COLUSA-SUTTER TRANSMISSION LINE PROJECT
SCOPING SUMMARY REPORT

Prepared for:

Western Area Power Administration
Sacramento Municipal Utility District

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SMUD

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Acronyms

CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CSLC	California State Lands Commission
CVP	Central Valley Project
CoSu Line Project	Colusa-Sutter Transmission Line Project
COTP	California-Oregon Transmission Project
DOE	U.S. Department of Energy
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMF	Electric and magnetic fields
GHG	Greenhouse gas
GIS	Geographic Information System
ISO	Independent System Operator
kV	Kilovolt
MW	Megawatt
NEPA	National Environmental Policy Act
NOI	Notice of Intent
NOP	Notice of Preparation
PG&E	Pacific Gas & Electric Company
SRFCP	Sacramento River Flood Control Project
SMUD	Sacramento Municipal Utility District
SNR	Sierra Nevada Region
USFWS	U.S. Fish and Wildlife Service
WAPA	Western Area Power Administration

Colusa-Sutter Transmission Line Scoping Summary Report

1.0 Introduction

This document is the Scoping Summary Report for the U.S. Department of Energy's (DOE) Western Area Power Administration (WAPA), Sierra Nevada Region (SNR) and Sacramento Municipal Utility District (SMUD) Colusa-Sutter Transmission Line (CoSu Line) Project. The Project underwent two scoping periods. The first scoping period – a 122-day scoping period – took place from December 18, 2015, through April 18, 2016. An additional 60-day scoping period took place from January 6, 2017, through March 7, 2017. During these periods, the public was invited to participate in the earliest phase of the environmental review process and WAPA and SMUD accepted public comments on the Project.

This report provides background on the CoSu Line Project, summarizes the environmental review process, describes the purpose of scoping, and discusses specific activities undertaken during the public scoping period. It also summarizes comments received during the scoping period and lists issues to be addressed in the Environmental Impact Statement/Environmental Impact Report (EIS/EIR) that will be prepared for the Project. Copies of notifications and materials developed during the scoping period are included as appendices to this report, as are copies of all comments received during the scoping process.

1.1 Project Purpose and Need

The purpose of the CoSu Line Project is to enable and enhance SMUD's access to regional markets for both the import and export of energy, including additional renewable and low-carbon energy from the Pacific Northwest and in the greater Sacramento Valley, by interconnecting the California-Oregon Transmission Project (COTP) line with SMUD's transmission system.

The CoSu Line is needed because it:

- Addresses WAPA's obligation to respond to a SMUD transmission service request under WAPA's Open Access Transmission Tariff and provides new Central Valley Project (CVP) capacity for the benefit of all WAPA customers.
- Ensures a new transmission path to the COTP allowing both SMUD and WAPA to schedule energy delivery.
- Provides SMUD with bi-directional scheduling rights between the COTP and the SMUD system, which can be used by SMUD to transfer additional energy to and from the COTP and/or import renewable generation in the greater Sacramento Valley or from the Pacific Northwest.
- Allows SMUD more flexible use of its transmission rights to the Pacific Northwest, to both import and export energy, for participation in newly developing markets for flexible energy

transfers, such as the California Independent System Operator's (ISO) regional Energy Imbalance Market.

- Allows SMUD greater flexibility to schedule energy to meet demands during peak and nonpeak periods and to ensure that adequate capacity is available to address system fluctuations caused by intermittent resources such as solar or wind, thereby enhancing reliability.
- Provides increased system reliability and capacity throughout the region, including WAPA's CVP transmission system.
- Provides greater access to renewable energy markets, helping SMUD to cost-effectively reduce its carbon emissions in support of the state's aggressive post-2030 carbon reduction mandates.
- Reduces or delays the need for some of WAPA's CVP transmission facility upgrades included in WAPA's ten-year plan.
- Serves as a hedge against distributed generation technology risks, lack of customer adoption or sustained use of these technologies, and/or other future market conditions that may impact the reliability of the electric system.

1.2 Proposed Action/Project Description

The proposed CoSu Line Project would involve construction, operation, and maintenance of a new 500-kilovolt (kV) single circuit 1,190-megawatt (MW) transmission line that connects the COTP transmission lines to a substation in Sutter or Sacramento County. It would also involve construction of substation facilities at the COTP interconnection point, including the installation of communication and protection equipment.

1.2.1 2015 - 2016 Scoping Period

Proposed corridors for the transmission lines and the proposed footprints of the substations were developed and presented to the public during the public scoping period and meetings. The corridors to be studied and evaluated in the EIS/EIR within Colusa and Sutter counties consist of the following:

- **Northern Corridor Study Area**: construct the proposed new CoSu Line Project (approximately 44 miles) adjacent to WAPA's existing 230-kV Olinda-O'Banion and Keswick-O'Banion double circuit transmission lines. The Northern Corridor Study Area would interconnect the existing COTP transmission line system near the existing COTP Maxwell Series Compensation Substation to WAPA's CVP transmission system near the existing WAPA O'Banion Substation. The proposed new CoSu Line would require the construction of an additional substation adjacent to the existing Maxwell Series Compensation Substation and an additional substation near the existing O'Banion Substation.
- **Southern Corridor Study Area**: construct the proposed new CoSu Line Project (approximately 27 miles) to interconnect with the existing COTP transmission line system approximately 8 miles northwest of the community of Arbuckle, California, and then continue east towards the existing O'Banion Substation. The Southern Corridor Study Area

would also require the construction of an additional substation adjacent to the existing COTP transmission line northwest of Arbuckle and an additional substation near the existing O'Banion Substation.

- **Segment 1 Alternative Study Area**: construct an alternate north-to-south route (approximately 9 miles) as an alternative to the Northern Corridor Study Area starting at WAPA's existing 230-kV Olinda-O'Banion and Keswick-O'Banion double circuit transmission line, and heading south just west of the Sutter National Wildlife Refuge and then due east to connect to the O'Banion Substation. Under this segment alternative, the new line would be located farther away from the Sutter National Wildlife Refuge.

1.2.2 2017 Additional Scoping Period

Based on comments received during the public scoping period held from December 2015 to April 2016, the two agencies determined that an additional study area and segment alternative should be considered.

- **County Road 16 Corridor Study Area**: construct approximately 27 miles of new transmission line to connect to the existing COTP transmission line approximately eight miles west of the community of Dufour in Yolo County, and proceed east towards the existing Elverta Substation in Sacramento County. Two new substations would be built: one adjacent to the existing COTP transmission line northwest of Dufour, and another adjacent to the Elverta Substation.
- **Segment 2 Alternative Study Area**: construct approximately nine miles of new transmission line to connect from six miles northwest of the existing Elverta Substation in Sacramento County and provide an alternate west-to-east route for the County Road 16 Corridor Study Area. It would extend north in a loop-like fashion, at a location approximately 2.5 miles north of the Sacramento International Airport, and then rejoin the County Road 16 Corridor Study Area as it continues due east to connect to the Elverta Substation. The new segment would be located further away from Sacramento International Airport to provide a greater buffer between the transmission structures and airplane flight paths.

2.0 EIS/EIR Process

A joint EIS/EIR will be prepared to examine the potential environmental effects of the CoSu Line Project. WAPA will be the lead Federal agency for the National Environmental Policy Act (NEPA) and SMUD will be the lead state agency for the California Environmental Quality Act (CEQA).

NEPA (42 U.S.C. Sections 4321–4370f) requires that Federal decision-makers evaluate environmental impacts from activities they undertake, permit, fund or otherwise authorize that could impact environmental resources. The objective of NEPA is to help agencies make better decisions through public input and analysis.

CEQA (Public Resources Code Sections 21000 through 21177) applies to all projects undertaken, funded, or requiring an issuance of a permit by a public agency. CEQA's basic purposes are to inform governmental decision-makers and the public about the potential significant environmental effects

of proposed activities; identify ways that environmental damage can be avoided or significantly reduced; require changes in projects through the use of alternatives or mitigation measures when feasible; and disclose to the public the reasons why a project was approved if significant environmental effects are involved.

An EIS is required under NEPA and an EIR is required under CEQA. The CoSu Line Project EIS/EIR will analyze environmental resources that could be affected by the project. WAPA and SMUD will evaluate a No Action/No Project Alternative in the EIS/EIR. Under the No Action/No Project Alternative, WAPA would not construct the proposed Project and the environmental impacts associated with construction and operation would not occur. The No Action Alternative will also form the baseline against which the potential impacts of the project and other project alternatives will be compared.

2.1 Scoping

Scoping is the earliest phase of the environmental review process in which the public is invited to participate. The scoping phase begins the planning for the environmental document under NEPA and CEQA, and is a public timeframe in which agencies and the general public can provide comments on what the lead agencies should consider in the scope of the EIS/EIR. In determining what to include in the EIS/EIR, WAPA and SMUD will consider comments relating to the range of alternatives to be studied, resources that may be affected by the project, the potential significance of the impacts, and recommended mitigation, minimization and avoidance measures.

Scoping begins with the issuance of a Notice of Intent (NOI) in the *Federal Register* by the Federal lead agency (WAPA) and filing of a Notice of Preparation (NOP) with the California Office of Planning and Research by the state lead agency (SMUD).

