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8.11 Visual Resources

8.11.1 Introduction

The following analysis evaluates potential visual resource impacts of the CPP project, and the consistency of the project with applicable LORS, in conformance with applicable guidelines of the California Energy Commission and the CEQA.

8.11.2 Laws, Ordinances, Regulations, and Standards

8.11.2.1 Federal

No federal LORS relating to visual resources apply to the proposed project.

8.11.2.2 State

Scenic Highway Program

No eligible or officially designated state scenic highways are located within the viewshed of the proposed project, according to the California Scenic Highway Program, administered by the California Department of Transportation (Caltrans) (Caltrans, 2001).

8.11.2.3 Local

The proposed project (power plant, transmission line, and gas pipeline) would be located in Sacramento County.

The Sacramento County General Plan Scenic Highways, Public Facilities, Conservation, and Land Use elements contain LORS that pertain to the protection and maintenance of visual resources. The policies and the project's compliance with them are discussed in Section 8.11.5.6, Compliance with LORS.

The District is expressly exempt from zoning ordinances under California Government Code Section 53091 (Sacramento County, 2001). However, a relationship is maintained between the District and Sacramento County to provide energy projects that meet the intent of the Public Facilities Element of the County of Sacramento General Plan. Therefore, the zoning ordinances that are potentially applicable to the proposed project are also discussed in Section 8.11.5.6.

8.11.3 Affected Environment

8.11.3.1 Regional Landscape

The project site is located within a regional landscape characterized by a nuclear power plant, rolling hills, vineyards, cattle grazing land, open space, and rural residences. The components of the CPP project will be developed within the existing 2,480-acre District site that is located in unincorporated southeastern Sacramento County. A portion of the site is developed into the Rancho Seco Plant and a photovoltaic facility. Another portion is developed into the Rancho Seco Park. Facilities at the Rancho Seco Plant, just north of the project site, include: two 426-foot-high parabolic cooling towers, a 160-foot-high reactor building, a 60-foot-high auxiliary building, a 40-foot-high turbine building, and a 70-foot-high training and records building.

The project would be developed on the site just south of the existing nuclear power plant facilities, which operated between 1974 and 1989. When the Rancho Seco Plant was operating, water vapor was emitted from its parabolic cooling towers and the plant was lit at night. It no longer emits water vapor plumes, but it is still lit at night, at approximately 75% of operational lighting. The existing nuclear facilities are currently undergoing decommissioning, which is expected to be completed in 2010. The existing Rancho Seco buildings and structures will not be removed as part of decommissioning activities, but will remain a part of the landscape.

8.11.3.2 Sensitive Receptors and Project Site Visibility

Residential land uses in the project vicinity and recreationists at Rancho Seco Park are considered to be potentially sensitive visual receptors to the project. Due to the long-term nature of the project and the sensitivity with which people regard their places of residence, residential viewers are considered to have high visual sensitivity. Similarly, landscape aesthetics add to recreationists' enjoyment, so they are also considered to have high visual sensitivity.

The area is considered rural residential. Field reconnaissance revealed that rural residences are scattered to the west and south of the project site. The few residences that exist to the north do not have a direct view of the project site due to intervening topography and the existing Rancho Seco Plant facilities that obscure those views. Only one residence is located to the east of the project site. Private access to that residence is provided via Clay East Road, which dead ends at the residence's property entrance. Public access to this residence is prohibited by several signs posted at the property entrance. This residence is not visible at ground level from the project site where the public road dead ends.

Views of the project site from Twin Cities Road are screened by vineyards that are at a higher elevation than the roadway. Twin Cities Road is a 2-lane paved roadway with a posted speed limit of 55 miles per hour. Views from the roadway are fleeting, short-term views, and are limited to a 45-degree cone of vision. Near the project site, drivers' attention would likely be focused on maneuvering the roadway and arriving at their destination rather than viewing their surroundings. Motorists' sensitivity is, therefore, considered to be low.

Due to the rural nature of the project vicinity, few sensitive receptors were identified. The identified receptors (nearby residents and recreationists at Rancho Seco Park) have views of the project site that are considered representative in the area. Receptors identified include: a residence at 14460 Clay East Road (the closest residence to the project site—representative of views from 2 residences); a residence located at 11615 Kirkwood Street (representative of views from 4 residences); a residence located at 11540 Clay Station Road (representative of the view from several hilltop residences in the area); and the public picnic/swimming beach at Rancho Seco Park (representative of most views from the park).

The viewshed (i.e., the areas from which the proposed project is likely to be visible) of the project site will encompass the area primarily to the west and south of the project site. Because of the existing 426-foot-high parabolic cooling towers and the rolling hills to the north of the project site, visibility of the site from the north is obstructed. The parabolic cooling towers are visible from at least 7 miles northeast along Twin Cities Road. The

cooling towers are also visible from at least 5 miles along Twin Cities Road to the southwest. Plant site and on-site transmission line visibility along this road is sporadic due to the hilly topography and vegetation. The site is also visible from the east from the property line of one ranch. Public access to that ranch is prohibited. Private access is provided via Clay East Road, which dead-ends at the ranch entrance.

Except for the occasional aboveground warning marker, the proposed underground natural gas pipeline would not be visible during project operation.

Figure 8.11-1 (all figures are located at the end of this section) provides a generalized indication of the project site viewshed. Identification of the project site's viewshed was based on a review of project drawings, topographic maps and aerial photos, and field observations.

There are likely areas within the viewshed boundary shown on Figure 8.11-1 where views toward the project may be blocked to some extent by intervening topography, structures, trees, or other features in the viewer's immediate foreground. There are also likely areas beyond the delineated boundary from which the project would be visible, but the viewpoints chosen (and shown on Figure 8.11-1) would have direct views and are considered representative of views experienced by several other receptors in the area.

8.11.3.3 Visual Character of the Project Site, Transmission Line, Gas Pipeline, and Vicinity

The proposed plant site vicinity (including the proposed on-site transmission line) exhibits a rural residential character intermixed with vineyards, cattle grazing, and undeveloped open space. The proposed gas pipeline alignment would pass through areas that are characterized as urban residential, rural residential, light industry, agriculture, and open space. The pipeline would follow a railroad alignment, roadways, and would cross some fields. The visual character of the landscape of the project site and pipeline alignment is described below.

