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Thomas Priestley, Ph.D.

Senior Environmental Planner

Education

Ph.D., Environmental Planning, University of California, Berkeley, 1988

M.C.P., City Planning, University of California, Berkeley, 1976

M.L.A., Environmental University of California, Berkeley, 1974

B.U.P., Urban Planning, University of Illinois, Urbana, 1969

Professional Affiliations

American Institute of Certified Planners (Certified Planner No. 008919)

American Planning Association

American Society of Landscape Architects

Relevant Experience

Dr. Priestley is a Senior Environmental Planner based in CH2M HILL's Los Angeles, California, office, and serves as the leader of the firm's visual resources practice group. In this role, Dr. Priestley guides the company's visual resources work through issue scoping, development of study designs, mobilization of staff and technologies appropriate to the assignment, guidance of analysis activities, and senior review of final products. In addition, Dr. Priestley consults directly in cases that require special visual resources and property value impact expertise and he provides expert witness testimony when required.

Dr. Priestley has more than 30 years of professional experience in urban and environmental planning and visual resource assessment. He is known nationwide for his expertise in evaluating aesthetic, land use, property value, and public acceptance issues related to electric energy projects. His experience includes projecting community land use development trends to determine facility needs and optimal location, assessing land use and visual effects of proposed electric facilities, documenting and evaluating design measures to integrate electric facilities into their visual settings, conducting studies of public perceptions of transmission line visual effects, and contributing to studies of electric facility impacts on property values. Through his project experience and research conducted for utility clients, Dr. Priestley has developed expertise in methods used for siting electric generation, transmission, and substation facilities and mitigating their land use, aesthetic, and other environmental effects. As editor or co-author, he has made major contributions to Edison Electric Institute publications related to understanding and evaluating the environmental and property value effects of electric facilities.

Representative Projects and Dates of Involvement

Projects Related to Electric Facility Property Value Effects

Mariposa Energy Project; Alameda County, California. Analysis and Expert Witness Testimony on Property Value Impacts. 2010–2011. Evaluated the potential effects of the proposed Mariposa Energy Project gas-fired power plant on property values in the Mountain House residential development located two miles away. Prepared an analysis report, and provided written and oral testimony on the project's potential property value impacts to the California Energy Commission.

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Montana Department of Environmental Quality; Mountain States Transmission Intertie (MSTI) Project; Montana and Idaho. Assessment of Potential for Property Value Impacts. 2009–2011. Conducted a review of recent research on the property value impacts of high-voltage transmission lines. Based on this and previous research reviews, prepared report that summarized this research and its key findings to provide a context for understanding the potential implications of the proposed 500-kV MSTI line on property values. In addition, provided a detailed review of a study of the impacts of high-voltage transmission lines on Montana real estate values sponsored by the project developer and participated in a workshop on transmission line property value impact issues in Montana.

New York Regional Interconnect Project (NYRI); New York State. Analysis and Expert Witness Testimony on Property Value Impacts. 2008–2009. For the NYRI project, designed and implemented an analysis of the potential effects of a 400-kV DC transmission line proposed to extend from Utica to Middletown on property values and tourism and the tourist economy in the communities through which it would be routed. Prepared technical reports and provided written and oral expert witness testimony on property value impacts to the New York Public Service Commission.

Lawrence Berkeley Laboratory Study of Wind Power Project Impacts on Residential Property Values. 2006–2009. Provided research guidance and technical advice to a study that used hedonic modeling to evaluate 7,459 sales of residences in the vicinity of wind power projects in the U.S. to assess the impacts of these projects on sales prices. Drawing on previous experience in conducting research on transmission line perceptions and property value effects, played a role in the development of variables to capture view quality and the impacts of the wind farms on views.

Dominion Technical Solutions; Richmond, Virginia. Expert Witness Testimony on Transmission Lines and Property Values. 2005. Prepared expert witness testimony on transmission line property value effects for presentation to the Emerging Technology Issues Advisory Committee of the Virginia General Assembly Joint Commission on Technology and Science. The testimony included a written report that reviewed and summarized the results of a comprehensive search and evaluation of the published literature documenting empirical research on the relationships between transmission lines and the sales prices of nearby properties. This report updated the literature review prepared for EEI in 1992 to incorporate the literature published between 1990 and 2005.

Sacramento Electric Utility District, El Dorado County, California. Upper American River Project Property Value Impact Assessment. 2004–2005. Task lead for the assessment of the potential impacts of a pumped storage facility and an associated transmission line and road improvement project on the sales values of privately owned properties. The approach included mapping of the facilities and privately owned lots in proximity to them, identification of visual and other project-related effects potentially having an impact on those lots, and review and application of the findings of the relevant property value impact research literature.

Sutter Power Project; Sutter County, California. Analysis of Transmission Line and Switching Station Effects on Agriculture and Land Use. 1998. In response to a request by one of the California Energy Commissioners hearing the licensing case, prepared an analysis of the potential effects of the transmission line and switching station associated with the proposed Sutter Power Project on the local agricultural economy and the value of agricultural property along the transmission line route. The analysis included a systematic review of the impact of the occupancy of land by the transmission structures, the increased time and costs in using ground and aerial equipment around the structures, and any reductions in yields these conditions would bring about.

Edison Electric Institute. Review of the Literature on Transmission Line Effects on Property Values. 1992. With Cynthia Kroll, co-author of an Edison Electric Institute-sponsored bibliography and critical review of

studies on the relationships between transmission lines and the property values that were published between 1975 and 1990.