2.1.1 NEPA Requirements

NEPA defines scoping as “an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action” (40 CFR 1501.7).

NEPA scoping requirements include:

- Initiation of the scoping period must occur with issuance of the NOI [40 CFR 1501.7];
- Time limits may be set for determining the scope of the EIS at the discretion of the lead agency [40 CFR 1501.7(b)(2), 1501.8(2)]; and
- DOE regulations require formal scoping meetings that cannot be held until at least 15 days following the publication of the NOI in the *Federal Register* [10 CFR 1021.311(d)].

2.1.2 CEQA Requirements

Section 15082 of the CEQA Guidelines (Title 14 California Code of Regulations §§ 15000–15387 15082) states a lead agency must consult early with federal agencies with jurisdictional authority over the project, responsible agencies, and trustee agencies responsible for resources that may be affected by the project. Within 30 days of receiving the project NOP, responsible and trustee agencies must provide comments to the lead agency with specific information on scope and content of environmental information related to their respective areas of statutory authority. At least one meeting to address scope and content of the EIR is required for projects of statewide, region-wide

or area-wide significance, with notice provided, at a minimum, to agencies, cities and counties encompassing the project area, and people and organizations requesting notice.

Agencies may also consult early with anyone it believes will have concerns about the environmental impacts of a project. This early consultation is called scoping, which the CEQA Guidelines state "has been helpful to agencies in identifying the range of actions, alternatives, mitigation measures, and significant effects to be analyzed in depth in an EIR and eliminating from detailed study issues found not to be important." The guidelines further state that "scoping has been found to be an effective way to bring together and resolve the concerns of affected federal, state, and local agencies, and proponents of the action, and other interested persons including those who might not be in accord with the action on environmental grounds." (CEQA Guidelines § 15083).

3.0 Public Scoping Efforts

WAPA and SMUD initiated the scoping process for the CoSu Line Project on December 18, 2015, following the publication of the NOI and issuance of the NOP. The scoping efforts included a variety of public notices and meetings to inform stakeholders about the Project and provided various methods for stakeholders to get information and submit substantive public comments.

Scoping outreach activities included: preparing and distributing notices in six newspapers; sending a newsletter, postcards, and letter to the Project mailing list; distributing email notifications to the Project email list; maintaining a Project website for stakeholders to review information; providing Project email addresses to submit questions (info@cosuline.com) and comments (comments@cosuline.com); and holding a series of public scoping meetings.

Six scoping meetings were originally held in January and February 2016 in Colusa and Sutter counties to share information, provide an avenue for members of the public to talk with Project representatives, and to receive public comments. The public scoping period was initially open for 60 days, concluding on February 16, 2016. WAPA and SMUD extended the scoping period to March 4, 2016, to respond to requests for a longer review period by stakeholders. The scoping period was extended a second time and closed after a 122-day period on April 18, 2016.

Based on comments received during the initial public scoping period, the two agencies determined that an additional study area and segment alternative should be considered. Therefore, the scoping period was reopened for a period of 60 days, from January 6, 2017 through March 7, 2017, and six additional scoping meetings were held. One meeting was held in Sutter County, one meeting was held in Colusa County, two meetings were held in Yolo County, and two meetings were held in Sacramento County. While the scoping period closed on March 7, 2017, WAPA and SMUD continued to accept public comments through March 21, 2017, in order to allow any residents who had been affected by regional flooding that took place in Northern California to have additional time to submit comments. The following sections describe the different efforts conducted to notify and inform stakeholders about the public scoping period.

3.1 Notice of Intent/Notice of Preparation

WAPA and SMUD prepared an NOI and NOP per requirements of NEPA and CEQA, respectively. The NOI was issued on December 18, 2015, and published in the *Federal Register*. The NOP was submitted to the California Office of Planning and Research, Colusa County Clerk, and Sutter County

Clerk on December 18, 2015. These notices initiated the Project's scoping period to receive comments on the scope of issues to be considered in the EIS/EIR.

The NOI/NOP each included an overview of:

- Background on the CoSu Line Project;
- Agency responsibilities;
- Project description and alternatives;
- Potential significant environmental impacts;
- Public participation opportunities;
- Public scoping meetings;
- How to submit comments; and
- Project contact information.

With the addition of the scoping period in 2017, WAPA prepared Notice of Additional Scoping Meetings that was issued on January 6, 2017, and published in the *Federal Register*. SMUD prepared a Revised NOP that was submitted to the California Office of Planning and Research on January 6, 2017. The Notice of Additional Scoping Meetings and NOP explained the addition of the new alternatives to the CoSu Line Project.

Copies of the notices from the 2015-2016 and 2017 scoping periods can be found in Appendix A.

3.2 Public Noticing

Additional notices were prepared and distributed during the scoping periods. These included legal notices, newsletters, postcards, newspaper display advertisements, a Project website, and email notices.

3.2.1 Legal Notices

Legal advertisements, or notices, were placed in newspapers of general circulation to notify the public about the start of the scoping process. Placement of these notices is a requirement of NEPA. Copies of these legal notices are included in Appendix B.

3.2.1.1 2015-2016 Scoping Period

Legal notices were placed in two newspapers of general circulation in Colusa and Sutter counties: the *Marysville Appeal-Democrat* and the *Colusa Sun-Herald.* The legal notices ran in the *Marysville Appeal-Democrat* on Friday, December 18, 2015, and in the *Colusa Sun-Herald* on Wednesday, December 23, 2015.The *Colusa Sun-Herald* is a weekly newspaper that only publishes on Wednesday, so the notice ran the week following the posting of the NOI in the *Federal Register*.

3.2.1.2 2017 Additional Scoping Period

With the addition of the County Road 16 Corridor Study Area and Segment 2 Alternative Study Area to the Project, legal notices were placed in newspapers in Yolo and Sacramento counties, in addition to Colusa and Sutter counties. Legal notices ran in the following newspapers on January 6, 2017:

Marysville Appeal-Democrat, Woodland Daily Democrat, and *The Sacramento Bee*. A legal notice ran in the *Colusa Sun-Herald* on January 11, 2017.

3.2.2 Scoping Notice Newsletter

Newsletters containing much of the same information from the NOI and NOP were sent to the Project mailing list to announce both scoping periods and the schedule for the scoping meetings. The Project mailing list was developed in 2015 by gathering addresses of property owners located within the proposed corridor study areas (the Northern Corridor Study Area, Southern Corridor Study Area, and Segment 1 Alternative Study Area), and within a 1,500-foot buffer on either side of the study areas. It also included Federal, state, and local agencies; elected officials; special districts; and other local groups and organizations. The Project mailing list was regularly updated based on attendees and additions identified during the public scoping meetings and when there were requests by individuals or other agencies and organizations through a link provided on the Project website. For the 2017 Additional Scoping Period, property owners located within the County Road 16 Study Corridor Area and Segment 2 Alternative Study Area and within a 1,500-foot buffer on either side of the County Road 16 Study Corridor Area and Segment 2 Alternative Study Area were added to the Project mailing list. At the time of the preparation of this scoping report, there are approximately 1,567 recipients on the mailing list. The mailing list will continue to be updated. A copy of the newsletters can be found in Appendix C.

3.2.2.1 2015-2016 Scoping Period

One newsletter was developed and mailed on December 17, 2015. It described the Project, its purpose and need, the environmental review process and start of the scoping period, public meeting information, information about the Project website, and how to comment during the scoping period. It also included maps of the Project study corridors.

3.2.2.2 2017 Additional Scoping Period

One newsletter was developed and mailed on January 5, 2017. It described the need for the additional scoping period, the addition of the County Road 16 Corridor Study Area and Segment 2 Alternative Study Area, public meeting information, a Project area map, and information on submitting comments, with a note that comments submitted during the 2015-2016 scoping period were in the project record and would not need to be resubmitted.

3.2.3 Scoping Meeting Postcards and Letters

Postcards and letters were distributed to the Project mailing list to remind stakeholders of the public scoping meetings and comment period. Copies of the postcards and letter can be found in Appendix D.

3.2.3.1 2015-2016 Scoping Period

The first postcard was mailed on January 2, 2016 and contained information on the general purpose of the scoping meetings and environmental review process, meeting information, and how to comment on the scope of the EIS/EIR. A second postcard was mailed on January 29, 2016, prior to the scoping meetings held in February 2016, to notify stakeholders that the comment period had been extended to April 18, 2016 and to remind them about the two remaining scoping meetings

taking place in February. A letter was mailed on April 11, 2016, to the Project mailing list as a reminder of the closing of the scoping public comment period on April 18, 2016.

3.2.3.2 2017 Additional Scoping Period

A postcard was mailed to stakeholders on February 28, 2017, to notify them that, due to impacts to landowners from regional flooding, the agencies would accept comments until March 21, 2017.

3.2.4 Newspaper Display Advertisements

Display advertisements ran in local newspapers prior to the start of the public scoping meetings to notify the general public about the meetings. Copies of the newspaper display advertisements can be found in Appendix E.

3.2.4.1 2015-2016 Scoping Period

Display advertisements ran in the *Marysville Appeal-Democrat* on January 5, 2016, and the *Colusa Sun-Herald* on January 6, 2016.