The view looking south along the proposed gas pipeline alignment from the Laguna Boulevard overcrossing shows baseball diamonds to the east in the foreground, and residential land uses to the east and west. The proposed gas pipeline alignment would parallel the railroad tracks.

The view of the proposed gas pipeline alignment from Ed Rau Road looking northeast across agricultural fields shows an existing transmission line alignment. The landscape in this area is primarily agricultural with a few rural residences.

The view of the valley looking south from the 11540 Clay Station Road residence on a hilltop approximately 2 miles west of the proposed plant site shows a landscape that exhibits variety. Pasture exists in the foreground, rural residential land uses and a riparian zone are shown in the middleground, and several rural residences are seen on a ridge in the distance.

Looking west along Clay East Road from its intersection with Kirkwood Street is undeveloped open space in the foreground. Rural residences exist in the foreground to the south. A transmission line to the north parallels Clay East Road. Vineyards are seen in the distance to the north.

The view looking east along Clay East Road from its intersection with Kirkwood Street shows the backyard of the 11615 Kirkwood Street residence. Clay East Road is to the north. Vineyards are also seen to the north. Just past the vineyards is the project site.

The view along Twin Cities Road looking northeast from its intersection with Clay East Road shows a winding Twin Cities Road. Vineyards are seen on the south side of the road. The Rancho Seco Plant parabolic cooling towers are seen in the background to the southeast.

The view along Twin Cities Road looking west from its intersection with Clay East Road shows that residences exist on both sides of the roadway. Sub-transmission and telephone lines are also seen on both sides of the road.

The view along Clay East Road from the cattle pens at the 14460 Clay East Road mobile home residence shows the road continuing east and dead-ending in the distance. East of the dead-end road is a dirt road that continues to a residence that is not clearly visible from this location. Access to this residence is restricted so it could not be confirmed whether the plant could be seen from it.

8.11.3.4 Visual Quality of the Project Site, Transmission Line, Gas Pipeline, and Vicinity

To respond to the CEC's requirement that an assessment be made of the visual quality of the landscapes potentially affected by the project, the discussion of the views seen from the Key Observation Points (KOPs) includes ratings of the visual quality of the landscapes that they represent. These ratings were developed based on a series of in-field observations carried out in June and July 2001, review of photos of the affected area, and review of methods for assessment of visual quality. The final assessment of the visual quality of the views from each KOP was made based on professional judgment that considered a broad spectrum of landscape assessment factors. The factors considered included evaluation of:

- Natural features, including topography, water courses, rock outcrops, and natural vegetation
- The positive and negative effects of man-made alterations and built structures on visual quality
- Visual composition, including assessment of the complexity and vividness of patterns in the landscape

The landscape quality ratings, expressed as a scale of six landscape quality classes, are listed in Table 8.11-1. The scale has a common-sense quality and is readily graspable because it defines landscape quality in relative terms, contrasting landscapes that are average in visual quality with those that are above and below average, and those that fall at the top and bottom of the landscape quality spectrum.

TABLE 8.11-1
Landscape Visual Quality Scale Used in Rating the Areas Potentially Affected by the Proposed Project

Rating	Explanation
Outstanding Visual Quality	A rating reserved for landscapes with exceptionally high visual quality. These landscapes will be significant regionally and/or nationally. They usually contain exceptional natural or cultural features that contribute to this rating. They will be what we think of as "picture post card" landscapes. People will be attracted to these landscapes to be able to view them.
High Visual Quality	Landscapes that have high quality scenic value. This may be due to cultural or natural features contained in the landscape or to the arrangement of spaces causes the landscape to be visually interesting or a particularly comfortable place for people. These are often landscapes that have high potential for recreational activities or in which the visual experience is important.
Moderately High Visual Quality	Landscapes that have above average scenic value but are not of high scenic value. The scenic value of these landscapes may be due to man-made or natural features contained within the landscape, to the arrangement of spaces in the landscape, or to the two-dimensional attributes of the landscape.
Moderate Visual Quality	Landscapes that have average scenic value. They usually lack significant man-made or natural features. Their scenic value is primarily a result of the arrangement of spaces contained in the landscape and the two-dimensional visual attributes of the landscape.
Moderately Low Visual Quality	Landscapes that have below average scenic value but not low scenic value. They may contain visually discordant man-made alterations, but the landscape is not dominated by these features. They often lack spaces that people will perceive as inviting and provide little interest in terms of two-dimensional visual attributes of the landscape.
Low Visual Quality	Landscapes with low scenic value. The landscape is often dominated by visually discordant man-made alterations; or they are landscapes that do not include places that people will find inviting and lack interest in terms of two-dimensional visual attributes.

Source: Buhyoff, et al., 1994.

The environment surrounding the project site is a landscape of moderately low to moderate visual quality. It is characterized by the Rancho Seco Plant, vineyards, rural residences, and rolling hills with open space. The landscape along the proposed pipeline is considered to be of moderate quality. It is characterized by uses typical of a suburban and rural landscape: residential subdivisions, light industry, an existing railroad line, park uses, an existing transmission line corridor, rural residences, vineyards, and undeveloped land.

The Rancho Seco Plant provides a sharp contrast to the existing landscape. Plant features are visible from several miles in all directions, and are clearly visible from aerial views. These facilities detract from the moderate visual quality landscape because of their stark difference in form, line, color, and texture, when compared to the landscape in which they exist. The presence of the nuclear facility, however, also provides variety and interest to the landscape, due to both the great mass and height of its facilities and the uniqueness of a well-known nuclear plant facility.

8.11.3.5 Key Observation Points

To structure the analysis of the project's effects on visual resources, an identification was made of the view areas most sensitive to the project's potential visual impacts and the receptors in those areas considered to be sensitive. Views from these sensitive receptor locations are considered to be KOPs. Four KOPs were selected for detailed analysis; the

KOPs are the "before" views of the project site. Figure 8.11-1 shows the locations where the KOP photos were taken and the direction that the camera was focused for each photo.

Photo simulations were developed to serve as a basis for visualizing the project's potential effects. In evaluating the sensitivity of the viewing areas potentially affected by the project, consideration was given to distance from the project site, numbers of viewers, and the presence of residential or recreational uses.

