maintenance would not result in significant cumulative impacts.

ES.8 ENVIRONMENTAL IMPACT STATEMENT REVIEW

The Draft EIS was filed with the U.S. Environmental Protection Agency (EPA) and released to the public in November 2002. About 200 copies were distributed to agencies, organizations, and individuals for review and comment during the review period, which ended on December 31, 2002. Detailed comments and responses are presented in Chapter 3. Comments received were classified into 17 categories:

- Air Quality
- Alternatives
- Biological Resources/Wetlands
- Construction
- Environmental Impact Statement Process
- Electric and Magnetic Fields
- Figures
- Funding
- Geology
- Health and Safety
- Land Use
- Permitting
- Power Transmission
- Remarks
- Socioeconomics
- Soils
- Visual Resources

ES.9 DECISION DOCUMENT

Following publication of this Final EIS, Western's Administrator will issue a Record of Decision (ROD), which will (1) state what the decision is, (2) identify all alternatives considered in reaching the decision, including which alternative is considered to be environmentally preferred, and (3) state whether all practical means to avoid or minimize impacts from the alternative selected have been adopted, and if not, why. The Administrator will ensure that the decision is executed as stipulated.