3.2.4.2 2017 Additional Scoping Period

Display advertisements ran on January 17, 2017, in the *Marysville Appeal-Democrat, Woodland Daily Democrat,* and *The Sacramento Bee,* and on January 18, 2017, in the *Colusa Sun-Herald, Williams Pioneer Review,* and *Territorial Dispatch.*

3.2.5 Project Website

The Project website was launched on December 18, 2015, to coincide with the start of the first scoping period. The website presents information about the project, its environmental review, public involvement opportunities, Project documents, frequently asked questions, how to contact the Project team and submit comments, and a form to add interested parties to the Project mailing/email lists. The website is routinely updated and contains up-to-date Project information.

The scoping meeting schedule and locations were posted on the website, as well as information and documents that were displayed and distributed at the scoping meetings. The contact information for submitting public comments on the scope of the environmental document was also available on the website. The CoSu Line website can be accessed at www.cosuline.com.

3.2.6 Email Notices

Emails were sent to stakeholders throughout the public scoping periods to inform them about the public scoping meetings and to encourage them to submit comments. Copies of the email notices can be found in Appendix F.

3.2.6.1 2015-2016 Scoping Period

During the 2015-2016 scoping period, emails were sent on December 18, 2015, January 8, 2016, January 29, 2016, April 4, 2016, and April 12, 2016. The initial email notice informed stakeholders of the start of the scoping period and invited them to attend the scoping meetings. A copy of the Project newsletter was also attached to the email. In the second notice, stakeholders were informed of the first comment period extension, from February 16, 2016, to March 4, 2016. On January 29, 2016, a notice to inform stakeholders that the comment period had been extended from March 4,

2016, to April 18, 2016, was distributed. The notice also reminded stakeholders of the two remaining public scoping meetings scheduled on February 2 and February 4, 2016, in Arbuckle and Yuba City, respectively.

In the April 4 and April 12, 2016, notices, stakeholders were reminded of the upcoming end to the scoping period and encouraged to submit comments. In the latter email notice, stakeholders were informed about a Project office opening in Yuba City that would be staffed three days during the work week for the public to visit and ask questions. The Project office closed in late 2016.

3.2.6.2 2017 Additional Scoping Period

During the 2017 additional scoping period, emails were sent on January 6, 2017, and February 22, 2017. The first email notice informed stakeholders about the start of the additional public scoping period and invited them to attend the scoping meetings. The second notice reminded stakeholders to submit public comments, and alerted them to the fact that WAPA and SMUD would accept comments through March 21, 2017, which was two weeks after the public scoping period. They accepted comments to accommodate stakeholders in the region of the study corridor areas who may have been affected by regional flooding and were unable to submit comments by the scoping period close date of March 7, 2017.

3.3 Scoping Meetings

3.3.1.1 2015-2016 Scoping Period

A total of six scoping meetings were held in January and February 2016, in Colusa and Sutter counties. The scoping meetings were noticed in the following ways: in the NOI and NOP; legal notices in the *Marysville Appeal Democrat* and *Colusa Sun Herald*; mailing of a scoping notice newsletter to landowners and other stakeholders; mailing of postcards to landowners and other stakeholders; email distribution to a stakeholder mailing list; newspaper advertisements in the *Marysville Appeal Democrat* and *Colusa Sun Herald*, and on the Project website (www.cosuline.com). Copies of all notices can be found in Appendices A through F.

The public and interested parties were encouraged to attend the scoping meetings to learn about the Project and submit public comments. The locations, dates, and number of registered attendees at each scoping meeting are presented in Table 1.

The scoping meetings were an open house format, where attendees could view informational posters, Project maps, and parcel data, and informally discuss issues pertaining to the Project with WAPA and SMUD staff. Participants were encouraged to sign in and register to be included on the mailing/email list to receive updates about the Project. About 20 members of the Project team were present at each meeting to meet with the public and answer questions about the Project. Large maps were provided at each meeting showing the study corridors. Participants were encouraged to write on the maps to identify potentially affected resources or related impacts near the study corridors. Computers were available with Geographic Information Systems (GIS) software so attendees could view satellite images of the Project area that showed the study corridors, parcels, and other land features. Project team members were available to help attendees locate their parcel or property in relation to the study corridors. Project staff made screen captures of the views and emailed them to participants upon request. Informational posters were displayed throughout the meeting rooms that provided details on a variety of topics, including:

- Public Scoping Meeting Schedule

- Project Background and Overview Map
- Project Purpose and Need
- Information about WAPA and SMUD
- Aerial Overview Map
- The NEPA and CEQA Process
- The Scoping Process
- The Environmental Review Timeline
- Environmental Resources
- Electrical Infrastructure Overview/Balancing Authority of Northern California Graphic
- Northern California Power System Graphic
- Local Transmission Facilities Map
- Photos of Example 500-kV Structure Types
- Photos of Example Substations
- Project Operations and Maintenance
- Information on Submitting Public Comments

Appendix G presents copies of informational posters and other materials displayed at the scoping meetings.

Table 1. Locations and Attendance of CoSu Line Public Scoping Meetings

Meeting Location	Date	Number of Attendees
Colusa Casino Resort, Community Room 3770 California 45, Colusa, CA	January 12, 2016, 4-7 p.m.	63
Colusa Casino Resort, Community Room 3770 California 45, Colusa, CA	January 13, 2016, 8-11 a.m.	44
Sutter Youth Organization Center 7740 Butte House Road, Sutter, CA	January 13, 2016, 4-7 p.m.	36
Sutter Youth Organization Center 7740 Butte House Road, Sutter, CA	January 14, 2016, 8-11 a.m.	25
Arbuckle Fire Hall 506 Lucas Street, Arbuckle, CA	February 2, 2016, 4-7 p.m.	39
Central Gaither Elementary School 8403 Bailey Road, Yuba City, CA	February 4, 2016, 6-9 p.m.	26

3.3.1.2 2017 Additional Scoping Period

A total of six scoping meetings were held in January and February 2017, in Colusa, Sutter, Yolo, and Sacramento counties. The scoping meetings were noticed in the following ways: in the Notice of Additional Scoping Meetings and NOP; legal notices in the *Marysville Appeal Democrat, Colusa Sun Herald, Woodland Daily Democrat* and *The Sacramento Bee*; mailing of a scoping notice newsletter to landowners and other stakeholders; email distribution to a stakeholder mailing list; newspaper advertisements in the *Marysville Appeal Democrat, Colusa Sun Herald*, *Williams Pioneer Review, Territorial Dispatch, Woodland Daily Democrat* and *The Sacramento Bee;* and on the project website (www.cosuline.com). Copies of all notices can be found in Appendices A through F.

The public and interested parties were encouraged to attend the scoping meetings to learn about the Project and submit public comments. The locations, dates, and number of registered attendees at each scoping meeting are presented in Table 2.

The scoping meetings were an open house format, the same as the 2015-2016 scoping meetings. Informational posters were the same ones as displayed in 2015-2016 but were updated to include the new alternative corridor study areas and substation locations, and revised timelines. In addition the following new posters were provided:

- Modifications to the Northern and Southern Corridor Study Areas and Segment 1 Alternative Study Area
- Typical Considerations for Siting New Transmission Lines
- Transmission Line Siting Process During the Environmental Review
- Tips for Providing Effective Public Comments

Appendix G presents copies of informational posters and other materials displayed at the additional scoping meetings.

Table 2. Locations and Attendance of CoSu Line Public Scoping Meetings

Meeting Location	Date	Number of Attendees
Sutter Youth Organization Center 7740 Butte House Road, Sutter, CA	January 24, 2017 5 – 8 p.m.	37
Colusa Casino Resort, Community Room 3770 California 45, Colusa, CA	January 26, 2017 5 – 8 p.m.	28
Woodland Community and Senior Center 2001 East Street Woodland, CA	January 31, 2017 9 a.m. – 12 p.m.	30
Woodland Community and Senior Center 2001 East Street Woodland, CA	January 31, 2017 5 – 8 p.m.	17
Haggin Grant American Legion Post 521 6700 8th Street, Rio Linda, CA	February 2, 2017 9 a.m. – 12 p.m.	8
Haggin Grant American Legion Post 521 6700 8th Street, Rio Linda, CA	February 2, 2017 5 – 8 p.m.	4

3.4 Scoping Comment Submission

3.4.1.1 2015-2016 Scoping Period

The public was encouraged to submit comments to WAPA and SMUD during the public scoping period of December 18, 2015 through April 18, 2016. There were numerous ways to submit comments with no limit to the number of comments that could be submitted during the scoping period.

At the public scoping meetings in January and February 2016, attendees could submit public comments verbally to a court reporter, leave hand-written comments on comment cards, and add written comments to the Project area maps that were displayed at each meeting. They could also take comment cards with them to mail in by the April 18, 2016 deadline.

Persons wishing to submit comments via email could send them to the Project's comment inbox at comments@cosuline.com.

Those who preferred to mail a letter could send it directly to the attention of Mr. Andrew Montaño, NEPA Document Manager, WAPA Headquarters, P.O. Box 281213, Lakewood, Colorado 80228-8213.