KOP 1 (Figure 8.11-2a) is the existing condition view of the project site looking northeast from the front yard of a mobilehome residence located at 14460 Clay East Road. This residence has a direct view of the proposed project facilities. It is located approximately 0.2 mile southwest of the site. The photo shows the undeveloped open space of the project site in the foreground, and the Rancho Seco Plant parabolic cooling towers and other nuclear facilities in the distance. This KOP is representative of the view from 2 residences (the two closest to the project site). The other residence represented is a single-family residence located to the west of the mobilehome, which is only used occasionally.

The KOP 1 photo was taken from the driveway of the mobilehome residence, looking northeast toward the project site. Clay East Road is seen in the foreground of the photo. The project site is undeveloped open space. A barbed-wire fence is located along the south side of the project site, fronting on the north side of Clay East Road. The existing Rancho Seco Plant is located to the north of the project site in the middleground. When facing the project site from the south side of Clay East Road, the Rancho Seco facilities appear behind the project facilities. In this photo, the Rancho Seco facilities appear on the left side of the photo. The view shown in this photo is considered to have moderately low to low visual quality because of the man-made alterations, and because the landscape is not particularly inviting, and provides little interest. The view in the photo has a visual sensitivity of medium, considering the visual quality of the area, the high viewer concern, and the viewer exposure.

KOP 2 (Figure 8.11-3a) is the existing condition view of the project site looking northeast from the backyard of a residence located at 11615 Kirkwood Street. This residence is located approximately 1.1 miles southwest of the project site, at the intersection of Kirkwood Street with Clay East Road. As shown, the residence is at a higher elevation than the project site. The foreground shows undeveloped open space, vineyards to the left, and the nuclear facility parabolic cooling towers at the far left in the distance. The project site is located south of the existing Rancho Seco Plant facilities, and it to the right of the center of the photo. This KOP is representative of the view from 4 residences.

KOP 2's photo was taken from the backyard fence of the residence, looking northeast toward the project site. Clay East Road is the roadway seen to the right of center in the photo. Transmission lines cross the project site and are aligned along both sides of Clay East Road. The view shown in this photo is considered to have moderately low to moderate visual quality because of the combination of undeveloped area and man-made alterations (vineyards and nuclear plant). The view in the photo has a visual sensitivity of medium, considering the visual quality of the area, the high viewer concern, and the viewer exposure.

KOP 3 (Figure 8.11-4a) is the existing condition view of the project site looking southeast from the backyard of a 2-story residence located at 11540 Clay Station Road. This residence is located approximately 2 miles northwest of the project site, on the north side of Twin

Cities Road. As shown, the view shows undeveloped open space, vineyards on the left and right sides of the photo, and the parabolic cooling towers and other nuclear facilities toward the center of the photo. The project site is located to the right of the existing Rancho Seco Plant facilities in the photo. This KOP is representative of the view from several hilltop residences in the area.

KOP 3's photo was taken from the backyard fence of the residence, looking southeast toward the project site. Vineyards, open space, and transmission line towers are apparent in the photo, in addition to the Rancho Seco facilities. The view shown in this photo is considered to have a moderate visual quality, due to the variety and interest afforded by the landscape shown in the photo. The view in the photo has a visual sensitivity of low-medium, considering the visual quality of the area, the high viewer concern, and the viewer exposure.

KOP 4 (Figure 8.11-5a) is the existing condition view of the project site looking northwest from the public swimming and picnic area at the 433-acre Rancho Seco Park and Reservoir complex, which is located to the southeast of the project site. The photo was taken approximately 1.6 miles from the project site. The Rancho Seco Reservoir was constructed to provide emergency cooling water storage for the Rancho Seco Plant and is used for recreation (picnicking, swimming, camping, boating, and fishing). The peak number of persons at Rancho Seco Reservoir on a summer weekend is approximately 5,000. This KOP is representative of the view from most locations at the park.

KOP 4's photo was taken from the major swimming and picnic area on the lake. Foreground views are of the lake and surrounding grassy shoreline. Distant views are of the parabolic cooling towers at the right side of the photo and the undeveloped area where the proposed project facilities would be constructed (toward the center of the photo). The view shown in this photo is considered to have a moderate to moderately high visual quality, due to the rich colors and textures provided by the lake and associated vegetation. The view in the photo has a visual sensitivity of high, considering the visual quality of the area, the high viewer concern, and the viewer exposure.

8.11.3.6 Visual Character and Quality of the Transmission Line and Water Pipeline

A 0.4-mile transmission line is proposed that would cross District property to connect to the existing Rancho Seco Plant's switchyard. The new transmission line would be 100 feet to the east and parallel to existing double-circuit transmission lines. The area consists of undeveloped open space. The area where the transmission line would be installed exhibits a moderately low to low visual quality.

Water for the proposed project would be obtained from an existing pipeline from the Folsom-South Canal. No off-site water pipeline construction would be required. Therefore, characterizing the visual character and quality for this element is not applicable.

8.11.4 Environmental Consequences

8.11.4.1 Significance Criteria

The CEQA Guidelines define a "significant" effect on the environment to mean a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including…objects of historic or aesthetic significance" (14 CCR 15382).

Under the CEQA Guidelines, significant visual impacts may result from:

- A substantial adverse effect on a scenic vista
- Substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway
- Substantial degrading of the existing visual character or quality of the site and its surroundings
- A new source of substantial light or glare, which would adversely affect day or nighttime views in the area

The analysis of the proposed project's impacts was based on evaluation of the changes to the existing visual resources that would result from the project's construction and operation. An important aspect of this analysis was evaluation of the "after" views provided by the computer-generated visual simulations, and comparison of them to the existing visual environment. In making the determination of the extent and implications of the visual changes, consideration was given to the above significance criteria.

8.11.4.2 Analysis Procedure

This analysis of the visual effects of changes that are expected as a result of proposed project implementation is based on field observations and review of the following information: local planning documents, project maps and drawings, photographs of the project area, computer-generated visual simulations from each KOP, and research on design measures for integrating electric facilities into their environmental settings.

Site reconnaissance was conducted to view the project site and surrounding area and gas pipeline alignment in June and July 2001, to identify potential KOPs, and to take representative photographs of existing visual conditions. A single lens reflex 35 mm camera with a 50 mm lens was used to shoot all photographs.