Guide to Conducting Research on Transmission Line Property Value and Aesthetic Effects. 1991. Co-author of an Edison Electric Institute guidebook for utility staff on the design and implementation of research on the effects of electric transmission lines on perceptions and property values in residential neighborhoods. Co-authored and assisted in the production of an accompanying videotape.

Pacific Consulting Services, Albany, California. Study of Transmission Line Effects on Property Values. 1989–1991. Consultant and major contributor to the design and implementation of a research project sponsored by Southern California Edison that used hedonic modeling to analyze over 950 sales to evaluate the property value effects of transmission lines in a cross section of suburban residential neighborhoods.

Electric Transmission Lines

Southline Transmission Project; Arizona and New Mexico. 2011-2013. Senior technical lead for the analysis of potential visual impacts from construction of a proposed new 345-kilovolt double-circuit transmission line (approximately 205 miles between New Mexico and Arizona) and upgrade of existing transmission line (approximately 120 miles in Arizona). Coordinated with Bureau of Land Management staff regarding design and implementation of the analysis to assure consistency with BLM Visual Resource Management system requirements. Directed the efforts of the CH2M HILL team in initial coordination with BLM staff, including conducting field work, documenting and selecting viewpoints for analysis, preparing visual simulations, analyzing impacts using BLM VRM worksheets, reviewing analysis results with BLM staff, and documenting the analysis in a technical report.

Mountain States Transmission Intertie Project; Montana and Idaho. 2008–20012. Technical lead for the visual resources impact and property value impact assessments of a 400-mile, 500 kV transmission line being proposed by Northwest Power. The client for the analysis was the Montana Department of Environmental Quality and the assessment was designed to fulfill the analytic requirements of the DEQ, the US Forest Service and the US Bureau of Land Management. As the technical lead for this task, designed the analysis strategy and directing its implementation by a team that included CH2M HILL staff and other team partners.

Southern California Edison; Eldorado to Ivanpah 220-kV Transmission Line, Proponent’s Environmental Assessment; San Bernardino County, California, and Clark County, Nevada. 2009-2010. Provided senior guidance and review for the preparation of the Proponent’s Environmental Assessment (PEA) visual resources impact analysis of a proposal by SCE to develop a new 36-mile, 220-kV transmission line between the Eldorado Substation and a new Ivanpah Substation located in eastern San Bernardino County, California, 7 miles southwest of Primm, Nevada.

Saguaro to North Loop Transmission Line Project; Pinal and Pima Counties, Arizona. 2009. Supervised the visual impact analysis of a 14-mile, 138 kV, four-circuit transmission line proposed by Tucson Electric Power. The route travels through an open and complexly vegetated desert landscape, passing close to several areas of residential development. The visual analysis was designed to meet the requirements of the Arizona Corporation Commission Power Plant and Transmission Line Siting Committee.

Tehachapi Renewables Transmission Project; Southern California. 2006–2009. Technical lead for the analysis of the visual impacts of a 190-mile, 500 kV transmission line proposed by Southern California Edison. The route traverses a diverse and complex set of landscapes that include open lands in the Antelope Valley, National Forest lands in the San Gabriel Mountains valued for their recreational and scenic importance, and highly developed urban areas in the San Gabriel Valley. Designed the analysis strategy that was implemented by a team of five CH2M HILL visual resource specialists who were supported by CH2M HILL planners and GIS, visual simulation, graphics, and report production staff.

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Southern California Edison; Antelope-Pardee 500-kV and Antelope Segments 2 and 3 Transmission Projects; Los Angeles County, California. 2006–2007. Assisted SCE in responding to controversial project visual impact issues and proposed visual impact mitigation requirements associated with these two 500 kV transmission line projects. Reviewed and critiqued the visual resource impact analysis prepared by the CPUC's visual consultant, conducted focused analyses of visual issues on which there was disagreement with the CPUC consultant's conclusions, prepared written reports for filing with the CPUC, and participated in working sessions with CPUC and US Forest Service visual resources staff to resolve issues.

Jefferson-Martin Transmission Project, Proponent's Environmental Assessment; San Mateo County, California. Senior reviewer and consultant for an analysis of the aesthetic issues associated with the proposed replacement of a 14.7-mile segment of an existing transmission line with a 230 kV line on larger towers. The transmission line's location in an open space area prized for its scenic qualities and in proximity to affluent residential areas made the visual issues a sensitive and critical dimension of this project, requiring an intensive degree of analysis. Contributed to a detailed critique of the PUC's conclusions regarding project aesthetic effects. Prepared written expert witness testimony.

Kangley-Echo Lake Transmission Line; King and Kittitas Counties, Washington. 2003-2004. Scoped the visual issues and designed and implemented an analysis plan to assess the potential aesthetic impacts of a proposed 500 kV transmission line on four alternative routes, with a total length of approximately 120 miles through forest, recreation, scenic corridor, and rural and suburban residential areas. Supervised the preparation of photo simulations and the preparation of GIS analyses. Prepared the technical report documenting the analysis.

Tri-Valley Transmission Upgrade Project Proponent's Environmental Assessment; Alameda County, California. Analyzed aesthetic issues associated with a system of new 230 kV lines and substations being proposed by Pacific Gas and Electric Company to upgrade service to the Livermore/Pleasanton/San Ramon area. Scoped issues and made an evaluation of a large set of candidate routes to aid selection of a smaller set of preferred routes. Conducted detailed visual analyses of the preferred routes, wrote the draft of the visual analysis report, and proposed mitigation measures in preparation for filing of a permit application with the California Public Utilities Commission.