State and local agencies responding to the NOP filed with the Office of Planning and Research, mailed comments to Emily Bacchini, SMUD, 6201 S Street, Mailstop H201, Sacramento, California 95817.

3.4.1.2 2017 Additional Scoping Period

As with the first scoping period, the public was encouraged to submit comments to WAPA and SMUD between January 6, 2017, and March 21, 2017, in the same manner as the previous scoping period. In all materials distributed to stakeholders, WAPA and SMUD noted that all substantive comments received during the first scoping period were in the official record and did not need to be resubmitted.

4.0 Summary of Scoping Comments

4.1 Overview of Comments Received

During both scoping review periods, over 300 comments were received in the form of letters, emails, comment cards, mark-ups on aerial overview maps, and verbal comments submitted and transcribed by the court reporter during the twelve public scoping meetings. Table 3 lists the comments by category of landowners/ general public (including mark-ups on aerial overview maps and verbal comments transcribed by the court reporter), Federal and state agencies, tribes, local agencies, elected officials, special districts and water companies, and interest groups, organizations and businesses.

Table 3. CoSu Line Project Scoping Commenters

Landowners/General Public
Federal Agencies
U.S. Department of Agriculture, Natural Resources Conservation Service

U.S. Environmental Protection Agency
U.S. Fish and Wildlife Service, Pacific Southwest Region
U.S. Fish and Wildlife Service, Sacramento National Wildlife Refuge Complex
Tribes
United Auburn Indian Community of Auburn Rancheria
Yocha Dehe Wintun Nation
State Agencies
California Department of Conservation, Division of Land Resource Protection
California Department of Fish and Wildlife
California Department of Transportation, District 3
California State Lands Commission
Central Valley Flood Protection Board
Central Valley Regional Water Quality Control Board
Native American Heritage Commission
Local Agencies
Colusa and Sutter Counties
County of Colusa, Office of the County Counsel
County of Sacramento, Department of Airports
County of Sacramento, Department of Community Development
County of Sutter, Board of Supervisors
County of Sutter, Floodplain Management Division
County of Sutter, Public Works Department
County of Yolo, Board of Supervisors
Elected Officials
Congressman John Garamendi
Assemblyman James Gallagher
Senator Jim Nielsen
California Legislature Outdoor Sporting Caucus
Special Districts and Water Companies
4M Water District
Butte Slough Irrigation Company
Colusa County Resource Conservation District
Glenn-Colusa Irrigation District
Reclamation District 70
Reclamation District 108
Reclamation District 1660
Reclamation District 1000
Sacramento Metropolitan Air Quality Management District

Sacramento River Westside Levee District
Sutter Mutual Water Company
Tehama-Colusa Canal Authority
Interest Groups/Organizations/Businesses
California Agricultural Aircraft Association
California Farm Bureau Federation
California Rice Commission
California Unions for Reliable Energy
California Waterfowl
Calpine Corporation
Central Valley Joint Venture
Colusa County Farm Bureau
CoSu Line Community Advocacy Group
Ducks Unlimited
Family Water Alliance
Matchbook Wines
Natomas Basin Conservancy
Natomas North Precinct Landowners Group
Sutter Buttes Regional Land Trust
Sutter Pointe Developers
Union Pacific Railroad
Wildlife Heritage Foundation
Yolo County Farm Bureau
Yolo Habitat Conservancy
Yolo Land Trust
Yuba Sutter Farm Bureau

The comments received in the form of letters, emails, comment cards, and mark-ups of aerial overview maps are presented in Appendix H. The verbal transcripts prepared by the court reporters from the public meetings are presented in Appendix I.

4.2 Summary of Comments Received

All comments received during the scoping period from December 18, 2015, through April 18, 2016, and from January 6, 2017, through March 21, 2017, were reviewed in detail to inform the Project team about issues of concern related to the Project in general, and specific items to be considered in the scope of the environmental review. The comments relevant to the scope of the environmental document will be addressed and analyzed in the EIS/EIR.

The following sections summarize the comments organized according to EIS/EIR resource sections and topics. The comments are not presented verbatim. Comments have been summarized or

rephrased, as appropriate. All comments received have been included in their entirety in Appendices H and I of this report.

4.2.1 Project Purpose and Need/Project Objectives

- Accurately describe the purpose and need for the project, including identifying the underlying problem or deficiency, and the opportunity the action will address
- Prepare a detailed and accurate project description, following Appendix G of CEQA Guidelines and parallel NEPA requirements
- Develop clear and distinct purpose and need statements under NEPA and project objectives under CEQA
- Identify a specific purpose and need for WAPA, separate from SMUD's, and describe core objectives to be met by SMUD through construction of CoSu Line
- The NOI does not identify any Federal need the Project would serve nor say how project is consistent with WAPA's federal mandate
- Provide and explain WAPA's independent purpose and need
- SMUD's purpose and need has become outdated since SMUD's request to WAPA was five years ago (ISO transmission planning illustrates continual reassessment of necessity for transmission projects, such as considering non-transmission alternatives)
- Provide factual support for project objectives
- Analyze needs for additional transmission capacity, explain connection between those supported needs and the proposed project, and allow the public an opportunity to comment on project objectives
- Articulate accurate, complete, and distinct goals and rationales for the project that correspond to respective mandates and authorities
- Describe and analyze modifications to WAPA's and/or SMUD's facilities
- Specify upgrades that will be avoided or delayed to reduce strain on WAPA's system and evaluate other options to reach similar result
- Describe Federal, state, and local approvals needed for project
- Disclose and analyze the relationship of the CoSu Line project to the Transmission Agency of Northern California (TANC) transmission project
- Disclose and analyze connected, cumulative, and related activities outside the region
- Describe SMUD's renewable targets
- Explain SMUD's infrastructure, load servicing capacity, and use of California ISO facilities
- Examine less invasive avenues to pursue connectivity for SMUD other than construction of a new transmission line

- Consider limited rights of SMUD to connect between its system and COTP for 40 years
- Examine the use of energy resources within California instead of Pacific Northwest to meet energy needs
- Consider biomass generation as a key renewable resource in California
- Consider others sources of energy transmission than transmission lines and towers, such as renewable energy
- Provide analysis of technical and economic feasibility of generating qualifying renewable energy supplies within California
- Using existing established lines would meet the purpose and need and give more credence to the project tagline “Delivering Clean Power”
- The project is not necessary to increase SMUD’s ability to import from and export power to other energy markets because it can use the existing California ISO grid
- Study the feasibility of other solutions to support solar and wind power sources because of intermittency issues, such as distributed grid scale batteries, residential scale batteries, and grid enhancement for demand shaving peak usage
- If hydroelectric power in California was considered renewable, that would change the need to import renewable power from other areas of the country
- The definition of cost effectiveness is too narrow and should not shift costs and economic burdens to landowners outside of SMUD’s footprint
- Conduct a cost-benefit analysis of purchasing power elsewhere in California
- Discuss existing transmission capability inefficiencies
- Describe objectives that will benefit Colusa and Sutter counties’ needs for local and regional reliability
- The project provides benefits to Sacramento County but impacts are on landowners in Colusa, Sutter, and/or Yolo counties

4.2.2 Project Description

- The project description is narrow and considered CEQA piece-mealing in relation to previous California Energy Commission (CEC) studies and planning related to project transmission capacity needs
- To avoid piece-mealing, describe any proposed modification to existing facilities, clarify relations between the Project and the larger TANC, and identify activities linked to facilities outside the region
- Include types of equipment or methods used, maximum area of impact or volume of soil/sediment removed or disturbed, and location of materials for disposal
- Describe seasonal work windows (timing needed for agricultural work and calving)

- Consider use of tubular steel poles instead of lattice towers
- Consider use of single pole towers and other options to reduce footprint of towers or number of towers
- Discuss if construction barges would be used
- The project grants SMUD rights for only 40 years and may necessitate similar infrastructure upgrades in the future

4.2.3 Public Involvement, Information and Scoping Period

- Requests to extend the comment period to allow more time to provide constructive comments
- Requests for maps with finer detail and precise boundaries and locations of the proposed transmission line
- Requests to notify all potentially affected landowners about proposed project so they can participate in public process
- Request to provide project information to state and Federal agencies who funded conservation easements in Yolo County.
- Requests to provide draft/preliminary reports and studies regarding the CoSu Line, and/or documents prepared for, about, or regarding the 500-kV transmission line between the Maxwell and O'Banion substations
- Opposition to delay in including County Road 16 Study Corridor and Segment 2 Alternative Study Area within an additional scoping period, instead of first scoping period
- Notice materials were not provided in the native languages of some landowners

4.2.4 Alternatives

- Request that SMUD and WAPA prepare more detailed and defined purpose and need statements in order to enable analysis of a reasonable range of alternatives for meeting said purpose and need
- Request SMUD analyze a reasonable range of alternatives and WAPA explore and evaluate all reasonable alternatives to SMUD's proposal that could meet the Federal Purpose and Need
- Identify a range of reasonable alternatives that would attain most of the project objectives while avoiding/reducing potentially significant impacts
- Consider a no-action alternative that provides a baseline for environmental analysis
- Expand the range of alternatives and include analysis of alternatives with fewer impacts to Colusa and Sutter counties