KOP 1 (Figures 8.11-2a and 8.11-2b showing the existing condition and visual simulation, respectively) are presented on 11 x 17-inch paper as 15.5-inch field-of-view photographs. The 15.5-inch prints should be viewed at a distance of approximately 12 inches to be considered life-scale (i.e., similar to what a viewer would see with the naked eye). Full-page photographs (9.5-inch prints) of KOPs 2, 3, and 4 (Figures 8.11-3a and 3b, 8.11-4a and 4b, and 8.11-5a and 5b, respectively) are also included. These photographs are considered to be life-scale when the page is held approximately 13 inches from the face.

The existing condition photographs are visual simulations produced to illustrate the "after" visual conditions from each of these points, providing the viewer with a clear image of the location, scale, and visual appearance of the proposed project. The computer-generated visual simulations are the result of an objective analytical and computer modeling process. Computer rendering techniques were used to produce the simulated images of the views of the site, as they would appear after development of the project. Existing topographic and site data, a site plan, and the project plan were used to produce the computer-generated visual simulations. The images are accurate within the constraints of the available site and project data.

For each KOP, a 62-inch eye level was assumed at each viewer location. Scaled outlines of project facilities were then overlaid on the photographs of the views from the KOPs. Visual simulation images were produced as a next step, and final "hardcopy" visual simulation images that appear in this AFC document were then produced using a color printer.

8.11.4.3 Project Appearance

8.11.4.3.1 Proposed Project Elements and Architectural Treatment

The features of the proposed project are described in detail in Section 2.0, including graphics that depict the project's layout on the site and elevations of existing on-site and proposed facilities. Primary features include 4 CTGs, 4 HRSGs, four 160-foot stacks, 2 steam turbine generators, water storage tanks, and 18 cooling tower cells.

The final color for proposed project facilities will be made in consultation with the staffs of Sacramento County, the CEC, and the Applicant.

The District proposes to enclose the facility with an 8-foot-high cyclone fence with wood slats, topped with barbed wire.

8.11.4.3.2 Landscaping

Project landscaping is planned to be planted along the south side of the project, outside of and along the perimeter fence. It would consist of native, drought-resistant trees and shrubs that would require low levels of maintenance. Figure 8.11-2b is a visual simulation of the project showing the view with proposed landscaping at 20 years in the future.

8.11.4.3.3 Lighting

The facility will be operated 7 days a week, 24 hours per day. As such, the project will require nighttime lighting for operational safety and security. The off-site visibility of this lighting will be limited by the proposed on-site structures and the existing structures on the nuclear facility site to the north. To further reduce the off-site impacts of this lighting, lighting at the facility will be limited to areas required for safety and security, and will be shielded from public view to the extent possible. For example, light bulbs and reflectors will be installed so that they are not visible from public viewing areas and illumination of the vicinity and the nighttime sky is minimized during project operation.

Exterior light fixtures will be hooded, and lights will be directed on-site so that significant light or glare (backscatter to the nighttime sky) will be minimized. Low-pressure sodium lamps and fixtures of a non-glare type will be specified. In addition, the nighttime lighting system will include switches, timers, and sensors to the extent possible. This will minimize the time the lights are on to further reduce the potential for project lighting to be visible off-site.

8.11.4.3.4 Water-Vapor Plumes

Sierra Research, Inc. performed the air quality analysis for the project. As part of that analysis, it performed a visibility screening analysis to evaluate potential visibility impacts on nearby Class I areas. The visibility screening analysis is comprised of two analyses: (1) a regional haze analysis and (2) a coherent plume analysis. Sierra Research, Inc. performed the regional haze analysis and determined that, during operation of the proposed project, potential visibility impacts to the nearby Class I areas will be less than the 5-percent level of acceptable change. Sierra Research, Inc. did not perform a coherent plume impact analysis because there are no Class I areas within 50 kilometers of the project site (Sierra Research, Inc., 2001). Sierra Research, Inc. expects the plume frequency of the proposed project to be minimal.

8.11.4.3.5 Transmission System and Pipelines

The proposed 0.4-mile on-site transmission line would consist of steel monopoles and double-circuit lines. Approximately 5 towers would be constructed as part of this project. The lines would parallel the existing PG&E double-circuit lines that traverse the property.

The proposed natural gas pipeline would be installed underground, and surface conditions would be restored; therefore, there would be no long-term changes to the visual environment.

8.11.4.3.6 Construction

As discussed in Section 2.2.15, installation of the Phase 1 of the project is expected to take place over a 24-month period from the fourth quarter of 2002 to the first quarter of 2005. Commercial operation of Phase 1 would begin in the first quarter of 2005. Construction of Phase 2 of the project would take approximately 24 months, from the second quarter of 2005 to summer 2007. Commercial operation for Phase 2 would begin in the first quarter of 2008.

Construction of the proposed power plant, transmission line, and natural gas pipeline would involve the use of cranes, heavy construction equipment, temporary storage and office facilities, and temporary laydown/staging areas. Construction of project linear facilities (transmission line and natural gas pipeline) is not expected to require the removal of ornamental trees or shrubs.

8.11.5 Assessment of Significance of Overall Visual Impacts

The impact assessment considers the CEQA significance criteria presented in Section 8.11.4.1. A discussion of the expected impacts on visual resources from project implementation is provided below.

8.11.5.1 Scenic Vistas

No scenic vistas of high visual quality were identified within the viewshed (area of potential visual effect) during the site reconnaissance of the proposed project, nor are there any such vistas identified in public policy documents. The project will thus not have a substantial adverse effect on a scenic vista.

8.11.5.2 Scenic Resources and Routes

As indicated in the previous discussion of LORS, there are no state-designated scenic highways within the project viewshed. Therefore, the project will have no effect on scenic resources and routes.

8.11.5.3 Visual Character or Quality

Project elements that were evaluated in the assessment of visual character or quality included: project construction, power plant structures, transmission line, natural gas pipeline, and HRSG and cooling tower plumes. There would be no off-site water pipeline construction; therefore, evaluation of this element is not necessary.

8.11.5.3.1 Project Construction

Construction of the proposed project (power plant, transmission line, and natural gas pipeline) would cause temporary visual impacts due to the presence of equipment, materials, and construction personnel. Project construction would involve the use of cranes, heavy construction equipment, temporary storage and office facilities, and temporary laydown/staging areas.