Valley-Auld Transmission Line Proponent's Environmental Assessment; Riverside County, California. Scoped visual issues associated with a proposed 12-mile, 115 kV Southern California Edison transmission line, conducted visual analyses, prepared the visual analysis report, and proposed mitigation measures to reduce project's visual effects to less-than-significant levels in preparation for filing of a permit application with the California Public Utilities Commission.

Swan Lake/Lake Tye Transmission Project; Tongass National Forest, Alaska. Prepared the visual section of the Environmental Impact Statement for a 60-mile transmission line and associated access roads proposed by Ketchikan Public Utilities for Forest Service lands in Alaska's southeast peninsula. Coordinated with Forest Service planning and visual resource management specialists; reviewed Forest Service Visual Resource Management analyses and policies for the project area; analyzed existing landscape conditions; evaluated the aesthetic effects of similar facilities that already exist in the region; provided advice about siting of the route alternatives; analyzed the visual effects of the alternatives; and developed mitigation strategies.

Geothermal Public Powerline; Lake and Colusa Counties, California. Consultant to the California Energy Commission for evaluation of the aesthetic impacts of a transmission line proposed to link the Geysers geothermal area and the Central Valley. Inventoried landscape conditions and reviewed the project proponent's visual impact assessments. Developed independent evaluations of the project's effects on landscape quality in developed communities, in resort areas, along scenic highway corridors, and in other sensitive areas; proposed mitigation measures.

Colusa County Transmission Line Element; Colusa County, California. Consultant to a team that developed an element for the Colusa County General Plan to guide the siting and design of new electric transmission lines. Summarized the literature on transmission line effects and on siting and design options for impact mitigation, developed an analysis framework, provided technical review of all final products, and prepared the chapter on aesthetic issues. The aesthetic work included survey and evaluation of the county's current landscape conditions and sensitivities, and development of siting and design guidelines.

International Electric Transmission Perception Project. Project Manager for a multi-year research program sponsored by Hydro-Québec, Electricité de France, BC Hydro, the Bonneville Power Administration, and Southern California Edison. Managed a team of planners and social scientists conducting research aimed at development and application of standardized methods for surveying the public's perceptions of the impacts of high-voltage transmission lines. Identified transmission line siting issues and information needs, summarized and evaluated existing research findings, participated in development of a conceptual framework for understanding the public's perceptions, and contributed to the development of a master plan and design for preparation and testing of standardized survey instruments.

Development of a New Method for Considering Aesthetic Issues in Transmission Line Siting, Québec, Canada. For Hydro-Québec, provided conceptual review and research assistance for its efforts to evaluate and revise approaches to treatment of transmission line aesthetic issues in project planning, siting, and design.

Environmentally Sensitive Design of Transmission and Substation Equipment. For Hydro-Québec and Electricité de France, developed an inventory and assessment of the experience of U.S. utilities in developing new transmission and substation equipment designs to reduce aesthetic and other environmental impacts. Activities included literature review, survey of utility engineers and planners, interviews with utility personnel, and documentation and synthesis of findings.

Review of New Design for 500 kV Towers, British Columbia, Canada. Aesthetics specialist on a panel of experts convened by BC Hydro to review a new design for 500 kV transmission towers.

Design Solutions for Mitigation of Substation Impacts. For Hydro-Québec, documented the experience of utilities in the U.S., Canada, France, and Japan in developing design solutions intended to integrate urban substations into their settings. In addition, documented measures used by U.S. utilities to respond to environmental issues associated with modifications of existing substations.

Study of Public Perceptions of a Transmission Line in a Residential Neighborhood; Vallejo, California. Designed and conducted a survey of resident perceptions of a newly upgraded 115/230 kV transmission line in a neighborhood of single-family homes. Conducted advanced analysis and interpretation of the findings. Published the results as a research report and journal article.

Transmission Line Undergrounding and Under River Crossings. For Hydro Québec, conducted a set of case studies documenting and analyzing controversies over the siting of electric transmission lines in which demands were made for placing lines underground or under water.

Transmission Line Effects on Land Use Development. For the Edison Electric Institute, identified and evaluated transmission line siting cases in which concerns about line impacts on future development were a major concern. Reviewed the literature on transmission line impacts on land use development and proposed a program for further research.

Transmission Line Land Use and Aesthetic Issues. For Pacific Gas and Electric Company, analyzed land use and aesthetic issues associated with transmission lines and prepared policy papers for submission to the California Public Utilities Commission.

Wind Generation Facilities

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Iberdrola Renewables; Blue Creek Wind Farm; Van Wert and Paulding Counties, Ohio. To meet the requirements of the Ohio Power Siting Board permit application process, designed and prepared the analysis of the potential aesthetic effects of a proposal to develop a 167 turbine wind farm and 115 kV transmission line in an agricultural area in northwest Ohio. Issues evaluated included the project's potential impacts on views from nearby residences, communities, and travel routes. Oversaw the analysis of the project's potential shadow flicker impacts and prepared the shadow flicker analysis report.

Iberdrola Renewables; Cayuga Ridge Wind Farm; Livingston County, Illinois. Supervised the site field work and preparation of simulations for this 300-MW wind farm proposed for development by in an agricultural area near Streator. Oversaw the analysis of the project's potential shadow flicker impacts and prepared the shadow flicker analysis report.