- Develop new alternative routes, including with the necessary input of Colusa and Sutter counties, which do not run through National Wildlife Refuges, private hunting clubs, and wildlife-friendly farming areas
- Explain why the alternative that would construct a 50-foot line between O'Banion Substation and existing 500-kV Table Mountain-Tesla Line is not being considered
- Evaluate a southerly route alternative along County Line Road and connecting to the Elverta Substation
- Consider following the Colusa-Yolo County line and connect to the Elverta Substation in Sacramento County
- Consider a route at the Colusa County-Yolo County line, then north to another substation or the O'Banion Substation
- Examine a route at the border between Yolo and Colusa counties
- Consider the shortest route near Woodland and into Natomas
- Consider eliminating the County Road 16 Corridor Study area due to its potential impacts to agricultural resources
- Avoid installing additional transmission lines along Elverta Road
- Consider other connection alternatives, including upgrading the existing 230-kV line along the proposed Northern Corridor Study Area route to allow for delivery of additional contracted capacity from COTP
- Consider the Northern Corridor Study Area as a preferred alternative due to the predominance of rice fields and open ground that may be better suited
- Consider a route two miles north of the Northern Study Corridor Area on the western edge
- Examine a transmission path that runs along the base of the Sutter Buttes and east of the Sutter Bypass
- Consider an alternative burying at least the portions of the lines adjacent to the Sutter and Colusa National Wildlife Refuges
- Consider an alternative route that would be a 50-foot line between the O'Banion Substation and existing 500-kV line
- Consider moving the southern corridor two miles north
- Consider a route near the Tisdale Weir
- Consider heading north along the County Road 16 Study Area Corridor before reaching Sacramento International Airport, since the corridor comes into the airport's air space
- Consider alternatives other than the County Road 16 Corridor Study Area and Segment 2 Alternative Study Area because of the proximity to Sacramento International Airport

- Consider an alternative to the County Road 16 Corridor Study Area, such as further south along County Road 17
- Consider following the Natomas Cross Canal to the existing O'Banion-Natomas transmission line, and then head south paralleling this line to the Elverta Substation as a less intrusive and less expensive alternative
- Consider an alternative other than the County Road 16 Corridor Study Area because of the potential impacts that corridor study area could have on the Natomas Basin Conservancy's implementation of their habitat conservation plans
- Consider an alternate routing of the Segment 2 Alternative Study Area; rather than turning east at parcel 35-130-019, continue northeast following the cross canal to Highway 99, then continue south following Highway 99 to reconnect to Segment 2 Alternative Study Area
- Consider a route along Sankey Road in Sutter County
- Disclose, analyze, and mitigate to less-than-significant all impacts the project may have on, in, and near the Natomas Basin
- Study the feasibility of extending the Segment 2 Alternative Study Area at its northern point eastward to connect into the existing transmission line, eliminating the need to construct through the Natomas North Precinct Plan area
- Consider a route that follows existing rights-of-way or public easements such as roadways or water transmission facilities
- Consider stringing new lines on the existing WAPA towers or enlarging their size
- Consider using the existing WAPA line that runs south to Tracy and back north to Nimbus
- Consider updating the existing WAPA line from Maxwell to O'Banion
- Use existing substations to generate needed power
- Avoid constructing a new substation in Maxwell near existing homes
- Examine options for construction of underground transmission lines
- Examine alternative routes along Interstate 5 that would have less impacts on agricultural crop production
- Evaluate alternatives that avoid or mitigate adverse floodplain or wetland impacts
- Consider constructing the shortest transmission route (Southern Corridor Study Area) to avoid greater impacts to migratory birds, other wildlife, and rice fields that support migratory bird habitat
- Consider constructing the shortest transmission route (Southern Corridor Study Area) because it is the most direct

- Avoid constructing the transmission line in the Southern Corridor Study Area because of potential adverse impacts to migratory birds migrating along the Pacific Flyway and other wildlife populations residing within the area
- Consider an alternative route to the County Road 16 Corridor because of its potential impact on Swainson's hawk
- Consider constructing the route that is the least costly and has least impact to landowners
- Consider a no-action alternative, as it may have least impact to migratory birds, other wildlife, and regional viewsheds
- Consider siting new and existing WAPA lines away from wildlife refuges and keeping the WAPA lines close together
- Analyze alternatives that reduce impacts on waterfowl at national and state wildlife refuges, private wetlands, rice agriculture, and private lands protected by conservation easements
- Specify the amounts of renewable energy necessary for SMUD's purposes and show it can actually be transmitted by the CoSu Line
- Examine alternatives that utilize solar power
- Consider an alternative solar or wind project in Sacramento County
- Consider alternatives for the changing nature of energy delivery (grid impacts) due to different energy sources and storage
- Consider biomass generation as California renewable resource
- Evaluate reactivating SMUD's nuclear power plant
- Examine alternatives that involve the development of renewable energy generation capacity within or adjacent to SMUD's service area
- Consider an alternative that does not link the SMUD system to the COTP
- Examine alternative means of reducing SMUD's carbon emissions without developing significant new infrastructure
- Consider an alternative that provides SMUD incentives for and/or direct implementation of distributed generation
- Discuss other renewable alternatives not provided or adequately explained
- Consider an alternative that has ease of implementation and the least cost
- SMUD is in Sacramento County; therefore the lines should stay in Sacramento County
- Analyze alternatives to purchase power from the ISO, join the ISO, and negotiate special terms with ISO
- Analyze and report on the expected availability of California renewable compliant power from WAPA or other sources that will travel down the CoSu Line

4.2.5 Land-use and Recreation

- Analyze and mitigate land use planning and growth-inducing impacts
- Analyze and mitigate recreation impacts in Colusa and Sutter counties, including impacts to use of walking trails in wildlife refuges
- Analyze potential impacts to wildlife refuges, wildlife areas, wildlife viewing, waterfowl hunting, including reduced hunting opportunities due to impacts to migratory waterfowl, and conservation easements
- Consider landowners who already have transmission lines, rail lines, gas lines, or substations on their property and the increased impacts to farming, aesthetics, and land value
- Include and analyze the initial land planning already conducted for the Natomas North Precinct Master Plan
- Consider the impacts to proposed development in the Natomas North Precinct Planning Area along Elverta Road in Sacramento County, specifically impacts to the land-use plan as well as location of schools, road improvements, public spaces, and housing densities
- Consider the impacts to proposed development in the Natomas North Precinct Planning Area along Elverta Road in Sacramento County, specifically impacts to the Natomas Basin Conservancy
- Consider that placing 500-kV lines, poles, and substations within the current County Road 16 Corridor Study Area would introduce incompatible land uses within an urbanizing area, and the route would be directly within the North Natomas Precinct project and bisect the community
- Analyze and consider higher land acquisition costs associated with County Road 16 Corridor Study Area in the Natomas North Precinct Plan area
- Discuss the potential expansion of the Elverta Substation and the impact on surrounding properties
- Disclose, analyze, and mitigate for land-use impacts and conflicts with the Natomas Basin Habitat Conservation Plan, Metro Air Park Habitat Conservation Plan, and Yolo Habitat Conservancy's Habitat Conservation Plan/Natural Community Conservation Plan
- Consider that the Project overlaps a 200-acre Swainson's hawk conservation easement held by the Yolo Habitat Conservancy that prohibits infrastructure development and ground disturbance activities in perpetuity
- Consider the impacts the CoSu Line could have on the quality of recreational experience in the County Road 16 Corridor Study Area, including areas within the Natomas Basin
- Disclose the short- and long-term impacts to public access and recreation for the Sacramento River

- Consider impacts to land held in conservation easements as part of the Yolo Land Trust, and regulations prohibiting restrictions on the landowners for planting and maintaining trees
- Consider impacts to Yolo County's wine region
- Describe and quantify the potential impacts to both State of California-owned property and protected property
- Discuss impacts to recreation if transmission lines cross the Sacramento River and barges are used during construction of lines
- Discuss impacts to photographers' views of wildlife refuges due to transmission lines
- Discuss impacts to conservation easements including California Farmland Conservancy Program conservation easements, land enrolled in Williamson Act contracts, lands used in public and private conservation programs, including acquisition and/or avoidance of such lands
- Explain when WAPA would use eminent domain
- Describe proposed fencing on project site
- Comply with California planning, zoning, and environmental laws
- Consider the impact the configuration of the transmission lines would have on parcels, resulting in the prevention of aerial applications in east-west or north-south patterns
- Consider potential impacts that nearby transmission lines could have on the ability to operate amateur radio station (7 to 30 MHz range of frequency) and interference with internet connections
- Consider impacts to property owners that already have impacts from other projects, roadways, or utilities on their property (PG&E lines, vicinity to Highway 505, fish screens, bridges, and public boat docks)
- Consider the impact to landowners from ongoing and increasing infrastructure that utilizes water and roads and increases dust and noise
- Consider the impacts to landowners who are affected by utility's efforts to increase landowner responsibility for vegetation management under transmission lines
- Consider impacts to agricultural landowners due to placement of permanent infrastructure in agricultural land and its resulting constraint on the ability to plant appropriate crops, adapt to new demands, and adjust to changing economic conditions

