

THE HIDDEN HILLS SOLAR ELECTRIC GENERATING SYSTEM, APPLICATION FOR CERTIFICATION (11-AFC-2)

PREPARATION TEAM

Executive SummaryMike Monasmith

IntroductionMike Monasmith

Project DescriptionMike Monasmith

Environmental Assessment

Air Quality/GHG Jacqueline Leyva, Ph.D

Biological Resources..... Carolyn Chainey-Davis, Chris Huntley, Carol Watson

Cultural Resources..... Thomas Gates, Ph.D

Hazardous Materials Management Geoff Lesh

Land Use.....Christina Snow

Noise and Vibration..... Shahad Khoshmashrab

Public Health.....Ann Chu, Ph.D, Obed Odoemelam, Ph.D

Socioeconomics Jim Adams, Steven Kerr, Richard McCann

Soils and Surface Water Marylou Taylor

Traffic and Transportation.....Candice Hill, John Hope, Gregg Irvin, Ph.D

Transmission Line Safety and Nuisance.....Obed Odoemelam, Ph.D

Visual Resources Melissa Mourkas

Waste Management.....Ellie Townsend-Hough

Water Supply.....Mike Conway

Worker Safety and Fire Protection Geoff Lesh

Engineering Assessment

Facility Design..... Shahab Khoshmashrab

Geology and Paleontology..... Casey Weaver

Power Plant Efficiency Shahab Khoshmashrab

Power Plant Reliability Shahab Khoshmashrab

Transmission System Engineering.....Sudath Edirisuriya

Alternatives Jeanine Hinde

General Conditions Joseph Douglas

Project Assistant Cenne Jackson

DECLARATION OF
J. Mike Monasmith

I, J. Mike Monasmith, declare as follows:

1. I am presently employed by the California Energy Commission in its Siting, Transmission and Environmental Protection Division as a Senior Project Manager.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on the **Executive Summary** and **Project Description** sections of the **Final Staff Assessment** for the **Hidden Hills Solar Electric Generating Station** Application for Certification (AFC), based on my independent analysis of the AFC, supplements, data, documents, analysis and testimony from other staff and reliable sources, and based upon my own professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: November 6, 2012 Signed: _____

At: Sacramento, California

J. MIKE MONASMITH

EMPLOYMENT HISTORY

California Energy Commission (Sacramento, CA)

Senior Project Manager (November 2007 – present)

Leads, plans, coordinates, prioritizes, monitors, reviews and conducts work activities associated with the permitting of large thermal energy facilities (including solar thermal) in California by means of certified CEQA regulatory program that incorporates applicable environmental laws, ordinances, regulations and standards. Lead multi-disciplinarian teams of engineers, planners, scientists and analysts who review complex, proposed power plant projects. Responsibilities include power plant proceeding schedule; utilization of principles and practices of engineering and environmental impact analyses, including specifics of Federal, State, and local laws (CEQA, NEPA) and regulations relating to energy and industrial facility siting, construction and operation. Conduct analyses of proposed or potential site areas; develop and recommend goals and objectives for a statewide facility siting program; develop, analyze and evaluate alternative facility siting plans; write research reports and prepare progress reports; coordinate and review energy facility siting standards, conditions, and guidelines with other state and federal regulatory agencies, stakeholders, related organizations and the public; conduct and manage large public hearings, workshops and events. Plans, coordinates, prioritize, monitors, guides, reviews and conducts work activities of project teams to ensure assigned work activities successfully contribute to the overall project completion schedule. Develops and maintains clear and concise communications and working relationships with other departments, agencies and members of the public.

Associate Public Adviser (November 2003 – November 2007)

Liaison between the Energy Commission, intervenors, members of the public and community organizations and stakeholders to ensure legally mandated public participation requirements were met in regard to Energy Commission activities, with particular focus on siting activities; advise departmental staff on various local community issues and developments in areas of concern and/or involvement and provide appropriate strategies and recommendations; oversee the development and implementation of community relations plans; organize and conduct public meetings, conferences and hearings regarding community issues; assist community work groups and advisory committees and maintain a close working relationship with these groups, as well as local agencies and elected officials; facilitate and advocate communication and understanding between technical experts, impacted communities and the general public via periodic emails, newsletters, phone calls and meetings in regard to Commission proceedings, decisions and regulations.

California Resources Agency (Sacramento, CA)

Special Assistant to Secretary Mary Nichols (April 2003 - November 2003)

Provided policy and program analysis and advice to California Resources Agency Secretary Mary Nichols. As a gubernatorial (Davis) appointee, provided assistant on key resource management issues, including: forest and fire protection, water resource use and development, parks and recreation priorities, and bonds and grant priorities and utilization.

California Democratic Party (Los Angeles, CA)

Director of Communications (March 2002 – December 2002)

Supervised state-wide Press and Communications staff for the California Democratic Party's 2002 California Coordinated Campaign effort to re-elect Governor Gray Davis, Lt. Governor Cruz Bustamante, Attorney General Bill Lockyer, State Treasurer Phil Angelides, State Controller Steve Westly, Secretary of State Kevin Shelley, Insurance Commissioner John Garamendi and Spt. of Public Instruction Jack O'Connell.

Gore/Lieberman - California Deputy Director (March 2000 – December 2000)

U.S. CONGRESSWOMAN JANE HARMAN (Washington, DC / Los Angeles, CA)

Chief of Staff (September 1997 – November 1998)

As Chief of Staff for U.S. Rep. Harman in 1997-1998, provided a wide-range of staff management, policy and political leadership, strategic political direction and advise to the Congresswoman on local, state and national issues of importance. Managed and was responsible for a staff of 16 policy and political professionals with a combined annual budget of \$2.5 million. As Political Director in 2001, I identified and resolved politically sensitive issues within the Congresswoman's coastal Los Angeles County Congressional district. Worked extensively with the Congresswoman's advisory committees (defense industry retention, education, environment and health care). Coordinated conferences and meetings in DC, the Los Angeles district and elsewhere in California. Provided ongoing analyses of community, economic and political concerns.

Deputy Campaign Manager, Harman for Governor (March 1998 - June 1998)

Political Director (June 2001- December 2001)

STATE CONTROLLER KATHLEEN CONNELL (Los Angeles, CA)

Chief Deputy Controller (December 2000 – June 2001)

As Chief Deputy Controller in 2000-2001, I was the lead staff member responsible for all facets of SCO external affairs, including: training, assigning and directing the work of SCO Executive Office press and communications staff; developing work schedules; assisting staff in resolving long-term and immediate/emergency problems and situations; making recommendations in staff performance appraisals; and reporting problems, concerns and developments directly to Controller Connell. As Press Secretary (CEA 1) in 1995-1996, responsibilities included managing, advancing and planning all outreach projects; served as the media project leader; prepared feasibility studies; developed, conducted and analyzed survey data and created public outreach campaign materials for Controller's goal of performance-based governance principles. Also developed work programs and schedules; managed budget and fiscal aspects of outreach projects; and, developed schedules and facilitated workshops and meetings.