Phase 1 of project construction would occur over a 24-month period. Phase 2 of project construction would occur over an 18-month period. Construction of the transmission line and natural gas pipeline would result in construction activity occurring for only a short period in any given location along the alignments. Due to the short-term nature of project construction and the District's commitment to restoring areas disturbed by construction to pre-construction conditions, no substantial visual degradation of the project site, transmission alignment, pipeline alignment, or their surroundings would occur. Potential visual impacts associated with project construction are considered less than significant.

8.11.5.3.2 Power Plant, Transmission Line, and Natural Gas Pipeline

Due to: (1) the moderate visual contrast that would occur with project implementation, (2) the co-dominance of the proposed plant facilities with the existing Rancho Seco Plant, (3) the view blockage that would occur, (4) the relatively low number of sensitive receptors with views of the proposed plant, and (5) the intervening topography that will obstruct views of the plant from several locations, the resulting visual impacts would be adverse but not significant. The proposed transmission line and natural gas pipeline would also not cause significant long-term visual impacts.

The plant will be largely screened to motorist viewers on Twin Cities Road by intervening topography. In addition, motorists' view cone will be approximately 45°, resulting in only fleeting views of the site, and motorists' attention will likely be focused on negotiating the winding road. Where the project will be visible to residential viewers, it will present a subordinate level of contrast in the context of a setting that is already developed for energy generation purposes.

Figures 8.11-2b, 3b, 4b, and 5b present visual simulations of the proposed power plant as viewed from KOPs 1, 2, 3, and 4, respectively.

Figure 8.11-2b is the simulation that represents the view of the project as it would appear from KOP 1, at 14460 Clay East Road. Most project facilities would be located to the right of the existing transmission line tower shown in the center of the photo. The exceptions are

some of the proposed transmission facilities, which are seen to the left of photo center. In this simulation, the new transmission structure visible to the immediate right of the existing lattice steel structure in the middle of the view is depicted as a steel pole H-frame structure. The current plan is that this new transmission structure and the other tangent structures on the new transmission line that is proposed will have a single-pole design (see Figure 5.3-4a), which means that they will be considerably simpler in form and less visually salient than the H-frame structure depicted here. As this simulation suggests, the proposed facilities would be prominent and clearly visible from this residence because of the size of the facilities proposed, the distance to the proposed facilities, and the topography. Although the proposed facilities would be visible, they would be in character with the view shown in the photo, which includes a view of the Rancho Seco Plant to the north of the site.

Although residential viewers are typically sensitive to visual change, due to the substantial power plant development that already exists in KOP 1's viewshed, and the compatibility of the proposed development with the existing development in that landscape, the impact on views from KOP 1 are not considered significant. The presence of project facilities would change the landscape character of the project site, but would not detract from the view, nor would the presence of the stacks obstruct a scenic view.

Figure 8.11-3b is the simulation that represents the view of the project as it would appear from KOP 2, at 11615 Kirkwood Street. As shown in the simulation, the proposed facilities would be clearly visible from the backyard of this residence but would be subordinate to the existing Rancho Seco plant. The proposed facilities would be in character with the view that includes the Rancho Seco Plant, and would not detract from the view or obstruct a scenic view.

Similar to KOPs 1 and 2, the proposed facilities shown in KOP 3 in Figure 8.11-4b would be visible from the backyard of the 11540 Clay Station Road residence. This view demonstrates the visibility of the project, and the dominance of the Rancho Seco plant. From this view, the proposed facilities would be subordinate in the photo, and would not detract from the existing view or obstruct a scenic view.

Figure 8.11-5b is the simulation that represents the view of the project as it would appear from KOP 4, at the Rancho Seco Park swimming and picnic area. As seen in the simulation, only the tops of the four proposed stacks would be visible on the horizon. As such, most of the proposed facilities would not be visible from this viewpoint. Therefore, proposal project facilities would be in character with existing transmission lines and the nuclear facility would not detract from the view or obstruct a scenic view.

8.11.5.3.3 HRSG and Cooling Tower Plumes

No plumes are emitted from the project site, and water vapor plumes are no longer emitted from the adjacent Rancho Seco Plant. Plumes from the 4 HRSGs and the cooling tower will not be present in warm weather. Plumes tend to form in the winter months, at night, and during early morning hours when the temperatures are very low and humidity is relatively high. If fog is present, plumes will not be discernable.

Receptors who were present in the area between 1974 and 1989 were accustomed to seeing water vapor plumes generated at the Rancho Seco Plant adjacent to the project. Receptors

who moved to the area or began driving in the area after 1989 are not accustomed to seeing such plumes because the Rancho Seco Plant ceased operation in 1989.

As indicated previously, Sierra Research, Inc. expects the plume frequency of the proposed project to be minimal. When viewed from the immediate project vicinity, the water vapor plumes that would be emitted from the proposed plant would cause a change to the view. However, given the moderately low to moderate visual quality of the environment surrounding the project site, the presence of vapor plumes would result in an adverse, but not significant, impact on the quality of the existing views.

8.11.5.4 Light or Glare

Existing visible night lighting from commercial and industrial facilities in the project region is minimal. The area is primarily agricultural and rural residential, and as such, residential lighting is the primary nighttime light source. Receptors who were present in the area between 1974 and 1989 likely became accustomed to seeing light emitted from the Rancho Seco Plant, immediately to the north of the project site. Receptors in the area since 1989 are accustomed to the site only being lit with security lighting and not operational lighting. Current lighting levels are approximately 75 percent of the operating plant lighting level.

The proposed plant will require nighttime lighting for operational safety and security. It will create a new source of nighttime light at the project site.

To minimize project facility nighttime lighting being visible off-site, the District has committed to installing lights that are shielded and directed downward. In addition, it has committed to installing switches on the HRSGs and cooling towers so that they will only be illuminated when needed. Due to the District's commitment to minimize light emissions off-site, the project will not create a substantial source of light and will result in a less than significant impact on visual resources.

Levels of daytime glare at the project site are not expected to be significantly affected because the District would consult with the County of Sacramento and the CEC to determine the appropriate colors for project features. Colors would be selected that are anticipated to blend with the surrounding landscape to the extent feasible.