4.2.6 Water Resources

- Analyze and mitigate impacts on aquatic resources, water supply, surface water, groundwater, water quality, and water rights

- Analyze water quality impacts to irrigated agriculture and if construction would cause water quality/ exceedances (i.e. sediment, toxicity, and dissolved oxygen)
- Consider adverse impacts to water quality and quantity during construction
- Discuss existing water wells within the easement of the new transmission line and if they would be relocated
- Discuss alteration of drainage or flooding patterns
- Evaluate reduced income from water sales, and impacts on water costs to other users with local water districts
- Examine impacts to irrigation water service, including disturbance to conveyance and maintenance
- Analyze impacts to water use from reduced ability to use buried irrigation systems and necessity of rerouting irrigation lines around towers
- Examine impacts to drainage canals, irrigation canals, and surface and subsurface irrigation
- Consider the impact to land that cannot be farmed and therefore will not have water, as that could affect endangered species and birds species drawn to the land
- Analyze the potential impact of introducing invasive species into California waterways and ecosystems (including aquatic invasive species and terrestrial plants due to construction boats or barges)
- Analyze if project elements, such as changes in bankside vegetative cover, would impact non-native fisheries
- O'Banion Substation is located in a Special Flood Hazard Area; therefore, new construction or improvements may need to be elevated to one foot above Base Flood Elevation and should meet flood standards and elevation requirements for facilities in these designated areas
- Analyze the impacts from potential flooding along Hahn Road in Colusa County
- Consider the weakened and lower levees in the Segment 2 Alternative Study Area on the west side of the Sacramento River and Cross Canal, and either side of the Feather River, and the potential hazard to transmission lines in the event of a levee failure
- Analyze potential impacts the Northern Corridor Study Area could have on local water conveyance infrastructure and associated rights-of-way
- Consider the impacts to proposed development in the Natomas North Precinct Planning Area along Elverta Road in Sacramento County, specifically impacts to drainage and sewer locations
- Analyze potential impacts to existing Sacramento River Flood Control Project (SRFCP) facilities protecting the Natomas Basin and the level of flood protection provided by these facilities

- Determine needs for permits including Clean Water Act Section 404 permit; Streambed Alteration permit; Water Quality Certification; Waste Discharge Requirement permit; National Pollutant Discharge Elimination System permit; Industrial Storm Water general permit; Phase I and II Municipal Separate Storm Sewer Systems permit; Construction Storm Water general permit; permits from Central Valley Flood Protection Board, including encroachment permits for the SRFCP facilities; Reclamation District 1000 encroachment permit for County Road 16 Corridor Study Area and Segment 2 Alternative Study Area; and other applicable permits
- Note that the proposed Project is within the Sacramento River, which is a regulated stream under the Central Valley Flood Protection Board and may require a permit for construction, maintenance, and protection of adopted plans for flood control
- Coordinate construction of facilities within County Road 16 Corridor Study Area with the U.S. Army Corps of Engineers' Natomas Levee Project
- Analyze project conformity with Department of Water Resources' Urban Level of Flood Protection or Urban Levee Design Criteria standards
- Analyze potential impacts to operation and maintenance of SRFCP features within County Road 16 Corridor Study Area, as well as to interior drainage system managed by Reclamation District 1000

4.2.7 Air Quality

- Analyze cumulative and indirect air quality impacts
- Describe ambient air conditions
- Discuss nonattainment areas
- Include all emissions calculations and analysis assumptions in Draft EIS/EIR
- Estimate emissions in construction and operation phases
- Analyze air quality impacts due to increased traffic during construction
- Discuss mitigation measures for construction emissions, fugitive dust, and operations
- Include a discussion on General Conformity applicability and analysis, if necessary, since this is both a federal and state project

4.2.8 Greenhouse Gases and Climate Change

- Consult with local and regional air quality management districts regarding methods and models to evaluate greenhouse gas (GHG) emissions
- Analyze GHG emissions
- Analyze impacts in project area that are susceptible to climate change
- Include evaluation of potential GHG emissions from construction

- Incorporate a holistic approach to complying with carbon emission reduction goals by considering the following in the analysis: the carbon footprint of actual construction and maintenance of the CoSu Line; the increased carbon intensity of agriculture on affected lands, such as additional aerial applications; the inefficiency and increased carbon emissions from transmitting power via the CoSu Line rather than sustainable distributed power in California; the positive economic impact of additional jobs and investment in renewable power generation and storage in California, instead of importing power from neighboring states with less demanding renewable power standards

4.2.9 Biological Resources

- Analyze and mitigate temporary, permanent and cumulative impacts, including construction and maintenance activities, on biological resources, including migratory birds, nongame nesting birds, waterfowl, wildlife, endangered species and special status species, such as giant garter snake, tricolored blackbird, Swainson's hawk, and other sensitive species
- Analyze impacts on migratory bird's flight patterns, mortality, foraging, nesting, and habitat
- Analyze the impact along the Pacific Flyway
- Consider that the Western Hemisphere Shorebird Reserve has designated rice fields and wetlands of the Sacramento Valley as a site of international importance to shorebirds
- Consider that impacts to Swainson's hawk in Yolo County (one of highest concentrations of Swainson's hawk nesting sites in California) and potential loss of foraging habitat, agricultural land and air space used during foraging
- Consider the impact on nesting trees and habitat fragmentation within the County Road 16 Project Corridor Study Area – there are 38 documented Swainson's hawk nest sites within one mile of the centerline of the County Road 16 Corridor Area and four hawk nest sites within one mile of the Segment 2 Alternative Study Area centerline
- Review studies linking EMFs from transmission lines to decline in honeybee populations, and consider that the project area has at least three commercial apiaries
- Analyze mortality, disturbance, reduced food resources, and amount of waterfowl habitat acreage impacted
- Analyze baseline conditions of fish and wildlife habitats and populations
- Analyze impacts to wetlands, marshes, or tributaries
- Consider the potential impacts to upland birds in the County Road 16 Corridor Study Area because there is less rice land and fewer protected areas, but it passes through substantial grassland and upland habitat
- Include avoidance, mitigation and conservation measures for state-listed species and Federally-listed species, as well as monitoring, reporting and adaptive management efforts

- Describe and quantify the potential impacts to both state-owned property (i.e. conservation easements) and private property
- Consult the California Natural Diversity Database (CNDDB) and previous studies in the project area for presence of sensitive species, and conduct species-specific surveys to determine presence in project vicinity
- Use California Department of Fish and Wildlife (CDFW) survey and monitoring protocols and guidelines
- Coordinate with CDFW and the U.S. Fish and Wildlife Service (USFWS)
- Disclose if an incidental take permit or consistency determination is required prior to construction
- Identify jurisdictional delineation and wetlands and propose mitigation measures to avoid, minimize, and mitigate impacts to these resources
- Consider introduction of invasive species, non-native species, and noxious weeds to project vicinity due to construction practices, and include mitigation measures and management plans to monitor/control
- Consider the location of native oak grove that is habitat for hawks and owls
- Consider the locations of Nature Conservancy land with the corridor study areas, and tree mitigation land near Sacramento River that provides habitat for birds and other wildlife
- Consider that the presence of transmission lines can be a safety hazard, or make it impossible, for aerial applications that have to be done at night due to protection of bees
- Consider that the County Road 16 Corridor Study Area has habitat that supports more than 30 species of raptors, by providing open flight area, hunting grounds, and quiet nesting area
- Identify and delineate lands held for conservation of wildlife, plants, open space, or agricultural protection because they provide wildlife habitat
- Identify and consider connectivity and corridors between protected areas and between protected areas and intact habitat that support wildlife and plant species
- Identify and delineate important water resources, riparian corridors, and floodplain areas
- Avoid routes that are previously conserved for wildlife, plants, open space and agriculture, and impair connectivity, riparian corridors, and floodplain areas
- Avoid protected and sensitive areas and conservation easements, such as the River Ranch Complex along Sacramento River
- Note that the Refuge Improvement Act of 1997 provides guidance on permitting commercial activities on National Wildlife Refuges, and commercial activities that detract from the purpose the Act established are generally considered incompatible and would not be authorized

4.2.10 Public Health and Safety

- Discuss hazards that transmission lines pose to crop duster airplanes and helicopters
- Discuss hazards that transmission lines pose to pilots
- Discuss hazards that transmission lines pose to machinery
- Discuss hazards that transmission lines pose to agricultural employees
- Discuss hazards transmission lines pose to oil, gas, and irrigation wells
- Discuss direct impacts to GPS systems and indirect impacts to safety of agricultural employees from loss of GPS signals, such as reduced tractor auto steer function
- Analyze dangers to pilots and agricultural aircraft from both towers and the transmission conductors during aerial application of seed, spray, and fertilizer
- Discuss direct impacts of hazards from EMF on livestock, wildlife and humans, and indirect impacts on reduced property values
- Discuss transmission line interference with pacemakers and heart conditions
- Analyze impacts to physical and mental health of children, adults, and animals in vicinity of 500-kV transmission lines
- Consider that the World Health Organization has recognized adverse health effects of exposure to EMFs
- Acknowledge that there is a public perception that EMF levels produced by overhead transmission lines may cause diseases, such as childhood leukemia
- Analyze impacts to home and utility districts' receivers (such as radios, televisions, and cellular phones)
- Analyze potential fire impacts from transmission lines, including necessity to prepare a fire prevention plan
- Consider impacts to reclamation and levee district canal maintenance workers and potential risk of electrocution from operating equipment near transmission lines
- Consider impacts to VORTAA/FAA radio antennas, including possible interruption or loss of signal
- Analyze impacts from constructing a transmission line in the Southern Corridor Study Area and potential hazards from new aerial obstacles for pilots, such as flying into transmission lines
- Consider the safety impacts of installing transmission lines in the Segment 2 Alternative Study Area near the Sacramento International Airport
- Consider routine burning of rice fields in the vicinity of transmission lines and the potential danger burning could pose to nearby transmission lines
- Analyze public safety near substations