Assistant Deputy Controller, External Affairs (April 1995 – June 1996)

VERIZON COMMUNICATIONS (Thousand Oaks, CA)

Director, Los Angeles Government Affairs (May 1999 – March 2000)

Planned, managed and coordinated GTE/Verizon California's Public Affairs program for the Los Angeles City Council and the Los Angeles County Board of Supervisors. Updated outreach and public affairs publications, and recommended candidate organizations for annual giving by the GTE Foundation. As a member of the Public and External Affairs staff, assisted in the preparation of speeches for public appearances before elected officials. Disseminated information on company activities to schools, government entities, elected/appointed officials and the public at large. Developed and implemented a systematic communications outreach program for ongoing relationship building between company and elected officials and community leaders/members within the company's service territory that provided a means for greater outreach and branding opportunity success.

McCOY & ASSOCIATES (Los Angeles, CA)

Senior Associate (December 1998 - April 1999)

Managed campaigns and special event projects for a variety of public and private sector clients as part of a multi-disciplined consulting firm. Responsible for the complete quality management of client deliverables such as development plans.

U.S. DEPARTMENT OF THE INTERIOR (Washington, DC)

Special Water Assistant, Asst. US Secretary Patricia Beneke (April 1997 – August 1997)

As a Schedule C Presidential appointee (President Clinton), I worked as a confidential adviser to Assistant U.S. Interior Secretary Patricia Beneke at United States Department of Interior in Washington, DC. Served Secretary Beneke in several capacities, including her liaison to US Bureau of Reclamation staff and key BOR field offices in California and Nebraska regarding western water issues (Lower Colorado River Basin issues that involved the state of California, and its 4.4 million-acre feet annual allotment of Colorado River water). For Nebraska, worked on the 3-state Platte River water consultations and the final cooperative water user agreement between the Governors of Colorado, Wyoming and Nebraska that involved farmers, environmental organizations, conservationists, the public and other stakeholders interested in the Platte River.

CLINTON/GORE '96 GENERAL COMMITTEE (Los Angeles, CA)

California Deputy State Director (Southern California Political Lead) (1996)

California Desk Co-Director, Presidential Inaugural Committee (1997)

SHEILA JAMES KUEHL FOR ASSEMBLY (Los Angeles, CA)

Campaign Manager (1994)

LOS ANGELES MAYOR RICHARD RIORDAN (Los Angeles, CA)

Deputy Press Secretary / Mayoral Assistant / Advance Co-Lead (1993-94)

Deputy Field Director / Deputy Director, Advance (Riordan for Mayor) (1993)

DEMOCRATIC PARTY OF ORANGE COUNTY (Santa Ana, CA)

Office Manager / Chief Assistant to the Chairman (1991-92)

UNIVERSITY OF CALIFORNIA, Santa Cruz

Federal Work-study Program Manager, UCSC Student Employment (1990 – 1991)

ICICLE SEAFOODS/TOWA ROE, Inc. (Seward, AK)

Salmon Cannery Production Supervisor “Team Lead” (Summers, 1988-1991)

EDUCATION:

University of California at Santa Cruz

B.A., Environmental Studies/Politics (Policy & Planning), 1990

(Thesis Honors: Resource Management, Tongass National Forest, Alaska)

Case Western Reserve University, Cleveland, Ohio

B.S. candidate, Industrial, Mechanical Engineering, 1985-88

AFFILIATIONS:

Association of Environmental Professionals, Member (2010-present)

Stonewall Democratic Club, Member (1992-present)

Los Angeles Export Terminal, Commissioner (1999-2005)

DECLARATION OF

I, Jacquelyn Leyva Record declare as follows:

1. I am presently employed by the California Energy Commission in the Facilities Siting Office of the Systems Assessments and Facilities Siting Division as an Air Resources Engineer.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony on **Air Quality** for the **Hidden Hills Solar Electric Generating System** based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony and errata is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and errata and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: Oct. 30, 2012 Signed: Jacquelyn Leyva Record

At: Sacramento, California

Jacquelyn Leyva Record

Experience

March '09 – Present **CA Energy Commission** **Sacramento, CA**

Air Resources Engineer

- Currently authoring staff assessment analyses for the technical area of air quality for the Engineering and Siting Division permitting power plant projects over 50 MW in the state of CA. Worked on renewable ARRA funding projects along with natural gas power projects.
- Reviewing emission compliance reports
- Authored staff analyses for project amendments
- Trained in CEQA and NEPA analysis, along with AERMOD air modeling.

August '08 – March '09 **ERRG, Inc.** **Martinez, CA**

Engineering Assistant

- Assisted with both technical and field duties for a variety of environmental investigations.
- Assisted on an environmental site assessment, preliminary assessments (PA), site inspections, and remedial investigations feasibility studies.
- Field duties performed include groundwater sampling and air sampling

June '07 – March '08 **Tetra Tech EC, Inc** **Santa Ana, CA**

Engineering Assistant Intern

- Working on various Department of Defense projects in environmental engineering.
- Helped assist in 5 year review of remediation approaches.
- Helping assist with a commercial project creating a water reuse/recycle treatment plant.

June '05 – September '05 **SF Regional Water Board** **Oakland, CA**

Contract Work – Special Project

- Wrote a memorandum regarding total petroleum hydrocarbons showing up as false positives in submitted quarterly monitoring reports for NPDES FUEL permit.
- Researched various EPA methods of testing for VOC, and Fuel constituents in water.
- Communicated with consultants from Weiss Associates and state funded laboratories to come to a conclusion for memorandum.
- Site inspections, site reports.

Education

2003-June 2008 University of California Irvine Irvine, CA

- B.S., Chemical Engineering
- MAES (Mexican American Engineers and Scientists) - Vice Chair 2004-2005
- CAMP summer science program participant 2003

June 1999 – September 2003 Las Lomas High School Walnut Creek, CA

- High School Diploma
- Life time member of CSF (California Scholarship Federation).