Air Force Center for Engineering and the Environment; Visual Analysis of Proposed Wind Turbine Development at the Massachusetts Military Reservation; Bourne, Massachusetts. Designed and directed the analysis of the potential aesthetic effects of a proposal to develop a single 1.65-MW wind turbine on the crest of a glacial moraine at the Massachusetts Military Reservation on Cape Cod. This analysis included an innovative use of GIS tools and data to develop mapping of potential turbine visibility that took into account the role of vegetation and distance in reducing potential turbine visibility and visual effects. This mapped analysis was used as a basis for assessing potential project visual effects on sensitive viewers and on views from the many historic sites in the project area. This analytic mapping, supplemented with photo documentation of views from sensitive areas, was incorporated into visual resource reports that responded to the requirements of the National Environmental Policy Act and of the Massachusetts Historical Commission.

Terra-Gen Power, LLC; Alta East Wind Project; Kern County, California. Senior consultant for a study of a proposed 300-MW wind energy project (up to 120 wind turbine generators within an approximately 3,700-acre site). Project site is located in the eastern Tehachapis, west of Mojave, on private and BLM-managed land. Analyses, including zone of visual influence (ZVI) mapping and visual simulations, were used in the technical report prepared to accompany both the Bureau of Land Management Plan of Development and County applications and to support County development of an Environmental Impact Report.

NextEra Energy Resources; North Sky River Project; Kern County, California. Senior consultant for a study of the visual effects of a proposed wind energy project on BLM and private lands in the southern Sierra Nevada, 15 miles north northwest of Mojave. Analyses, including the use of zone of visual influence mapping and visual simulations, were incorporated into a technical report to accompany both BLM Plan of Development and County applications and to support County's development of an Environmental Impact Report.

PacifiCorp; Dunlap Ranch Wind Energy Project; Carbon County, Wyoming. Designed and supervised the analysis of the potential aesthetic effects of a proposal to develop a 111-MW wind farm and 230-kV transmission line on privately owned ranch lands located approximately 7.5 miles north of Medicine Bow. This analysis became the Visual Resources chapter of the project's Environmental Assessment required by the Wyoming State Industrial Siting Act permit process. Provided expert witness testimony before the Wyoming Industrial Siting Board on the project's aesthetic issues.

Duke Energy; Top of the World Windpower Project; Carbon County, Wyoming. Designed and supervised the analysis of the potential aesthetic effects of a proposal to develop a 99-MW wind farm and 230-kV transmission line on privately owned ranch lands located north of Glen Rock. This analysis became the Visual Resources chapter of the project's Environmental Assessment required by the Wyoming State Industrial Siting Act permit process. Special attention was focused on potential visual effects on the nearby community of Rolling Hills.

Horizon Wind Energy; Simpson Ridge Wind Power Project; Carbon County, Wyoming. To meet the requirements of the Wyoming State Industrial Act permit process, designed and supervised the analysis of the potential aesthetic effects of a proposal to develop a 154-turbine wind farm and 230-kV transmission line on ranch lands in the area south of Hanna and Medicine Bow. Issues evaluated included the project's potential impacts on views from nearby communities, historic U.S. Route 30, and the historic Carbon town site and cemetery.

Duke Energy; Campbell Hill Wind Power Project; Converse County, Wyoming. Designed and supervised the analysis of the potential aesthetic effects of a proposal to develop a 100-MW wind farm and 230-kV transmission line on ranch lands in the area north of Glenrock. This analysis became the Visual Resources chapter of the project's Environmental Assessment required by the Wyoming State Industrial Act permit process.

Horizon Wind Energy; Antelope Ridge Wind Farm; Union County, Oregon. Senior task lead for the preparation of Exhibit L (Impacts on Protected Areas) and Exhibit R (Scenic and Aesthetic Values) for the Energy Facility Siting Council permit application for this 300-MW wind farm. Specialized analyses included detailed visibility studies from the City of Union and the Oregon Trail. Prepared materials related to the project's visual issues to support public outreach activities and participated in the project's public information meeting. Prepared simulations to depict the project's appearance, including a simulation to counter a citizen-prepared simulation circulating in the community that grossly misrepresented the project's appearance and visual effects.

Orion Wind Energy; Biglow Canyon Wind Power Project; Sherman County, Oregon. Designed and conducted the analysis of the potential aesthetic effects of a proposal to develop up to 218 1.5-MW turbines in an agricultural area in north central Oregon. Assessed effects on views from scenic, aesthetic, and protected areas defined by the Oregon Energy Facility Siting Council (EFSC). Based on these analyses, prepared Exhibit L (Impacts on Protected Areas) and Exhibit R (Scenic and Aesthetic Values) of the EFSC permit application.

Zilkha Renewable Resources; Kittitas Valley Wind Power Project; Kittitas County, Washington. Designed and conducted the analysis of the potential aesthetic effects of a proposal to develop up to 121 1.3- to 2.5-MW turbines on ridge lands in a rural area in north central Kittitas County. Assessed effects on views from nearby roadways and residences and recommended mitigation measures to attenuate impacts. Prepared the aesthetics chapter for the permit application to the Washington Energy Facility Site Evaluation Council (EFSEC). Provided written and oral expert testimony in hearings before EFSEC. Developed an approach to determine appropriate turbine setbacks from residences that was adopted by EFSEC in its decision and which was validated by the Washington Supreme Court when in response to a legal challenge, it upheld EFSEC's approval of the project.