- Consider the adverse risk transmission lines placed in close proximity can have upon railroad signals, such as inductive interference that can cause track signal failure
- Analyze the potential adverse effect of ground fault events (power surges from transmission lines or substations) into railroad signal equipment
- Review the example from Florida Power & Light Company's 2011 Electric Service Standards for information regarding customer and employee safety near power lines, including safe distances to maintain for working near power lines

4.2.11 Socioeconomics

- Analyze and mitigate socioeconomic impacts, including impacts to rural lifestyle, farming livelihoods and operations, rice and orchard farming operations, generational property owners, increased farming costs, increased cost of credit, and loss of revenue over short-term period as well as over generations if farmland is taken out of production
- Consider impacts to local agricultural support resources such as seed dealers, fertilizer dealers, equipment dealers and labor
- Consider the additional time and money required for agricultural operations to work around towers each year
- Consider the economic impact of closing and re-routing water wells on agricultural land
- Discuss eminent domain and severance damages
- Analyze reduced income for property owners that operate duck clubs on their property
- Analyze impacts to duck hunting businesses and tourism, including lost revenue from reduction of hunting leases and other sources
- Assess economic impacts to existing waterfowl habitat
- Analyze impacts of reduced income from hunting leases and duck blinds and reduction in duck hunting tourism due to impacts to waterfowl
- Consider the disparity of value between land with transmission lines and similar lands with no transmission lines
- Analyze the impacts to land values and consider impacts to landowners due to decreased property values
- Understand the hardships to farmers and smaller landowners in Yolo County if transmission lines are installed, including the economic impact when land is taken out of production
- Consider the impacts to businesses located in Dufour, specifically the inability to expand operations
- Consider the impacts to Colusa County from taking farmland out of production, including impacts to minorities

- Consider that impacts to agricultural businesses are no less significant than those to urbanized areas
- Consider the impacts substations create due to their substantial footprints that remove agricultural land from production
- Analyze impacts to aviation companies, aircraft operators, and airstrip operators, including reduced ability to conduct aerial operations because of transmission lines, and compensate airstrip operators if airstrips cannot be used due to project operations
- Analyze community impacts if the Sutter Energy Center is dormant due to the CoSu Line project
- Consider loss of revenue to reclamation and irrigation districts if irrigable land is reduced, and farming operations are reduced or eliminated
- Disclose and analyze all significant impacts and feasible mitigation in Colusa and Sutter counties
- Consider economic impacts to farmers and agricultural operators in Yolo County
- Consider environmental justice impacts to Sutter and Colusa counties
- Consider environmental justice issues along portions of the Southern Corridor Study Area
- Consider adverse tax consequences to properties in Williamson Act contracts
- Explain how SMUD would fund the project and discuss whether the project would be financed only by SMUD ratepayers or bonds backed by the State of California
- Analyze the feasibility and costs of mounting additional power lines on existing towers or upgrading existing towers.

4.2.12 Noise

- Evaluate noise and vibration impacts on fish and birds from construction and include mitigation measures to minimize impacts
- Discuss impacts associated with noise and buzzing from transmission lines
- Consider the noise impacts to proposed development in the Natomas North Precinct Planning Area along Elverta Road in Sacramento County, specifically impacts from the transmission lines and substation

4.2.13 Visual Resources

- Analyze and mitigate impacts on visual and aesthetic resources
- Discuss direct impacts to viewsheds caused by towers and lines, specifically for landowners
- Discuss indirect impacts to wildlife viewing and uses of walking trails in wildlife refuges in (Colusa and Sutter counties) and the Sutter Buttes

- Consider that transmission line towers could be a visual blight in more densely populated settings, such as Yolo County
- Consider that transmission lines and towers installed along the County Road 16 Corridor Study Area will degrade the skyline of Dunnigan Hills
- Consider the impact to the Natomas Basin viewshed, and mitigate according to the habitat conservation plans in place for the Basin
- Consider the impact to visual resources along the Feather River, specific to the Segment 2 Alternative Study Area
- Consider the impacts to proposed development in the Natomas North Precinct Planning Area in along Elverta Road in Sacramento County, specifically impacts to viewsheds and the aesthetic implications of constructing 500-kV lines within an urban setting

4.2.14 Historic, Cultural, and Paleontological Resources

- Analyze and mitigate impacts on cultural resources
- Analyze protection of historic properties and homes
- Conduct surveys along Hahn Road, Grimes-Arbuckle Road, and Spicer Road within the Southern Corridor Study Area for cultural artifacts
- Consider that the County Road 16 Corridor Study Area is known to contain substantial numbers of burials, village sites, and other significant historic and cultural resources
- Analyze the impacts to the historic Fremont Settlement monument opposite the mouth of the Feather River and the Indian Mounds on the Sacramento River levee
- Consult with California Native American Tribes
- Consult with Native American Heritage Commission regarding Sacred Lands Files search and Native American Tribal Consultation List
- Review and comply with requirements of Section 106 of the National Historic Preservation Act, Assembly Bill 52, and Senate Bill 18
- Evaluate impacts to submerged cultural resources in the project area
- Obtain shipwreck data from California State Lands Commission (CSLC) and discuss CSLC's jurisdiction of abandoned shipwrecks, archeological sites, and historic or cultural resources
- Consult with California Historical Research Information System Center for archaeological records search in project vicinity
- Determine need for archaeological inventory survey and preparation of professional findings and recommendations report
- Consider the impacts to the bridge along Helen Road in Colusa County and indirect impacts to safety for visitors

- Include a mitigation and monitoring reporting program plan that discusses provisions for identification and evaluation of inadvertently discovered archaeological resources, disposition of recovered cultural items not burial associated, and treatment and disposition of inadvertently discovered human remains
- Conduct surveys, studies and consultations as required by the National Historic Preservation Act and section 4(f) of the Department of Transportation Act

4.2.15 Transportation

- Analyze and mitigate impacts on airports and aviation operations, such as reduced operations due to transmission lines
- Analyze loss of airstrips, and additional fuel required to access other airstrips and re-fly fields (multiple aerial applications due to portions skipped due to lines and towers)
- Consider impacts to airstrips in Southern Corridor Study Area and potential safety concerns during takeoff and landing of aircraft in this area
- Consider impacts to nine airfields in Sutter County
- Consider the impact to County Road 90A in Yolo County, which is used as an airstrip between County Road 16 and County Road 14
- Consider the impact to the airstrip along Spicer Road in the Southern Corridor Study Area, specifically taking it out of operation
- Identify all small airstrips in project area and include on project mapping
- Disclose, analyze, and mitigate airplane hazards and impacts on air traffic patterns due to the County Road 16 Corridor Study Area's proximity to Sacramento International Airport
- Consider impacts to Sacramento International Airport in County Road 16 Corridor Study Area and Segment 2 Alternative Study Area due to close proximity of transmission lines and towers, including potential hazards, and coordinate with Federal Aviation Administration
- Consider impacts to Sacramento International Airport in County Road 16 Corridor Study Area and Segment 2 Alternative Study Area and potential need for significant efforts to notify pilots (through special lighting and marking) about the presence of transmission lines and towers
- Consider mitigation measures at Sacramento International Airport to minimize attracting wildlife, especially birds, near proposed transmission lines and towers
- Consider that the use of land at Sacramento International Airport may be subject to mitigation for habitat take
- Disclose impacts to existing roads, such as rerouting county roads
- Analyze transportation impacts in the Southern Corridor Study Area due to road closures during construction
- Consider the impacts from increased traffic on farm roads and access roads

- Union Pacific Railroad objects to any route that runs parallel within 300 feet of railroad right of way, as well as structures along the right of way, and all crossings will require agreement with Union Pacific and review for safe operation of signaling equipment
- Consider ground fault events that cause electrical currents in the ground through rails and signal equipment and associated monetary damages and destruction of equipment
- Determine the need for permits, such as requests for wireline crossings across railroad properties.
- Adhere to utility accommodation policies and encroachment on the State Highway system
- Note that any work on aerial crossings of the State right-of-way will require an encroachment permit

4.2.16 Public Services and Utilities

- Analyze and mitigate impacts to public services and utilities
- Analyze impacts to natural gas production wells
- Address impacts to existing utilities (such as 4M Water District and PG&E) and reclamation districts (such as canals and maintenance work)
- Coordinate with PG&E to determine regional and local impacts of CoSu Line
- Evaluate reduced income from water sales, and impacts on water costs to other users with local water districts
- Discuss project need in relation to Calpine's Sutter Energy Complex
- Please note that Colusa County expects SMUD and WAPA to seek additional approval from the County prior to locating or constructing any electrical transmission lines, substations, or related facilities in the County, as required under Chapter 16 of the Colusa County Code and California Public Utilities Code Section 12808.5