**DECLARATION OF
Carol Watson**

I, **Carol Watson**, declare as follows:

1. I am presently employed by the California Energy Commission in the Environmental Office of the Siting Transmission & Environmental Protection Division as a staff biologist (Planner II).
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony on **Biological Resources** for the Hidden Hills Solar Electric Generating System based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 10-30-2012

Signed: 

At: Sacramento, California

**Carol Watson
Sacramento, CA 95816**

WORK EXPERIENCE

California Energy Commission 2/2010 - Present
Sacramento, CA
Siting Transmission &
Environmental Protection
Division

As staff biologist, primary duty analysis of power plants over 50MW: solar thermal, photovoltaic (pending litigation), natural gas, and coal technologies. Analyze applications to permit projects, conduct CEQA-certified regulatory program under the Warren-Alquist Act, perform scoping and coordination with resource agencies, the public, "intervenors" to the applicant's process, formulate and recommend mitigation, and defend analysis under oath before Energy Commission Commissioners. Provide compliance oversight for permitted projects during all stages: construction, operation, and closure, and ensure proper implementation of mitigation. Synthesize developing regulations (REAT agency, DRECP Sec. 10 process among others) and relevant legislation to ensure Energy Commission compliance. Coordinate with— and negotiate— solutions with diverse entities as BLM, USWS, Water Quality Control Board, US Army Corps of Engineers, Governor's Office liaisons to the Energy Commission, private interest groups, and solicitors working on behalf of these interests.

Parsons Corporation 10/2004 - 12/2009
Las Vegas, Nevada

Principal Scientist

Worked in-house with client, Southern Nevada Water Authority. Served as Principal scientist from 11/2008 to 2/2010. Prepared Environmental Species Act Section 7 Permit for the Southern Nevada Water Authority Pipeline Project. Species included desert tortoise and 10 other Mojave and Great Basin aquatic and upland species. Perform general site surveys, spring snail counts, sage grouse telemetry, mist netting for bats, Amargosa toad surveys in Death Valley, Nevada, and assist the Nevada Department of Wildlife with bat telemetry studies. From 2004-2008 served as project scientist. Duties included mapping riverbank vegetation of the Virgin river, from the lower reach in Nevada through the confluence with Lake Mead. Ground-truthed plant assemblages based on aerial imagery and 3-dimensional (stereoscopic) views of vegetation. Familiar with cadastral and rastral imagery analysis. From 9/2005-11/2008 served on consultant basis. Prepared EIS/EIR analysis for impacts to peregrine falcon and special status bat species from the Gerald Desmond Bridge Project, in the Port of Long Beach, California.

Enercon 9/2005-11/2007
Tulsa, Oklahoma

Project Biologist

Fulltime from 7/2008-11/2008, consulting status from 9/2005 to 5/2007. Served as project biologist, performing a range of work from baseline surveys for the Oklahoma Department of Transportation, preparing NEPA documents, preparing and responding to Requests for Proposals and Requests for Qualifications. Representative projects include coordination of environmental studies and preparation of an Environmental Assessment for the Federal Highway Administration, on behalf of Kellogg Engineering, in Rogers County, Oklahoma. Conducted public scoping and agency solicitation, attending county plenary sessions as technical environmental consultant. Prepared an Environmental Information Document for the Environmental Protection Agency for the expansion of the Rural Water District #3 Tacora Water Treatment plant in Rogers County, OK. Conduct protocol surveys for the federally endangered American burying beetle on behalf of clients such as Chesapeake Operating Systems, OKDOT, and Panther Energy Company, surveyed new pipeline routes from Oklahoma through northern Texas for OG&E.

Representative Project: City of Moreno Valley, Riverside Co., California. Prepared Caltrans' Natural Environment Study for improvements to SR-60 at the Moreno Beach Drive and Nason Street interchanges. Studies included oversight of a jurisdictional delineation of wetlands and waters of the U.S., and coordination with project engineers to determine project boundaries and impacts. Developed mitigation in conformance with the Western Riverside County Multiple Species Habitat Conservation Plan.

BonTerra Consulting
Pasadena, California

2/2004 – 10/2004

Wildlife Biologist

Draft RFQ/RFP, perform general biological surveys on behalf of public and private sector clients, and prepare CEQA/NEPA documentation. Representative Project: Plum Canyon Development, Los Angeles Co., California: Conducted salvage (pitfall trapping & grubbing salvage) and relocation of sensitive and local populations of reptiles and amphibians. Species handled included Western spadefoot toad, coastal western whiptail, and silvery legless lizard. Coordinated with CDFG regarding species of special concern, drafting relocation plans, and assisted with developing a protocol to simulate and force spring emergence and subsequent relocation of spadefoot toads prior to grubbing.

Sapphos Environmental
Pasadena, California

12/2000-2/2003

Wildlife Biologist

Responsible for all phases of project management and biological technical work. Responded to and prepared RFP/RFQ, designed and conducted environmental study sufficient to project details (*i.e.* determination and development of appropriate ESA, NEPA, CEQA, Clean Water Act permits); and prepared environmental documentation. Prepared and conducted all public noticing and scoping per regulations, and prepared as technical consultant before the county and city and planning committees of Ventura and Los Angeles.

Representative Project: Ahmanson Ranch, Ventura County, California: Conducted long-term monitoring of a population of California red-legged frog with detailed notes as to location, behavior, and conditions. Assisted permitted biologists in placing passive integrated transponders, or PIT tags, as part of a radio telemetry study designed to aid understanding of habitat use and foraging distances. Assisted with the preparation of a Biological Assessment for an Endangered Species Act Section 7 consultation. Managed the design and creation of enclosed habitat and a captive breeding program. Conducted various studies at the Ahmanson Ranch, including San Fernando Valley spineflower introduction studies, seed counts and collections, and oak tree surveys and assessments.

EDUCATION

M.S. Zoology, Eastern Illinois University **2000**

Focus: environmental ecology;
population dynamics

Paid Teacher's Assistantship
B.S., Biology, Western Michigan University 1998

Chemistry minor

RELEVANT TRAINING

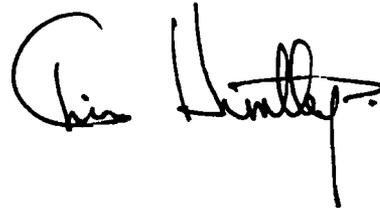
CPR Certified (2011, Energy Commission)
Desert Tortoise Surveying, Monitoring, and Handling Workshop, (2000)
BLM certified to survey for the flat-tailed horned lizard (2001)
California red-legged frog workshop (2001)
Passed U.S. Fish and Wildlife Service survey exam for El Segundo blue butterfly (2002)
American Burying Beetle Bait-away Surveys and Pitfall Trapping (performed under a permitted biologist' supervision), 2006-2007

**DECLARATION OF
Testimony of Chris Huntley**

I, **Chris Huntley**, declare as follows:

1. I am presently employed by Aspen Environmental Group, a contractor to the California Energy Commission, Siting, Transmission and Environmental Protection Division, as a **Biological Resource Technical Specialist**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on **Biological Resources** for the **Hidden Hills Solar Electric Generating System Final Staff Assessment** based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.