Zilkha Renewable Resources; Wild Horse Wind Power Project; Kittitas County, Washington. Designed and conducted the analysis of the potential aesthetic effects of a large wind turbine installation proposed for Whiskey Dick Mountain in eastern Kittitas County. Assessed effects on views from nearby roadways and residences and recommended mitigation measures. Prepared the aesthetics chapter for the permit application to the Washington EFSEC. Prepared written expert witness testimony and provided oral testimony before EFSEC.

Solar Generation Facilities

Bright Source Energy; Ivanpah Solar Electric Generating System; San Bernardino County, California. Senior reviewer for the Application for Certification visual resource analysis prepared for a solar thermal project proposed by for development on 3,400 acres of federal land managed by BLM that are located in the desert region of eastern San Bernardino County, approximately 5 miles southwest of Primm, Nevada. Prepared detailed studies of impacts of the project on views from nearby Wilderness and National Monument lands

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and provided expert witness testimony on the visual resources issues before the California Energy Commission.

Solar Reserve; Rice Solar Energy Project; Riverside County, California. Senior reviewer for the Application for Certification visual resource analysis prepared by CH2M HILL's visual resources staff for a solar thermal project proposed by for development on 3,325 acres of privately owned land on the site of the former Rice Army Airfield in the Mojave Desert region of eastern Riverside County. Provided expert testimony before the California Energy Commission (CEC), leading to a determination by the CEC that the aesthetic impacts of the project would be less than significant.

NextLight; Silver State Photovoltaic Power Project; Clark County, Nevada. As the senior consultant, oversaw the preparation of the federal Environmental Impact Statement visual resource assessment for a proposal to develop a photovoltaic power plant on 7,840 acres of federal land managed by BLM located immediately east of Primm, Nevada.

NRG Solar; Alpine Solar Generating Station; Los Angeles County, California. As the senior consultant, oversaw the preparation of the visual resources technical report for a proposal to develop a photovoltaic power plant on 800 acres of privately owned desert land located in the Antelope Valley in northern Los Angeles County. Issues included potential visibility of the project from nearby residential areas and a state park and a state reserve.

AT&T Solar; Pilot Initiative, Analysis of Potential Visual Effects; San Ramon, California. Analyzed the potential aesthetic effects of a 1.1-MW direct-current solar photovoltaic system proposed for installation on the roof of the AT&T headquarters building. Identified and photo-documented views from sensitive viewing areas and directed production of visual simulations to depict the appearance of the installed PV system. Prepared a report that presented the simulations, evaluated the project's effects on the views, and addressed concerns about the potential for the system to create glare effects.

Iberdrola Renewables; Hyder Valley Solar Thermal Project; Maricopa County, Arizona. Prepared the federal Environmental Impact Statement visual resource assessment for a proposal to develop a solar thermal power plant on 1,980 acres of BLM-managed federal land located east of Hyder, Arizona.

Thermal Generation Facilities

Visual Resource Impact Analyses of Gas-fired Power Plants; Various Locations, California. Evaluated potential visual resources impacts of more than 30 gas-fired power plants proposed for a variety of urban and rural settings in California. Identified visual issues, designed the analysis strategies, contributed to development of architectural and landscape treatments, prepared visual resources analyses for the Applications for Certification for submittal to the California Energy Commission (CEC), reviewed and critiqued relevant sections of the CEC's analyses of the projects, and evaluated the visual issues associated with CEC-proposed alternative sites. As an expert witness on visual resources, prepared written testimony and provided oral testimony in hearings before the CEC.

Dominion Energy; Visual Impact of Cooling Tower Alternatives for the Manchester Street Generating Station; Providence, Rhode Island. Evaluated the visual impacts of alternative cooling tower options being considered for a large combined-cycle, gas-fired power plant located at a visually prominent site on the Providence waterfront. Scoped the issues, directed the preparation of analytic maps, identified and photo-documented critical viewpoints, and directed the production of visual simulations depicting the three alternative cooling tower structures and the steam plumes associated with them. Scope also included evaluating the visual impacts of the alternatives on the critical viewpoints, and preparing a report documenting the analysis for submission to the Rhode Island Department of Environmental Management.

Dominion Energy; Visual Impact of Cooling Tower Alternatives for the Salem Harbor Generating Station; Salem, Massachusetts. Evaluated the visual impacts of three alternative cooling tower options being

considered for development at a large harborside coal-fired power plant located near historic and cultural resources of national importance. Scoped the issues, directed the preparation of analytic maps, identified and photo-documented critical viewpoints, directed the production of visual simulations depicting the three alternative cooling tower structures and the steam plumes associated with them, evaluated the visual impacts of the alternatives on the critical viewpoints, and prepared the report documenting the analysis for submission to the U.S Environmental Protection Agency.

Hydroelectric Projects

Oroville Facilities Hydroelectric Project; Oroville, California. As part of an Applicant Prepared Relicensing (APR) process, responsible for preparation of initial project documents. Developed outlines and work plans, coordinated with the Department of Water Resources and environmental specialists for each of the issue areas, assembled drafts, edited text, designed final reports, and supervised report production. Responsible for analysis of the visual resource issues associated with the project's reservoir, forebay, afterbay, canals, dam structures, power houses, and fish ladder facility. Technical advisor to the Land Use, Land Management, and Aesthetics Work Groups, requiring participation in sessions involving agency staff, representatives of Indian Tribes and Non-Governmental Organizations, and members of the general public.