8.11.5.5 Cumulative Impacts

Cumulative impacts to visual resources could occur where project facilities or construction activities occupy the same field of view as other built facilities or affected landscapes and further degrade the view. A cumulative impact could also occur if a viewer's perception is that the general visual quality of an area is diminished by the presence of structures or construction effects (such as disturbed vegetation), even if the new structures are not within the same field of view as the existing structures. The significance of the cumulative impact would depend on the degree to which: (1) the viewshed is altered; (2) visual access to scenic resources is impaired; (3) visual quality is diminished; or (4) the project's visual contrast is increased.

The number of viewers exposed to the project and its plumes may increase over time if more residents move to the area. However, the proposed project is located outside of the County's Urban Service Area boundary, and urban growth is not planned for the project vicinity. In addition, intervening topography will still screen views of the project site from many

locations. With implementation of the proposed power plant, proposed transmission line, and other identified projects, the overall landscape character of the area as seen from Twin Cities Road is expected to remain essentially as it is. In addition, the proposed natural gas pipeline, an underground feature, will not alter the landscape character along its alignment.

The proposed plant and these other future developments will alter the landscape character of the project site and vicinity. These projects will add a power plant facility to an existing 30-acre undeveloped setting and the other facilities nearby. The proposed project will be adjacent to an established nuclear power facility, whose existing facilities will dwarf the proposed facilities by comparison. The areas in the vicinity of the project site and the other identified projects will remain unchanged as a result of project implementation.

Although the local landscape would be altered with these future developments, implementation of the proposed project and the other projects will not result in significant cumulative impacts on visual resources. This is because the project will be developed adjacent to the existing Rancho Seco Plant; views of the proposed project and the other anticipated projects are obstructed from Twin Cities Road (the nearest major roadway); views are limited to residences to the west and southwest; views from the north are obstructed; and views from the east are limited to one possible residence whose entrance is at the dead-end of Clay East Road. Views of these development areas are obstructed by a combination of intervening topography (rolling hills), established vegetation, and residential structures.

Predicted plumes from the proposed plant will occur under certain climatic conditions that are conducive to plume formation (i.e., low temperatures and high humidity). Therefore, implementation of the proposed project will result in an increase in the number and frequency of plumes emitted from District property, when compared to existing conditions. The presence of these plumes would cause an adverse cumulative visual impact, but the impact would be less than significant because of the visual quality of the immediate project vicinity.

8.11.5.6 Compliance with LORS

The County of Sacramento General Plan (1993) contains LORS relating to visual/aesthetic resources in the following General Plan elements: the Scenic Highways Element, the Public Facilities Element, the Conservation Element, and the Land Use Element.

Scenic Highways Element

The County General Plan includes a Scenic Highways Element. A Scenic Highways Element is primarily designed to encourage local jurisdictions to implement the State Scenic Highways Program. For a roadway to be designated as a State Scenic Highway, the highway must be included in the State Master Plan of Highways Eligible for Official Scenic Highway Designation. Roads may be added to the Master Plan only by an act of the Legislature. Designation of the eligible highways as Official State Scenic Highways can occur after the State has accepted a local plan to protect the visual corridor of the highway. County roads may be designated by the State as Official County Scenic Highways if the local jurisdiction prepares an acceptable protective plan and program for the route. County roads, however, do not appear on the State's Master Plan.

The County has identified several roads that warrant scenic corridor protection. Among those is Twin Cities Road from State Route 160 east to State Route 99 (listed as Policy 10) (Sacramento County, 1974). This portion of Twin Cities Road is located to the west of the project site and natural gas pipeline alignment.

Public Facilities Element

The General Plan Public Facilities Element (1993) addresses water, wastewater, solid waste, emergency services, schools and libraries, and energy facilities siting.

The background report for the Public Facilities Element lists the various types of energy developments. Although the following is listed as a mitigation measure for cogeneration facilities, it is possible that the County may require a similar measure for the proposed project: "Visual impacts should be minimized by implementing the following: avoid or reduce exhaust stack plumes; provide landscaping in concert with fencing, in compliance with zoning code standards, along the perimeter of the site; and direct lighting away from adjacent residential uses" (Sacramento County, 1993a).

Land Use Element

The County Land Use Element (1993) sets the policy for the distribution and intensity of lands uses in the County for 20 years. The land use designation for the project site is Public/Quasi Public, overlain with a Resource Conservation Area designation.

Zoning Ordinance

The District is expressly exempt from zoning ordinances under California Government Code Section 53091 (Sacramento County, 2001). However, a relationship is maintained between the District and Sacramento County to provide energy projects that meet the intent of the Public Facilities Element of the County of Sacramento General Plan.

The proposed project would be consistent with most of the policies referenced in Table 8.11-2, and would meet the intent of all of Sacramento County's policies. A few of the policies may not be directly applicable to the project; therefore the height limit zoning ordinance may not require the District to obtain approval for installing stacks that exceed the maximum height allowed.

TABLE 8.11-2
Proposed Project's Consistency with Local LORS Applicable to Visual Resources: Sacramento County General Plan and Zoning Ordinance

LORS		Consistency Determination Before Mitigation	Basis for Consistency
General Plan Section	Objective and Policy Descriptions		
Scenic Highways Element	Policy 15: Several roads should be studied, which would be appropriately designated as County Scenic Corridors. Includes the balance of Twin Cities Road. Includes the portion of the roadway that passes to the north of the project site and comprises a portion of the natural gas pipeline alignment.	Not Applicable	Road not designated by County.
	Goal 1: Preserve and enhance the aesthetic quality of scenic roads without encouraging unnecessary driving by personal automobile.	Not Applicable	Road not designated by County.