4.2.17 Agriculture and Forestry Resources

- Analyze impacts to the agricultural land categories of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land
- Discuss impacts to conservation easements including California Farmland Conservancy Program conservation easements, land enrolled in Williamson Act contracts, lands used in public and private conservation programs, including acquisition and/or avoidance of such lands
- Analyze and mitigate impacts to agricultural resources, such as rice and tree crops, farming operations such as disruption to planting in row crops, reduction in acreages able to be planted, reduction of production crops, potential loss of productivity of disturbed soils, fragmentation of agricultural operations, availability of leasable replacement farmland, loss of cropping options, conversion of agricultural land, lost future revenue, property values, taxes, support infrastructure, wildlife conservation programs, and cumulative impacts

- Discuss impacts to farm land and operations if easements are in place for the project, specifically insufficient land available or ability to efficiently farm
- Consider impacts to agricultural resources from modification or removal of airstrips
- Consider increased farming operational costs due to challenges working around towers and aerial spraying inefficiencies due to presence of transmission lines
- Consider impacts to small parcels and the resulting inefficiencies and economic impacts if they are split by the CoSu Line
- Consider the high cost of land value and easements for Yolo County parcels due to Class I soil costs
- Consider the potential impact on the acreage of annually-farmed rice lands in the Segment 2 Alternative Study Area
- Consider impacts to aerial application of crop pesticides and herbicides, including additional costs, lost yield, increased water needs, increase in weeds, additional costs of weed abatement, limitations on timing for application, reduced ability to apply, potential damage or depletion of crops, additional passes of planes and/or helicopters, and unfavorable application results
- Consider impacts to farmers because helicopter pilots refuse to fly fields with power lines, must spray at night due to protecting bee pollinators, and in spring need to use helicopters for frost control
- Evaluate potential adverse effects the Southern Corridor Study Area could have on waterfowl and shorebirds, local agricultural irrigation water purveyors, agricultural resources, airports, houses, and drying facilities
- Consider the impacts to agricultural production in Yolo County and understand that mitigation would not compensate for the impact
- Consider the impact to the Dunnigan Hills Viticulture Region, as it has been developed for over 30 years to expand awareness in Yolo County as a premium wine grape growing region
- Consider the impact to the Dunnigan Hills Viticulture Region from reducing land values for wine growing and reduced agricultural revenue for Yolo County
- Examine impacts to irrigation systems, including costs to relocate systems buried deep underground
- Consider the impacts to yields of row crops, which are dependent on timing of irrigation and efficient irrigation systems
- Analyze the impact on organic crops due to the potential increase of weeds spreading throughout crops from increased vegetation around towers and decreased weed control abilities

- Consider efforts to use renewable resources, such as feedstock and agriculture waste from removal of orchards for biomass generation, and operating the biomass plant east of Woodland
- Describe landowner compensation related to impacts on farming practices and reduced land values, which affects ability to apply for loans
- Consult with USDA-NRCS regarding eminent domain actions and mitigation
- Discuss direct/indirect conversion of agricultural lands and mitigation
- Review the applicability of the Orchard Planting Agreement between the California Farm Bureau and WAPA to address existing easement issues
- Discuss vegetation management practices under transmission lines and potential loss of crops in easement area from trees requiring removal or being cut too low to be productive
- Discuss impacts from vegetation management, such as trimming in existing mature orchards
- Discuss impacts to GPS systems and potential interference transmission lines could have on agricultural operations such as spraying, land leveling, placement of drip tape, and plantings, as well as loss of auto steer functions for tractors and logging spray swaths for chemical applications, and hampering precision application of fertilizers and field yield mapping during harvest
- Discuss project construction, including scheduling, access to lines and towers after construction, restoration of land affected by construction, during project construction, and consider construction scheduling around agricultural work
- Discuss project design, including impacts to tree height

4.2.18 Energy Conservation

- Analyze and mitigate impacts on energy supply
- Explain renewable sources and contracts
- Examine use of sustainable power-generating sources
- Conduct a cost-benefit analysis of purchasing power elsewhere in California
- Analyze and report on the expected availability of California renewable compliant power from WAPA or other sources that would be used by the CoSu Line
- Examine the changing nature of energy delivery and potential grid impacts due to different energy sources and storage
- Examine the potential impact the project could contribute to related to the over-supply of power in California, since the CoSu Line would bring in additional power from out of state
- Analyze if increasing the supply of power would reduce the demand of locally-produced power and contribute to closures of existing facilities

4.2.19 Minerals

- Analyze and mitigate impacts to future development of a property's mineral rights
- Analyze impacts to existing natural gas wells including those outside the easement but that have angled bores
- Analyze direct impacts to gas producing wells located in the Southern Corridor Study Area, and impacts to landowners to drill new wells or retrofit old wells

4.2.20 Cumulative Impacts

- Address the potential for the County Road 16 Corridor Study Area to physically divide an established community (the Natomas North Precinct Master Plan)
- Analyze the potential impact of renewable energy stimulation
- Analyze the impacts of all past, present, and reasonably foreseeable transmission and related infrastructure projects in the Sacramento Valley
- Analyze the potential significant loss of crop production due to procurement of easements and access roads needed for ongoing maintenance of towers and lines
- Consider the cumulative impact to food production due to increased development of housing and rail, and gas and transmission lines within agricultural resource areas
- Use Environmental Protection Agency, Federal Highway Administration, and Caltrans methodology to describe cumulative impacts

4.2.21 Growth Inducement

- Consider growth-inducing impacts the Project would have on Sacramento County, such as increased water demands, increased transit miles, increased housing, and increased infrastructure needs

4.2.22 Mitigation

- Consider appropriate compensation for acreage, such as $10,000 per acre
- Consider compensation of $20,000 an acre for Yolo County landowners with Class 1 soil suitable for orchards
- Compensate landowners for loss of revenue from hunting or recreation on property
- Compensate landowners by purchasing duck blinds of their choice and paying annual dues
- Consult with the U.S. Department of Agriculture Natural Resources Conservation Service regarding eminent domain actions and mitigation
- Discuss direct/indirect conversion of agricultural lands and mitigation
- Discuss mitigation measures for construction emissions, fugitive dust, and operations

- Include avoidance, mitigation and conservation measures for covered species, state-listed species, and Federally listed species, as well as monitoring, reporting and adaptive management efforts
- Consider introduction of invasive species, non-native species, and noxious weeds to project vicinity due to construction practices, and include mitigation measures and management plans
- Include a mitigation and monitoring reporting program plan that discusses provisions for: identification and evaluation of inadvertently discovered archaeological resources, disposition of recovered cultural items not burial associated, and treatment and disposition of inadvertently discovered human remains
- Evaluate noise and vibration impacts on fish and birds from construction and include mitigation measures to minimize impacts
- Disclose and analyze all significant impacts and feasible mitigation in Colusa and Sutter counties
- Consider that, because the County Road 16 Corridor Study Area traverses the Natomas Basin and is part of Natomas Basin Habitat Conservation Plan, it uses agricultural land as habitat mitigation for the Specific Plan build-out that is covered by an Incidental Take Permit and therefore may unacceptably impact this land
- Consider that any mitigation property currently in the Natomas Basin Habitat Conservation Plan area would need to be replaced and all impacts to the Plan should be analyzed

4.2.23 General Opposition and Known Areas of Controversy

- Opposition to WAPA and SMUD installing transmission lines in Colusa, Sutter, Sacramento, and Yolo counties
- Purpose and need statements were not adequately explained and supported by circumstances, agency's mandates, and facts
- Analyze other alternatives for obtaining energy besides transmission lines
- Opposition and/or concern over installing transmission lines on private property, over structures, houses, businesses, airstrips, water wells, and gas wells
- Concern there are no benefits and only impacts to Colusa, Sutter, or Yolo counties from implementation of the project
- Explain how the project objectives will benefit Colusa and Sutter counties' needs for local and regional reliability
- Concern that benefits to lead agencies could come at the expense of impacts to local agricultural operations and economy
- Concern that the Pacific Flyway is disregarded in the name of renewable energy

- There are better approaches to solving renewable energy that do not disrupt homes, farms, rural business, and the environment
- Farmers play a role in California's global economy and statewide ecotourism, and impacts to their livelihood should be considered and not minimized
- Agricultural landowners who cannot farm on their property due to transmission lines and towers located on or near their property are unable to generate income
- There is a disconnect about the value of land within the project study area, in that WAPA and SMUD consider agricultural property wide open spaces, while to farmers and landowners, the land is a means to generate income and maintain a livelihood for future generations
- Objection that SMUD should be lead agency under CEQA; suggests California Energy Commission
- Objection that SMUD's needs for energy impact landowners outside of their service area
- Explain whether WAPA has been exempt from CEC planning and coordination for this project
- SMUD customers should pay for the project
- SMUD is in Sacramento County so transmission lines and towers should be located in Sacramento County

Appendices provided separately