Willamette Falls Hydroelectric Project; Oregon City and West Linn, Oregon. As part of the APR process, prepared analyses of visual resources issues that include evaluations of the appearance of the falls under varying flow conditions, as well as assessments of the relationship of project structures to the project's landscape setting.

Aesthetic and Site Enhancement Studies, Shoshone Falls Hydroelectric Project, Idaho. Consultant to Idaho Power on the effects of proposed relicensing of the Shoshone Falls hydroelectric project on the aesthetic qualities of the falls and adjacent park. Provided direction for development of the analysis approach for assessing the effects of changes in flows over the falls on the falls' appearance and public expectations. Evaluated the project in light of local government and land management agency plans and policies, designed and implemented special perception studies, and worked with an advisory committee of representatives of local governments and state agencies. Based on this process, recommended mitigation and enhancement measures. Assisted in preparing a visual analysis report for incorporation into the Exhibit E submitted to the Federal Energy Regulatory Commission.

Federal Energy Regulatory Commission Exhibit E, Snoqualmie Falls Hydroelectric Project; Washington. Analysis of the aesthetic implications of a proposal by Puget Sound Power and Light to increase the capacity of its generating plant at Snoqualmie Falls. Assessed impacts of structural changes and changes to flows over the falls. Developed and applied a methodology for evaluating the effects flow changes would have on the falls' appearance. Prepared the aesthetics section of Exhibit E of the relicense application. Developed the script for a video regarding the aesthetics issues submitted to the Federal Energy Regulatory Commission.

Water Resources Projects

U.S. Army Corps of Engineers Washington Aqueduct Division; Washington Aqueduct Residuals Management Environmental Impact Statement; Washington, D.C. Scoped the aesthetic issues related to new facilities and landscape modifications associated with alternative measures for disposal of water treatment residuals, and designed and implemented a strategy for assessing the aesthetic impacts to provide a basis for comparing the alternatives and preparing the NEPA Environmental Impact Statement.

Los Angeles Department of Water and Power; LADWP Headworks Environmental Impact Report, Los Angeles County, California. Evaluated the potential aesthetic effects of a proposal to construct a large enclosed reservoir at a location near Griffith Park to replace the treated water storage capacity that had been provided by the Silver Lake Reservoir.

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Visual Assessment/Mitigation Recommendations for the San Joaquin Reservoir; Newport Beach, California. Evaluated visual impacts of proposed alternative reservoir cover and water treatment plant options for a Metropolitan Water District water supply facility located in an affluent residential area. Developed a proposal for design mitigation measures that led to project acceptance by residents of the neighborhood overlooking the reservoir.

Red Bluff Diversion Dam; Tehama County, California. Developed the analysis plan for and directed the assessment of the aesthetic changes associated with a set of alternatives being considered for changes in management of the Red Bluff Diversion Dam to enhance passage for anadromous fish. Changes being considered included construction of a massive pumping facility, new fish ladders, and a dam bypass and elimination of an aesthetically and recreationally important lake created by the dam either entirely, or for all but two or four months of the year. The analysis, which included preparation of simulations, was summarized in an aesthetics chapter prepared to meet the requirements of both the NEPA and CEQA.

Landfill Projects

Kettleman Hills Landfill Project; Kings County, California. Conducted analyses of the potential aesthetic effects of a major expansion of Waste Management's Kettleman Hills Landfill. The analysis included identification of sensitive viewpoints in the surrounding area and preparation of visual simulations of the effects of the proposed expanded landfill areas on these views. Presented the results of the analysis in the form of the visual resources chapter of the project Environmental Impact Report.

Chiquita Canyon Landfill Expansion; Los Angeles County, California. Provided scoping, analysis design, and senior review for an assessment of the potential aesthetic effects of a proposed expansion of the Chiquita Canyon Landfill. The analysis strategy included documentation of the visual effects of existing landfills in Southern California that are comparable to what is being considered at Chiquita Canyon. In addition, studies were conducted of the potential visibility of alternative fill levels and patterns at Chiquita Canyon, and assessments were made of the changes the alternatives would have on views from sensitive locations.

Transportation Projects

Port of Los Angeles Berths 97-109 Container Terminal Project; San Pedro, California. Developed the analysis plan for and implemented the assessment of the aesthetic impacts of a major new terminal proposed for the West Basin area of the Port of Los Angeles. Special attention was given to the visual effects of the ten 248-foot-high shore-side gantry cranes proposed for installation near the Vincent Thomas suspension bridge, an important regional landmark. Identified mitigation measures that were adopted to reduce and compensate for the project's aesthetic effects.

SR-79 Environmental Document Visual Impact Technical Study; Riverside County, California. Directed the analysis of the potential aesthetic impacts of alternative alignments of a 20-mile-long freeway being planned for the rapidly developing San Jacinto Valley. Landscape conditions range from rural to suburban. Applied FHWA procedures to develop an analysis consistent with Caltrans specifications. Identified the aesthetic impacts associated with each of the alternative alignments and recommended mitigation measures.

SR-47 Environmental Document Visual Impact Technical Study; Los Angeles County, California. Directed the analysis of the potential aesthetic impacts of alternatives for the replacement of the Schuyler Heim Bridge and for construction of an elevated freeway to connect SR 47 with the Alameda Avenue expressway. The project is located in a visually complex region that includes the Ports of Los Angeles and Long Beach and nearby industrial, recreational, and residential areas. Applied FHWA procedures to develop an analysis consistent with Caltrans specifications.