TABLE 8.11-2
Proposed Project's Consistency with Local LORS Applicable to Visual Resources: Sacramento County General Plan and Zoning Ordinance

LORS		Consistency Determination Before Mitigation	Basis for Consistency
General Plan Section	**Objective and Policy Descriptions**		
Public Facilities Element	Minimize the health, safety, aesthetic, cultural, and biological impacts of energy facilities in Sacramento County.		
	Policy PF-71: Locate and design production and distribution facilities so as to minimize visual intrusion problems in urban areas and areas of scenic and/or cultural value including: recreation and historic areas; scenic highways; landscape corridors; state or federal designated wild and scenic rivers; visually prominent locations such as ridges, designated scenic corridors, and open viewsheds; and Native American sacred sites.	Yes	Area not considered urban or scenic or of high cultural value.
	Policy PF-72: Locate and design energy production and distribution facilities in a manner that is compatible with surrounding land uses by employing the following methods when appropriate to the site: (1) visually screen facilities with topography and existing vegetation and install landscaping consistent with surrounding land use zone development standards where appropriate, except where it would adversely affect photovoltaic performance or interfere with power generating capability; (2) provide site-compatible landscaping; (3) minimize glare through siting, facility design, nonreflective coatings, etc., and (4) site facilities in a manner to equitably distribute their visual impacts in the immediate vicinity.	Yes	The District proposes landscaping along the southern perimeter fence. Surrounding topography and existing vegetation in the project vicinity aid in screening facilities. Non-reflective coatings will be used on project facilities; colors and proposed treatments will be determined in consultation with Sacramento County and the California Energy Commission.
	Ensure the provision of safe, reliable, efficient, and economical electric service while minimizing potential land use conflicts, and health, safety, environmental, and aesthetic impacts of transmission facilities.		
	Policy PF-85: New transmission corridors should, whenever possible, avoid existing and planned urban areas; specifically those areas designated for residential and commercial uses. When avoidance is not possible, transmission lines should be placed underground.	Yes	Transmission line alignment is not within an existing or planned urban area, and is not designated for residential and commercial uses.

TABLE 8.11-2
Proposed Project's Consistency with Local LORS Applicable to Visual Resources: Sacramento County General Plan and Zoning Ordinance

LORS		Consistency Determination Before Mitigation	
General Plan Section	**Objective and Policy Descriptions**		**Basis for Consistency**
	Policy PF-86: New transmission lines constructed within existing and planned urban areas should utilize existing transmission corridors whenever practical. Secondary preferred locations are railway and freeway corridors. If feasible, existing towers should be upgraded to accommodate additional circuits rather than erecting new towers.	Not Applicable	Transmission line alignment is not within an existing or planned urban area and uses an existing corridor.
	Policy PF-87: To minimize visual impacts and protect the county's visual and aesthetic resources, new bulk substations should be located in industrial and non-retail commercial areas. To further minimize visual intrusion and potential land use conflicts, substations shall be enclosed with an 8-foot-high security fence in concert with a 25-foot landscaped setback along all public street frontages.	Yes	Proposed substation would be located on-site. The District proposes enclosing all facilities with an 8-foot-high fence, and would be set back 25 feet from Clay East Road.
	Policy PF-88: Proposals to locate all new bulk substations and all other large scale energy distribution facilities shall be submitted to the Planning Department for review and comment in the form of a General Plan Conformity request.	Yes	The District will submit proposed plans to Sacramento County and consult with the County, as necessary.
	Policy PF-89: Locate and design new transmission towers in urban areas in a manner that minimizes visual and environmental impacts, including impacts to historic buildings and viewsheds.	Yes	The proposed transmission line would be located on-site. Locating the proposed transmission line on-site would minimize visual impacts by running parallel to an existing line.
	Plan and design transmission facilities to minimize visual impacts, preserve existing land uses, and avoid biological and cultural resources.		
	Policy PF-92: Whenever feasible, utilize existing transmission poles to accommodate new overhead transmission lines. Existing and future transmission corridors should be shared by more than one utility company.	No	It is not possible to use existing transmission poles to meet project objectives. The project requires the installation of new poles.
	Policy PF-93: Transmission rights-of-way should avoid bisecting parcels wherever possible.	Yes	Siting the transmission line on-site avoids bisecting parcels.
	Policy PF-99: Locate transmission facilities in a manner that maximizes the screening potential of topography and vegetation.	Yes	Siting the transmission line in its proposed location will maximize the screening potential of the area due to intervening topography.

TABLE 8.11-2
Proposed Project's Consistency with Local LORS Applicable to Visual Resources: Sacramento County General Plan and Zoning Ordinance

LORS		Consistency Determination Before Mitigation	
General Plan Section	**Objective and Policy Descriptions**		**Basis for Consistency**
	Policy PF-100: Utilize monopole construction, where practicable, to reduce the visual impact on a corridor's middle and distant views.	Yes	The proposed transmission line will use monopole construction.
	For electric subtransmission facility siting and design, site subtransmission facilities without compromising community aesthetic, health, and safety standards.		
	Policy PF-112: To the maximum extent possible, locate distribution substations serving residential areas on adjacent commercial properties. When not feasible, these facilities should be designed in a manner to harmonize visually with the surrounding development, including the use of landscaped buffers.	Yes	The proposed switchyard would be located on-site. It would be compatible with existing land uses to the north, and with other facilities on-site. Landscaping is proposed along the south perimeter project fence.
	Policy PF-113: To minimize visual intrusion problems, enclose all substations with a security fence at least 8 feet high, provide a setback 25 feet from public street frontages, and provide landscaping consistent with the development standards of the surrounding land use zone when in non-industrial areas.	Yes	The District proposes enclosing the project with an 8-foot-high fence, providing a 25-foot setback from Clay East Road, and planting landscaping along the south perimeter project fence.
	For natural gas production and distribution facilities, distribute natural gas safely and efficiently, and withdraw underground gas reserves in an environmentally sensitive manner.		
	Policy PF-118: Route new high-pressure gas mains within railway and electric transmission corridors, along collector roads, and wherever possible, within existing easements. If not feasible, these gas mains shall be placed as close to the easement as possible.	Yes	The proposed natural gas pipeline would follow an existing railroad and transmission line easements for a portion of the alignment. It would also be in or adjacent to road easements when possible.
Conservation Element	As part of the surface water quality section of the Conservation Element, minimize erosion from new development in urban areas.		
	Policy CO-13: Roads and structures shall be designed, built, and landscaped to minimize erosion during and after construction.	Yes	A portion of the proposed natural gas pipeline alignment would be routed through an urban area. The District proposes erosion control, as part of the project, as needed. The District proposes to replace vegetation removed during construction.