Dated: November 8, 2012

Signed: _____

At: Sacramento, California



Academic Background

Graduate Studies, Biology, California State University Northridge
BA, Biology, University of California at Santa Cruz, 1992

Professional Experience

Mr. Huntley has 14 years of experience with Aspen supporting and managing CEQA/NEPA projects including EIR/EIS, IS/MND, EA, BE/BA, and BA documents. In addition, Mr. Huntley has extensive energy experience including preparing the biological resource sections on several landscape level solar and wind projects. He also has broad experience conducting biological assessments, managing large-scale construction and restoration projects, and supporting agency clients with permitting tasks including compliance with California Department of Fish and Game (CDFG) 1600 and 2081 permits, US Fish and Wildlife Service (USFWS) Section 7 process, Regional Board 401 compliance, and US Army Corps (Corps) 404 permits. Mr. Huntley has extensive experience working on large scale permitting projects in the Mojave and Colorado Deserts. These projects involved extensive 1600, 2081, Section 7 consultation, and coordination with the BLM, CDFG, and USFWS. With over 20 years of experience as a biologist, Mr. Huntley has demonstrated expertise working with the sensitive biological resources that occur in the arid southwest of California, Arizona, and Nevada. Mr. Huntley has completed detailed vegetation mapping, sensitive species surveys including desert tortoise, and developed revegetation plans for projects throughout southern California, Nevada, and Arizona. With practical experience in managing large-scale construction projects, Mr. Huntley has unique experience in resolving conflicts and ensuring compliance with environmental regulations. Supported by a solid background in biological resources, experience in completing BLM procedures, CEQA, NEPA, USDA Forest Service Biological Assessments, sensitive species consultation, and over a decade of construction management experience, he works closely with resource agency personnel, contractors and affected jurisdictions to ensure that projects are constructed on time and in compliance with applicable laws, ordinances, regulations and standards. Some of the relevant projects Mr. Huntley has worked on are described below.

Aspen Environmental Group 1998-present

Energy Experience

- **Calico Solar Project (formerly SES Solar One Project), California Energy Commission, Biologist (2009-2010).** Mr. Huntley prepared the biological resources analysis of the Staff Assessment/EIS for this solar energy project proposed by Calico Solar, LLC. The proposed project would be located in San Bernardino County and includes the construction and operation of an 850-MW Stirling engine solar generation facility, which would include approximately 34,000 SunCatcher solar dish Stirling systems on approximately 8,230 acres. Key issues include potential impacts to desert tortoise, Mojave fringe-toed lizard, Nelson’s bighorn sheep, burrowing owl, and golden eagle, as well as large-scale modifications to existing drainages and interference with regional wildlife movement.
- **Palmdale Hybrid Power Plant, California Energy Commission, Biologist (2009-present).** Mr. Huntley is preparing the biological resources analysis of the Staff Assessment for this power generation project proposed by the City of Palmdale. The proposed project would be located in northern Los Angeles County and includes the construction and operation of a 570-MW hybrid combined-cycle and solar thermal electrical generation facility, which would include an approximate 333-acre plant site and a 35.6-mile transmission line to connect the project to the existing Southern California Edison Vincent Substation, as well as four pipelines to transport water, gas, and wastewater (ranging from 1.5 to

7.4 miles in length). Key issues include potential impacts to Swainson's hawk, desert tortoise, Mojave ground squirrel, and golden eagle.

- **Rice Solar Energy Project, California Energy Commission, Biologist (2009-2010).** Mr. Huntley is contributing to the biological resources analysis of the Staff Assessment/EIS prepared for this solar energy project proposed by Rice Solar Energy, LLC (a wholly owned subsidiary of SolarReserve, LLC). The proposed project would include a 150-MW solar generation facility consisting of up to 17,500 solar-tracking heliostats, a central tower, and associated infrastructure and appurtenant structures. The solar field site would be located on approximately 1,410 acres of privately owned land in eastern Riverside County. In addition, a 10-mile 230-kV generator tie-line would be constructed to interconnect the project with Western Area Power Administration's existing Parker-Blythe transmission line. The new transmission line would traverse lands primarily under the jurisdiction of the Bureau of Land Management (BLM). The new transmission line would also require the construction of a new 4.6-mile access road, also largely located on BLM lands. Key issues include potential impacts to desert tortoise and golden eagle, and potential impacts to birds in general from the solar technology.
- **California Energy Commission Emergency Siting Team, Power Plant Development, Compliance Project Manager.** For two years, Mr. Huntley's duties included management of technical staff for the completion of CEQA equivalent environmental permitting for over nine new emergency power plants, review of applicant submittals, drafting of Memoranda of Understanding with Chief Building Officials, conducting audits of building officials, and coordinating with affected agencies to resolve concerns with potential resource impacts. Other duties included maintaining contractor construction milestones, compliance monitoring and reporting, development of mitigation measures and conflict resolution for power plant compliance issues.
- **California Energy Commission (CEC) Coastal Power Plant Study, Deputy Project Manager/Biologist.** Mr. Huntley conducted biological surveys at 21 coastal power plants as part of the CEC's coastal power plant study. Site visits characterized habitat within the footprint of the power plant, landscaping, and identified potential environmental and permitting issues associated with potential expansion of the power plants.
- **CEC Hydroelectric Power Plant Inventory Study, Deputy Project Manager/Natural Resources Analyst.** Mr. Huntley coordinated a team that collected power and environmental data on over 200 hydroelectric power plants located in California. Physical power data included electrical output, system upgrades, water storage capacity and peaking availability. Environmental information included developing a data base addressing sensitive species issues, fish screens and ladders, monitoring parameters and a map of known hydroelectric facilities and barriers to anadromous fish passage. Mr. Huntley also obtained water use information on thermal power plants in support of the CEC's bi-annual environmental performance report.
- **Topaz Solar Farm EIR, San Luis Obispo County, Issue Area Coordinator/Biologist (2009-2011).** Mr. Huntley is acting as the issue area coordinator for natural resources on this solar energy project proposed by Topaz Solar Farms, LLC (wholly owned by First Solar, Inc.). The proposed project would consist of a 550-MW solar photovoltaic (PV) energy generating facility on approximately 6,200 acres in the Carrizo Plain area of eastern San Luis Obispo County. Key issues include potential impacts to San Joaquin kit fox, jurisdictional drainages, vernal pools, rare plants, and nesting birds.
- **California Valley Solar Ranch EIR, San Luis Obispo County, Issue Area Coordinator/Biologist (2009-2011).** Mr. Huntley is acting as the issue area coordinator for biological resources on this solar energy project. The proposed project involves construction and operation of a 250-MW photovoltaic (PV) solar power plant in the unincorporated portion of eastern San Luis Obispo County. The project would be owned by High Plains Ranch II, LLC, a wholly owned subsidiary of SunPower Corporation

Systems. A 3.5-acre substation and approximately 2.5 miles of 230-kV transmission would be required to connect to the existing PG&E Midway to Morro Bay 230-kV transmission line. The project is one of three solar power plants currently proposed for the Carrizo Plain. Key issues include potential impacts to San Joaquin kit fox, blunt-nosed leopard lizard, and giant kangaroo rat.