California High Speed Rail Authority; California High Speed Rail Environmental Impact Report; Southern California. Evaluated the potential aesthetic impacts of a proposed high speed rail route extending from downtown Los Angeles to downtown San Diego by way of San Bernardino and Riverside. The route included

depressed, at-grade, and overhead segments that would pass through a variety of urban, suburban, and rural settings, many of which have highly valued visual qualities. In addition to identifying and documenting potential impacts, recommended measures for impact mitigation.

Bay Area Rapid Transit (BART) Warm Springs Extension; Fremont, California. Analyzed the aesthetic impacts of a proposed 7.8-mile extension of the BART heavy-rail system from the city of Fremont to Santa Clara County. Prepared the aesthetics section of the CEQA-mandated Environmental Impact Report.

Urban Freeway Design Research; France and US. Conducted research comparing American and French approaches to planning and design of urban freeways to optimize their integration into the urban environment. Research included literature review, interviews with highway engineers and landscape architects in the U.S. and France, review of plans and environmental assessments, and site visits to exemplary projects.

Chevilly-Larue Roadway Design Evaluation Study, France. Member of a study team that evaluated the effects of urban design measures intended to improve traffic safety and aesthetics that were installed on a heavily traveled road through the center of a suburban community. Developed a research strategy and questionnaire for documenting resident perceptions before and after the installation of the measures.

Land Use, Natural Resource, Facility Siting, and Urban Design Studies

East Anderson Receiving Station Growth Impact Study; Phoenix, Arizona. For the Salt River Project, analyzed the land use development implications of a large electric receiving station proposed for a developing area on the edge of Phoenix. Directed collection, mapping, and analysis of demographic, economic, land use, infrastructure, planning, and policy data, and generation of projections of future land use patterns under project and no-project scenarios.

Growth and Development Studies; Northern and Central California. At PG&E, designed, scheduled, and managed studies evaluating growth trends and forecasting future population and land use in urban and rural areas throughout Northern and Central California to provide a basis for planning and siting future electric facilities. Supervised work that included coordination with local planning agencies; data gathering and evaluation; analysis of economic, demographic, environmental, infrastructure, and policy data; development of growth projections; and reporting of findings.

University Teaching

Lecturer; Department of City and Regional Planning, University of California, Berkeley. Taught CP 214, "Urban and Regional Physical Infrastructure," a graduate-level course providing a survey of the major infrastructure systems, their characteristics and impacts, and their relationships to the planning of cities and regions.

Assistant Professor; Department of Urban and Regional Planning, California State Polytechnic University, Pomona. Designed and taught undergraduate courses in urban design, and natural factors in planning. Taught studio sections of courses in graphic communication and design and in subdivision design.

Visiting Lecturer; Ecole Nationale des Ponts et Chaussées. Paris, France. Taught "The Urban Environment," a lecture course in English for engineers and planners on environmental quality issues and their treatment in project planning and design.

Instructor. Departments of Landscape Architecture and City Planning, University of California, Berkeley. Co-taught "The Urban Environment" a graduate-level course reviewing methods for treating environmental quality issues in the planning and design process. Assisted in teaching "Social Factors in Landscape Design."

Thomas Priestley, Ph.D.

Selected Professional Reports, Publications and Conference Papers

Property Values

Book Review of Towers, Turbines, and Transmission Lines: Impacts on Property Value by Sandy Bond, Sally Sims, and Peter Dent. Accepted for Publication by *Noise Control Engineering Journal*. 2014.

Electric Transmission Lines and Property Values—Proposal for a Program of Research. Presentation at the Edison Electric Institute/National Rural Electric Cooperative Association Siting Workshop, Burlington, Vermont. October 20, 2009.

Addressing Transmission Line and Wind Power Property Value Issues; Properly Informing the Public, Regulators, and Policy Makers. Invited Presentation to the 2008 Edison Electric Institute and National Rural Electric Cooperative Association Electric Facility Siting Workshop, Minneapolis, MN, October 7, 2008.

Transmission Lines and Property Values: Review of the Research and Summary of Key Findings: Report to the Emerging Technology Issues Advisory Committee of the Virginia General Assembly Joint Commission on Technology and Science. July, 2005.

The Effects of Overhead Transmission Lines on Property Values: A Review and Analysis of the Literature (with Cynthia Kroll, Ph.D.). Prepared for the Siting and Environmental Planning Task Force of the Edison Electric Institute. 1992.

A Statistical Analysis of Transmission Line Impacts on Residential Property Values in Six Neighborhoods (with Patrice Igelzi). Prepared for the Southern California Edison Company. May 1991.

A Guide to Assessing Transmission Line Impacts in Residential Communities (with Patrice Igelzi). Washington, DC, Edison Electric Institute. 1990.

Transmission Line Impacts: Studying Perceptions and Property Values. (videotape, contributing author of script). Washington, DC, Edison Electric Institute. 1990.

Public Perceptions of Electric Facilities

Public Perception of Electric Facilities, an Advanced Workshop. Washington, DC. *March 17, 18, 19, 1996: Workshop Summary* (editor). Published by the Edison Electric Institute, Washington, DC, 1997.

Perception of Transmission Lines: Summary of Surveys and Framework for Further Research (with Kenneth Craik, Mary Deming, and Selma Monsky). International Electric Transmission Perception Project. Published by Edison Electric Institute, Washington, DC, 1996.

“Environmental Perception, Cognition, and Behavior: Public Responses to Electric Transmission Lines” (with Gary Evans, Ph.D.). *Journal of Environmental Psychology* 16, 65–74. March 1996.