TABLE 8.11-2
Proposed Project's Consistency with Local LORS Applicable to Visual Resources: Sacramento County General Plan and Zoning Ordinance

LORS		Consistency Determination Before Mitigation	
General Plan Section	**Objective and Policy Descriptions**		**Basis for Consistency**
Land Use Element	Use low glare external building surfaces and light fixtures that minimize reflected light and focalize illumination.		
	LU-22: Exterior building materials on nonresidential structures shall be composed of a minimum of 50 percent low-reflectance, non-polished finishes.	Yes	The District will consult with Sacramento County and the California Energy Commission regarding exterior finishes and colors.
	LU-23: Bare metallic surfaces such as pipes, flashing, vents, and light standards on new construction shall be painted to minimize reflectance.	Yes	The District will consult with Sacramento County and the California Energy Commission regarding exterior finishes and colors.
	LU-24: Requires overhead light fixtures to be shaded and directed away from adjacent residential areas.	Yes	The District proposes to use directional lighting, as part of the project.
	LU-25: Requires exterior lighting to be low-intensity and only used where necessary for safety and security purposes.	Yes	The District proposes to use switches and timers to ensure that lighting will only be "on" when operational staff is near, or for safety and security purposes.
Zoning Ordinance Note: The District is not subject to zoning ordinances but attempts to comply with zoning requirements whenever possible.	Section 301-17: All utilities shall be placed underground unless the Planning Director determines it to be impractical.	Yes	The proposed natural gas pipeline would be installed underground.
	Section 301-21: Fences or walls may be required and conditioned to exceed 6 feet in height.	Yes	The District proposes to install an 8-foot-high cyclone perimeter fence with wood slats and barbed wire atop the fence.
	Section 301-22: For commercial and industrial land use zones, the height limit is 140 feet, subject to approval by either the County Board of Supervisors or the Project Planning Commission	Yes	Although the project would not be located in a commercial or industrial zone, the 160-foot stack height would require approval by the County.
	Section 301-40: Every part of a required yard or court shall be open from its lowest point to the sky unobstructed.	Not Applicable	The proposed project does not include a yard or court.
	Section 301-61: A solid wood or masonry fence shall be provided along the interior property lines for all institutional projects, when located adjacent to residential and agricultural-residential zones.	Not Applicable	The project site is located within property owned by the District on all sides. Therefore, it is not adjacent to agricultural-residential uses.
	Section 301-62(a): Outside storage of materials and equipment shall be located within the buildable portion of the lot and screened from view with solid wood fences, masonry walls, or chain link with slats.	Yes	The District proposes to install an 8-foot-high cyclone perimeter fence with wood slats and barbed wire atop the fence.

TABLE 8.11-2
Proposed Project's Consistency with Local LORS Applicable to Visual Resources: Sacramento County General Plan and Zoning Ordinance

LORS		Consistency Determination Before Mitigation	Basis for Consistency
General Plan Section	**Objective and Policy Descriptions**		
	Section 301-63 specifies regarding height of fences the following: • Fences within the front and side street yards shall not exceed 6 feet in height. • All required fences shall be at least 6 feet in height and may be erected to a maximum height of 8 feet. • Fence height shall be measured from the highest elevation at the property line or at the finished grade of the rear or side yard setback, whichever is higher.	Yes	The District proposes to install an 8-foot-high cyclone perimeter fence with wood slats and barbed wire atop the fence.
	Section 301-64: Fences that deviate from the County standard may be permitted as a condition of approval of a fence use permit approved by the Zoning Administrator.	Not Applicable	The proposed fencing is consistent with the County requirements.
	Sections 301-70 and 301-71: Requires appropriate long-term care and maintenance of all existing landscaping provided.	Yes	The District proposes to install low-maintenance, drought-resistant native tree and shrub species, and the District would maintain such species.
	Section 320-01(I): Applies to public utilities.	Yes	Applies to public utilities.
	Section 320-04: No building or structure, nor the enlargement of any building or structure for any of the uses specified in Section 320-01 may be erected to a height exceeding 40 feet.	Not Applicable	If the District's proposal would deviate from County standard, the District will consult with the County, as required.
	Section 320-05: the requirements of landscaping for uses specified in Section 320-01. A landscaped area is specified between 6 and 25 feet wide. In addition, subsection (b) specifies a 6-foot-high perimeter fence of solid wood or masonry be installed along the boundary line. Subsection (g) specifies that landscaping provided shall be cared for, maintained, and appropriate permits shall be acquired as specified in Title III, Chapter 1, Article 6 of this Code.	Yes	The District proposes to install low-maintenance, drought-resistant native tree and shrub species and the District would maintain such species. The District will consult with the County, as required.

TABLE 8.11-2
Proposed Project's Consistency with Local LORS Applicable to Visual Resources: Sacramento County General Plan and Zoning Ordinance

LORS		Consistency Determination Before Mitigation	Basis for Consistency
General Plan Section	**Objective and Policy Descriptions**		
	Section 320-06: For buildings specified in Section 320-01 in a zone other than commercial or industrial shall have a front and side street yard of not less than 25 feet adjacent to all public and private streets. It also specifies that a side yard shall not be less than 6 feet and a rear yard shall not be less than 25 feet.	Not Applicable	Front and side yards are not applicable to this type of project.
	Section 325-07: Reflectors, spotlights, floodlights, and other sources of illumination may be used to illuminate buildings, landscaping, signs, and parking and loading areas on any site only if they are equipped with lenses or other devices which concentrate the illumination upon such buildings, landscaping, signs, and parking and loading areas. No unshielded lights, reflectors, or spotlights shall be so located and directed that they shine toward or are directly visible from adjacent properties or streets.	Yes	The District proposes to use directional lighting as part of the project.
	Section 325-22 is applicable to industrial uses located within a scenic corridor along certain County roads, as established by Section 335-36 (Sacramento County, 2001). The proposed project is not located along any of the roads listed in Section 335-36.	Not Applicable	Road not designated by County.

Source: County of Sacramento, 1974, 1993a, 1993b, 1993c, and 2001.

The contact person at Sacramento County is listed in Table 8.11-3.

TABLE 8.11-3
Sacramento County Contact Person

Contact Person, Title, Address, and Phone Number
Tricia Stevens Principal Planner County of Sacramento 827 7th Street Sacramento, CA 95814 916-874-6141

8.11.6 Mitigation Measures

Because no significant impacts have been identified, no mitigation is necessary.

8.11.7 References

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