- **Panoche Valley Solar Farm EIR, County of San Benito, Biologist (2010-present).** Mr. Huntley is technical support for this large-scale solar energy project. The proposed project would consist of a 420-MW solar energy generation facility on approximately 4,717 acres in the Panoche Valley of southeastern San Benito County. The facility would consist of 1,822,800 solar photovoltaic panels and associated infrastructure. Key issues include potential impacts to California tiger salamander, blunt-nosed leopard lizard, San Joaquin antelope squirrel, giant kangaroo rat, San Joaquin kit fox, San Joaquin coachwhip, mountain plover, golden eagle, northern harrier, burrowing owl, loggerhead shrike, and American badger. In addition, suitable habitat for the following special-status species exists at the project site: vernal pool fairy shrimp, Swainson's hawk, western spadefoot, California horned lizard, merlin, pallid bat, and western mastiff bat.
- **Pacific Wind Energy Project EIR, Kern County, Biologist (2009-2010).** Mr. Huntley oversaw the preparation of the biological resources analysis of this EIR evaluating a proposed 250-MW wind energy generation facility in the Mojave region of Kern County. The proposed project would be located on approximately 8,300 acres in the Tehachapi Wind Resource Area. Key issues include potential impacts to birds and bats from the wind turbines as well as potential impacts to desert tortoise, California condor, Swainson's hawk, and golden eagle.
- **Alta-Oak Creek Mojave Project EIR, Kern County, Biologist (2008-2009).** Mr. Huntley oversaw the preparation of the biological resources analysis of this Initial Study and EIR evaluating a proposed 800 MW wind development in the Tehachapi Wind Resource Area. The proposed project site consists of three distinct land areas comprising a total of approximately 10,750 acres. Key issues include potential impacts to birds and bats from the wind turbines as well as potential impacts to desert tortoise, California condor, Swainson's hawk, golden eagle, and Bakersfield cactus.
- **North Sky River, Jawbone Wind Energy Project, Alta Infill II Project, the Morgan Hills Wind Energy Project, and the Alta East Wind Projects, Kern County, Biologist (2010-2012).** Mr. Huntley oversaw the preparation of the biological resources for these large scale wind farms.
- **Transmission Line Experience**
- **Downs Sub-station and Transmission Line Project IS/MND California Public Utilities Commission (2011-present), Issue Area Coordinator/Biologist.** Mr. Huntley acted as issue area coordinator for biological resources on this transmission line upgrade project to be completed by Southern California Edison in the Mojave Desert. Key issues on this project include the assessment of impacts to desert tortoise and Mohave ground squirrel.
- **Devers-Palo Verde Transmission Line Project No. 2 EIR/EIS, California Public Utilities Commission/Bureau of Land Management (2005-present), Issue Area Coordinator/Biologist.** Mr. Huntley acted as issue area coordinator for biological resources on this 230-mile 500-kV transmission line upgrade to be completed by Southern California Edison. This project crosses key wildlife areas including the KOFA Wildlife Sanctuary, the San Bernardino National Forest, the Mojave and Sonoran Desert habitats, and sections of the Riverside Multiple Species Conservation Area. Currently, Mr. Huntley is supporting the biological monitoring team responsible for implementing CPUC and BLM monitoring requirements during construction of the project and was responsible for assessing desert tortoise mitigation lands in coordination with the CDFG, BLM, and USFWS.

- **Tehachapi Renewable Transmission Project California Public Utilities Commission/US Forest Service (2007-present), Issue Area Coordinator/Biologist.** Mr. Huntley is acting as the issue area coordinator and principal author for biological resources on this 500-kV transmission line project proposed by Southern California Edison in support of wind energy projects. This transmission line is 173 miles in length and includes two separate segments that cross the Angeles National Forest. Some of the key issues on this project include potential impacts to Mojave ground squirrel, desert tortoise, arroyo toads, California condors, spotted owl, and a host of forest sensitive plant and wildlife species. As part of the project, Mr. Huntley mapped over 190 riparian related features and completed extensive surveys of the Angeles National Forest (ANF). Mr. Huntley managed an extensive biological staff and organized the completion of comprehensive botanical surveys for the proposed right-of-way. Other key issues involve the coordination with State Park, Forest, and resource agency staff. Currently, Mr. Huntley and is responsible for assessing desert tortoise mitigation lands in coordination with the CDFG and USFWS.
- **Antelope Transmission Project, Segments 2 & 3 EIR, California Public Utilities Commission/US Forest Service (2006-2011), Issue Area Coordinator/Biologist.** Mr. Huntley acted as issue area coordinator for biological resources on this 500-kV transmission line proposed by Southern California Edison in support of wind energy projects. Key issues on this project include potential impacts to Mojave ground squirrel, California red-legged frog, burrowing owl, and rare plants. As part of this project Mr. Huntley conducted focused surveys for arroyo toads and coordinated ESA compliance with the USFS and USFWS. As part of the project Mr. Huntley completed the BE/BA to comply with the provisions of the ESA and the Management Indicator Species Report for ANF compliance. Currently, Mr. Huntley provides technical assistance to monitoring staff.
- **El Casco Sub-Transmission Project EIR, California Public Utilities Commission (2006-present), Issue Area Coordinator/Biologist.** Mr. Huntley acted as issue area coordinator for biological resources and completed the impact analysis section of the EIR for this 17-mile subtransmission line upgrade to be completed by Southern California Edison. This line is located in the Western Riverside Multiple Species Conservation Area and crosses areas supporting several federally protected species including least Bell's vireo, southwestern willow flycatcher, and Stephens' kangaroo rat. Currently, Mr. Huntley provides technical assistance to monitoring staff.
- **Antelope-Pardee Transmission Project EIR/EIS-BE/BA, California Public Utilities Commission/US Forest Service (USFS, 2005-2010), Issue Area Coordinator/Biologist.** Mr. Huntley was the issue area coordinator for biological resources on this 500-kV transmission line upgrade to be completed by Southern California Edison. Key issues on this project included compliance with the USFS Forest Plan and sensitive species including California condor, burrowing owl, and rare plants. Mr. Huntley reviewed and prepared the Biological Resource Section for the EIR/EIS, developed project alternatives, coordinated with USFS staff, and conducted sensitive species surveys for arroyo toad in support of this project. Currently, Mr. Huntley provides technical assistance to monitoring staff.
- **SCE Valley-Auld Power Line Project, CPUC, Environmental Monitor.** Conducted inspections of construction of this 11-mile power line upgrade for compliance with the project's Mitigated Negative Declaration mitigation measures and compliance plans. Other tasks included review of pre-construction compliance materials, maintaining inspection documentation, and coordination with SCE and its subcontractors. **Sunset Substation IS/MND and Biological Site Assessment, City of Banning (2006-2007), Biologist.** Mr. Huntley prepared the biology section of the IS/MND as a sub-contractor to R. W. Beck. In addition, Mr. Huntley conducted burrowing owl surveys and managed surveys for Los Angeles pocket mouse at select locations along the proposed right-of-way.