Perceived Effects of Electric Transmission Facilities: A Review of Survey-Based Studies. Prepared for the Siting and Environmental Planning Task Force of the Edison Electric Institute. 1992.

Perceptions of a Transmission Line in a Residential Neighborhood: Results of a Case Study in Vallejo, California (with Gary Evans, Ph.D.). Prepared for the Southern California Edison Company. November 1990.

“Perceptions of Transmission Lines in Residential Neighborhoods: Results of a California Case Study.” *Edison Electric Institute Workshop on Transmission Lines in Residential Neighborhoods: Issues in Siting and Environmental Planning*. Portland, Oregon, October 1989.

“Study of the Effects of an Electric Transmission Line on Perceived Neighborhood Quality.” IAPS 10, Delft, Holland. July 1988.

Electric Facility Planning, Design, and Evaluation Issues

Wind Power: Aesthetics and Community Acceptance. Presentation at the American Wind Power Association Wind Power Siting Workshop. Portland, Oregon. February 19, 2013.

Visual Impacts: Providing Decision Makers With the Information They Need. Presentation at the American Wind Energy Association WINDPOWER conference. Anaheim, California. May 20–25, 2011.

Visual Impacts of Renewable Energy Facilities: New Issues and New Strategies for Impact Assessment. Presentation at the Edison Electric Institute/National Rural Electric Cooperative Association Siting Workshop. Phoenix, Arizona. October 6, 2010.

Aesthetic Issues in Wind Power Siting and Licensing. Presentation at the American Wind Energy Association Wind Power Siting Workshop. Denver, Colorado. February 18, 2010.

An Introduction to Shadow Flicker and its Analysis. Presentation that was part of the New England Wind Education Project (NEWWWP) Webinar #5 on “Understanding the Current Science, Regulation, and Mitigation of Shadow Flicker.” February 10, 2010.

Addressing Transmission Line and Wind Power Property Value Issues; Properly Informing the Public, Regulators, and Policy Makers. Invited Presentation to the 2008 Edison Electric Institute and National Rural Electric Cooperative Association Electric Facility Siting Workshop. Minneapolis, Minnesota. October 7, 2008.

Wind Power Visual Impact Assessment: Practical Issues and Links to Research. Invited Presentation to the National Wind Coordinating Committee Workshop on Technical Considerations in Siting Wind Developments. Washington, DC. December 1, 2005.

Getting it Right with Local Government: Dealing With Aesthetic Issues Up Front. Presentation at the American Wind Energy Association WINDPOWER conference. Denver, Colorado. May 16–18, 2005.

Wind Power Visual Impact Assessment: Practical Issues and Links to Research. Invited Presentation to the National Wind Coordinating Committee Workshop on Technical Considerations in Siting Wind Developments. Washington, DC. December 1, 2005.

Technical Issues in Developing Wind Projects: Aesthetics. Presentation at the American Wind Energy Association Wind Power Siting Workshop. Portland, Oregon. October 13, 2004.

Addressing the Aesthetic Challenges Faced by the Wind Industry: Research to-Date and Insights from the Environmental Design Paradigm. Presentation at the Global WINDPOWER conference. Chicago, Illinois. March 31, 2004.

L' integration dans l'environnement des ouvrages de transport d'énergie électrique (in collaboration with Aménatech). Prepared for Hydro-Québec and Electricite de France. 1996.

Environmental Design Issues Associated with Older Substations (with Aménatech). Report prepared for Hydro-Québec, Vice-présidence Environnement. October 1995.

“The Public and Electric Facility Siting” (with Daniel Cohen). Article published in *Environmental Planning Quarterly*, Spring 1995.

Substations in the Urban Context: Design Issues and Examples. Report prepared for Hydro-Québec, Vice-présidence Environnement. 1994.

Colusa County Transmission Line Element. Paper presented at Edison Electric Institute National Land Management Workshop, Duluth, Minnesota, August 1992, and included in the workshop proceedings.

Undergrounding of Electric Transmission Lines: A Review of Recent Cases in the United States. Prepared for Vice-présidence Environnement, Hydro Québec. July 1990.

Thomas Priestley, Ph.D.

Aesthetic Quality Issues and Their Treatment in Electric Transmission Line Planning - Towards a New Paradigm. Ph.D. Dissertation, Department of Landscape Architecture, University of California, Berkeley. September 1988.

Aesthetic Considerations and Electric Utilities: An Introductory Guide to the Literature. Palo Alto, CA: Electric Power Research Institute. February, 1984.

Transmission Lines and Land Use Development: Final Report. Prepared for the Community and Regional Planning Task Force of the Edison Electric Institute. 1983.

Other Planning and Design Issues

“Donald Appleyard’s Contribution to Street Livability Research.” *Proceedings, Fifth Annual Pedestrian Conference*. Boulder, Colorado: Transportation Division, City of Boulder, 1984, pp. 19-27.

Chinatown Urban Design Study (with Peter Bosselmann, et al.). Berkeley Environmental Simulation Laboratory. 1984.

Sun, Wind, and Comfort: A Study of Open Spaces and Sidewalks in Four Downtown Areas (with Peter Bosselmann, Edward Arens, et. al.). Berkeley, California: Institute of Urban and Regional Development. 1984.

“The Field of Visual Analysis and Resource Management: A Bibliographic Analysis and Perspective” *Landscape Journal*. Spring 1983. pp. 52-59.