- **Viejo System Project IS/MND, California Public Utilities Commission, Biologist.** Conducted biological surveys and completed the biological section of the Initial Study and Mitigated Negative Declaration for the SCE's transmission line upgrade project.

Pipeline Experience

- **Santa Fe Pacific Pipeline, CPUC, Environmental Monitor.** Inspected construction of three petroleum distribution station sites for compliance with approved project mitigation measures and compliance plans.
- **Line 401 PG&E Redwood Expansion Project, CPUC, Lead Environmental Monitor.** Under contract to the California Public Utilities Commission (CPUC), Mr. Huntley acted as Lead Environmental Monitor and supervised two environmental monitors in the field on the implementation of the CPUC's conditions of approval for construction of this 14-mile natural gas pipeline. Responsibilities included: supervision, guidance and development of environmental monitors, onsite field monitoring, compliance review and mitigation development of pre-construction plans, and mitigation compliance documentation. Other duties included review of variance and temporary extra work space (TEWS) requests; recommendations for CPUC issuance of Notices to Proceed with construction and variance approvals; approval of TEWS requests; preparation of weekly reports for all monitoring activity; and coordination with PG&E, construction managers and subcontractors, local municipalities, affected and interested agencies and the public.
- **Horsethief Creek Road Repairs Project, IS/MND and Biological Assessment, California Department of Water Resources (2005-2009), Biologist/Project Manager.** Mr. Huntley prepared the biological resource section and managed the completion of the IS/MND and the BA for construction of an all weather road at Horsethief Creek located near Lake Silverwood in San Bernardino County. Mr. Huntley also assisted DWR through formal consultation with the USFWS. The project was intended to provide an all-weather access to DWR facilities while avoiding impacts to federally endangered arroyo toads. Mr. Huntley also managed and conducted several of the sensitive species surveys required for this project including arroyo toad, two-striped garter snake, and southwestern pond turtles. Mr. Huntley managed the monitoring efforts at the site to comply with permit regulations identified by the Biological Opinion.

NEPA Experience

- **Littlerock Dam and Reservoir Restoration Project EIR/EIS-BE/BA, Palmdale Water District/US Forest Service (2004-present), Deputy Project Manager/Biologist.** Mr. Huntley is currently acting as deputy project manager and project biologist for the sediment removal activities associated with the Littlerock Dam and Reservoir in the Angeles National Forest. Mr. Huntley is working to develop project alternatives for sediment disposal while avoiding impacts to federally endangered arroyo toads. Mr. Huntley is managing the sensitive species surveys for this project and completing the biological resources section of the EIR/EIS, Management Indicator Species Report, and BE/BA.
- **Newhall Ranch Project, California Department of Fish and Game (2005-2009), Biological Coordinator and CDFG Reviewer.** Mr. Huntley provided biological expertise and assisted CDFG staff in reviewing and revising the EIR/EIS for the proposed 6,000-acre Newhall Development Plan EIR/EIS in Santa Clarita. Primary issues concern the land use conversion of several thousand acres of wild lands and agricultural areas located in and adjacent to the Santa Clara River. This region is known to support numerous threatened and endangered species including least Bell's vireo, southwestern willow flycatcher, California condor, arroyo toad, unarmored three-spine stickleback, and San Fernando Valley spineflower. Other concerns associated with the development include wildlife movement corridors, and effects to riparian habitats. Mr. Huntley reviewed, commented and revised the environmental

documents, scheduled and coordinated meetings with resource professionals and agency staff, and provided technical review of the document. Mr. Huntley will be assisting CDFG staff in the response to comments on the Draft EIR/EIS.

- **Matilija Dam Ecosystem Restoration Project EIR/EIS, US Army Corps of Engineers, Biologist.** Mr. Huntley conducted biological surveys and assisted in the completion of the EIS/EIR to assess impacts to sensitive biological resources located on Matilija Creek and the Ventura River downstream of the of the Matilija Dam. The analysis focused on potential impacts associated with dam removal on sensitive species known to occur on the Ventura River and the beneficial impacts of the restoration of spawning territory for the endangered Evolutionary Significant Unit of Southern Steelhead.
- **Fort Irwin Environmental Baseline Survey Reports US Army Corps of Engineers (2005), Project Manager/Biologist.** Mr. Huntley managed the preparation of two Environmental Baseline Survey reports near Fort Irwin, San Bernardino County to support the land acquisition of over 95 parcels by the US Army for the Fort Irwin National Training Center. Mr. Huntley conducted site investigations, documented existing biological conditions and managed the preparation of the report.
- **Matilija Dam Ecosystem Restoration Project EIR/EIS, US Army Corps of Engineers, Biologist (2008).** Under contract to Parsons Brinckerhoff, Mr. Huntley managed a team of biologists and conducted biological surveys at the proposed sediment disposal sites associated with the removal of the Matilija Dam.
- **Patriot Integrated Air Defense Exercise Project Environmental Assessment and Environmental Baseline Survey, Nellis Air Force Base, Nevada (2006-2008), Project Manager/Biologist.** Mr. Huntley managed the preparation of an EA for ongoing military activities conducted on Bureau of Land Management (BLM) lands surrounding Nellis Air Force Base in Lincoln and Nye Counties, Nevada. Mr. Huntley coordinated with the USAF regarding field surveys of the proposed anti-aircraft sites, the assessment of biological and cultural resources, and prepared the DR/FONSI and Right-Of-Way document for the USAF. Mr. Huntley also prepared sections and managed the completion of an Environmental Baseline Report for each of the artillery sites.
- **Joint Red Flag '05 Exercise Environmental Assessment, US Army Corps of Engineers/Bureau of Land Management, Nellis Air Force Base Nevada (2004-2005), Project Manager/Biologist.** Mr. Huntley managed and coordinated the EA process for the ground component of the Joint Red Flag '05 Exercise which was conducted Bureau of Land Management (BLM) lands surrounding Nellis Air Force Base in Lincoln County, Nevada. Mr. Huntley conducted extensive field surveys of the proposed anti-aircraft sites, completed the assessment for biological and visual resources, prepared the DR/FONSI, managed sensitive species surveys, identified and flagged populations of noxious weeds, and prepared of military training guides for the soldiers in the field.
- **March Air Reserve Base Cactus and Heacock Channels Environmental Assessment and Biological Technical Report and EA, US Army Corps of Engineers (2005-2009), Project Manager/Biologist.** Mr. Huntley conducted and managed the preparation of a Biological Technical Report for two channels located along the perimeter of the March Air Reserve Base in Riverside. Mr. Huntley and a team of biologists conducted burrowing owl surveys, vegetation and vernal pool mapping, and documented existing biological conditions at the two channels. As part of this project detailed GIS maps were created to assist the Corps in preparing environmental documents for the area. Mr. Huntley managed the completion of an Environmental Assessment to evaluate impacts of construction of approximately 3 miles of flood control channel located at Cactus and Heacock Drainages. Currently, Mr. Huntley provides technical assistance to Corps staff for this project.

- **Monterey Bay Accelerated Research System (MARS) Cabled Observatory EIR/EIS, California State Lands Commission/Monterey Bay National Marine Sanctuary (2004-2006), Deputy Project Manager.** The MARS project is an advanced cabled observatory in Monterey Bay that would provide a continuous monitoring presence in the MBNMS as well as serve as the test bed for a state-of-the-art regional ocean observatory, currently one component of the National Science Foundation (NSF) Ocean Observatories Initiative (OOI). Mr. Huntley acted as deputy project manager for this project. In addition, his duties involved review of technical data, development of the project description and alternatives, and coordination with state and federal agencies.
- **Lower Colorado Flood Control Project EIR/EIS, US Army Corps of Engineers (2003-2004), Deputy Project Manager/Biologist.** Mr. Huntley conducted reconnaissance surveys and vegetation mapping along a 23-mile section of the Lower Colorado River in Yuma Arizona. In addition, Mr. Huntley updated the biological resource section of the current baseline conditions and is working with a team of State and federal agencies in an effort to determine the future alignment of the Lower Colorado River in this location. As part of this process Mr. Huntley developed project alternatives that met the criteria identified by the United States Boundary Water Commission and State and federal resources agencies.
- **Murrieta Creek Flood Control Project Phase II-IV Revegetation Plan and Sensitive Species Surveys, US Army Corps of Engineers (2006-2007), Project Manager/Biologist.** Mr. Huntley prepared comprehensive vegetation maps and detailed restoration plan for over six miles of riparian habitat located at Murrieta Creek in Riverside California. As part of this task, Mr. Huntley conducted and managed a team of resource experts in completing sensitive plant and animal species within the Murrieta Creek. Prepared detailed vegetation maps, site assessment and impact analysis for the Environmental Assessment, comprehensive revegetation and restoration plan to address project impacts, and developed mitigation for sensitive plant and wildlife species. In addition, Mr. Huntley worked closely with local resource agencies and managed sensitive wildlife surveys and the trapping and relocation of southwestern pond turtles from the project area. Currently, Mr. Huntley is providing technical assistance to the Corps regarding this project.
- **Murrieta Creek Flood Control Project Supplemental EA, US Army Corps of Engineers (2003-present), Deputy Project Manager/Biologist.** Mr. Huntley conducted site surveys for sensitive plant and animal species within the Murrieta Creek. He also prepared detailed vegetation maps, site assessment and impact analysis for the Environmental Assessment, comprehensive revegetation and restoration plan to address project impacts, and developed mitigation for sensitive plant and wildlife species. In addition, Mr. Huntley worked closely with local resource agencies and managed sensitive wildlife surveys and the trapping and relocation of southwestern pond turtles from the project area. Currently, Mr. Huntley is providing technical assistance to the Corps regarding this project.

Other Relevant Experience

- **Level 3 Fiber Optics Network Construction Monitoring and Supplemental Environmental Review Program, CPUC, Environmental Monitor.** Mr. Huntley's duties included inspection of several southern California segments including Santa Barbara to Burbank, San Bernardino, Corona to Atwood, and San Diego to the California/Arizona state line. He provided environmental compliance during construction addressed biological and cultural resource, air and water quality, traffic control, and public utilities. Other tasks included maintaining daily documentation, review of pre-construction mitigation measures, weekly reporting of compliance activities, and coordination with Level 3 personnel and subcontractors, and affected agencies.

- **Salton Sea Debris Removal Project, Los Angeles Department of Water and Power (2007-2008), Project Manager/Biologist.** Mr. Huntley conducted Phase I, II, and III burrowing owl surveys at several sites scheduled for clean-up in the Imperial Valley. Mr. Huntley managed the monitoring of clean-up activities and developed mitigation strategies to comply with State and local permit requirements regarding the protection of this species.
- **Perris Lake Permit Support, California Department of Water Resources (2005/2006), Biologist.** Mr. Huntley prepared a biological technical report to support permitting activities at Perris Lake in Riverside California. Mr. Huntley also reviewed and prepared the Storm Water Pollution Prevention Plan in compliance with Regional Board requirements.
- **Focused Surveys for least Bell's vireo and southwestern willow flycatchers at the Hansen Dam, Los Angeles River, and San Gabriel River, US Army Corps of Engineers (2005), Project Manager.** Mr. Huntley managed the focused surveys and report preparation for this task.
- **Tortoise Monitoring at Las Vegas Wash, US Army Corps of Engineers (2005-2006), Project Manager.** Mr. Huntley managed the survey and report preparation for monitoring activities associated with this task. Monitoring crews conducted work within the Tropicana, Flamingo, and Blue Diamond tributaries as part of the ongoing flood control activities.
- **Pacific Pipeline Project EIR/EIS for the US Forest Service, Angeles National Forest, and the California Public Utilities Commission, Environmental Monitor.** Served as an Environmental Monitor and supervised mitigation monitoring for all sensitive resources for a construction segment along a 132-mile crude oil pipeline within southern California.
- **San Antonio Creek Erosion Repairs Project BA/EA, US Army Corps of Engineers, Biologist.** Mr. Huntley conducted botanical surveys and prepared detailed vegetation maps within San Antonio Creek. Mr. Huntley also prepared the Biological and Environmental Assessments for the project and developed mitigation for sensitive plant and wildlife species.
- **Vista Del Lago Visitor Center Slope and Waterline Repair Biological Evaluation/Biological Assessment, California Department of Water Resources (2006-2008), Project Manager/Biologist.** Mr. Huntley managed the preparation of the Biological Evaluation/Biological Assessment in compliance with the USFS to conduct repairs to a failed slope at the Vista Del Lago Visitor Center at Pyramid Lake. Mr. Huntley also acted as the USFS and CDFG liaison for this project and managed the preparation of regulatory permits for compliance with CDFG, Corps, and Regional Board requirements. Mr. Huntley also managed the biological monitoring for this project.
- **Pyramid Dam Emergency Access Road IS/MND and Biological Evaluation/Biological Assessment, California Department of Water Resources (2005-2008), Project Manager/Biologist.** Mr. Huntley prepared the biology section of the IS/MND and the Biological Evaluation/Biological Assessment in compliance with the USFS to construct an emergency access road from Interstate 5 to Pyramid Lake Dam. Mr. Huntley acted as the USFS and CDFG liaison for this project and managed the sensitive species surveys for the project.
- **Castaic Lake Biotic Assessment, Los Angeles Department of Water and Power (2007), Project Manager/Biologist.** Mr. Huntley managed the preparation of an updated Biological Resource Assessment for the Castaic Power Plant at Castaic Creek. Mr. Huntley managed a team of experts and conducted focused surveys for arroyo toad and other sensitive plant and wildlife species to support LADWP management of the area.
- **Lake Canyon IS/EIR, Ventura, Ventura County Flood Control District, Biologist (2006-2007).** Mr. Huntley conducted biological surveys of this proposed detention basin and prepared the biological resource section of the Initial Study.

- **Piru Creek Restoration of Natural Flows Project EIR, California Department of Water Resources (2004-2005), Biologist.** Mr. Huntley managed resource specialists for completion of sensitive bird surveys along Piru Creek. In addition, he conducted sensitive species surveys for aquatic resources including two-striped garter snake and southwestern pond turtle, and coordinated with technical experts during reconnaissance surveys for arroyo toad. Mr. Huntley completed engineering cross sections of Piru Creek and prepared a comprehensive State jurisdictional riparian delineation for an 18-mile section of middle Piru Creek between Pyramid Dam and Lake Piru. Mr. Huntley prepared the biological resources section and developed environmentally sound alternatives to address impacts associated with restoring natural flows to Piru Creek. Discussions of biological resources focused on the potential beneficial impacts that may occur to southwestern arroyo toad, southwestern pond turtle, red-legged frog and two-striped garter snake.
- **Angeles National Forest Fuels Reduction Project, Biological Evaluation/Biological Assessment, US Department of Agriculture Forest Service (2005/2009), Biologist.** Mr. Huntley reviewed existing documents and assisted staff in responding to comments from USFS staff. Mr. Huntley met with USFS staff and conducted site inspections at several plantation and natural stands. Currently, Mr. Huntley is revising BE/BA's for the ANF.
- **East Branch Extension Project Phase II, California Department of Water Resources (2006), Project Manager/Biologist.** Mr. Huntley managed and conducted sensitive species surveys for DWR in support of the EIR for this aqueduct extension project. In addition, Mr. Huntley acted as an expert witness and provided testimony in the San Bernardino Superior Court to allow access to key areas in support of the surveys. Focused surveys included the slender horned spineflower, Santa Ana River wooly star, California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher.
- **Emergency Storm Repairs Biological Assessment, California Department of Water Resources (2005), Project Manager/Biologist.** Mr. Huntley prepared the Biological Assessment to evaluate potential impacts to sensitive species from emergency storm repairs at two locations at Piru Creek. The BA documented site conditions, identified potential sensitive species habitat and presence in the project area, and addressed specific USFWS requirements associated with arroyo toads.
- **South Adit Access Road Repair Project Biological Evaluation/Biological Assessment, California Department of Water Resources (2005/2006), Project Manager/Biologist.** Mr. Huntley prepared the Biological Evaluation/Biological Assessment in compliance with the USFS to repair storm damage to the existing asphalt road surface and to stabilize the adjacent hillside to maintain access to the South Adit; a Department of Water Resources facility located along the West Branch of the California Aqueduct. Mr. Huntley managed sensitive resource surveys for rare plants and wildlife, conducted pre-construction surveys, and coordinated with the USFS personnel. As part of ongoing construction activities at the site Mr. Huntley provided environmental training and materials, monitored construction at the site, relocated wildlife from the construction area, developed a stream diversion plan and tree removal plan for CDFG review, reviewed the SWPPP, and conducted restoration activities at the site.
- **Creel Census Surveys, California Department of Water Resources (2004-2005), Project Manager/Biologist.** In an effort to obtain information on species composition and angler usage on DWR waterways, Mr. Huntley managed creel census surveys at three locations in southern California. These included Castaic Lake, Pyramid Lake, and Piru Creek. Piru Creek is located in the Angeles National Forest and contains habitat for the endangered arroyo toad. Creel surveys are supporting analysis currently underway to restore natural flows on Middle Piru Creek to benefit populations of arroyo toad in the National Forest.

- **Rare Plant Surveys and Tree Report for the Lower Reach River Supply Conduit, Los Angeles Department of Water and Power (2006), Biologist.** Mr. Huntley managed and conducted rare plant surveys and a comprehensive tree inventory along a 14-mile water pipeline corridor.
- **Owens Gorge Re-watering Project IS/MND, Los Angeles Department of Water & Power (2006), Biologist.** Mr. Huntley prepared the biology section of the IS/MND to address potential impacts to sensitive plants and wildlife along the Owens Gorge near Bishop. This project involves the restoration of flows to a previously de-watered section of the Owens Gorge.
- **Arundel Barranca Habitat Restoration Plan, Ventura County Flood Control District (2005), Biologist.** Mr. Huntley developed a planting schematic for a 3000-foot section of existing flood control channel as part of the proposed Arundel Barranca flood control channel plan.
- **Piru Creek Repairs Project IS/MND, California Department of Water Resources, Biologist.** Mr. Huntley completed sections of the US Forest Service Biological Assessment/Biological Evaluation, and biological technical report for the Piru Creek Repairs Project. In addition, Mr. Huntley has conducted sensitive species surveys and coordinated with CDFG, USFS and RWQCB regarding permits and sensitive species issues.
- **Compliance and Mitigation Development, California Public Utilities Commission, State Lands Commission, California Department of Water Resources, Biologist.** Working with technical experts Mr. Huntley developed mitigation measures for a number of State and federal projects including the Kinder Morgan pipeline, Santa Ana pipeline and Viejo transmission line project.
- **Hollywood Reservoir Pump Station Upgrade IS/MND, Los Angeles Department of Water and Power Biologist.** Mr. Huntley conducted biological surveys of the lower Hollywood Hills pump station as part of a planned upgrade of the Los Angeles water system and completed the biological resource section of the Initial Study and Mitigated Negative Declaration.
- **Lake Skinner Filtration Plant, Metropolitan Water District, Biologist.** Mr. Huntley conducted biological surveys and completed a biological assessment at the Lake Skinner Filtration Plant to assist Metropolitan in obtaining streambed alteration, regional water, and US Army Corps of Engineers permits.
- **Los Angeles County Drainage Area (LACDA), US Army Corps of Engineers, Environmental Monitor & Biological Assessment.** Mr. Huntley conducted inspections of Los Angeles County Drainage Area levee wall expansions for improved flood control. Also conducted Biological Assessments for proposed project changes.
- **Las Virgenes Municipal Water District IS/MND, Biologist.** Mr. Huntley conducted site surveys for sensitive plants and animal species for potential water pipeline expansion. Prepared detailed vegetation maps and site assessment documenting site botany and reviewed Biological Assessment for the site.
- **Dent Drain Permit Support, Ventura River, Ventura County Flood Control District, Biologist.** Mr. Huntley conducted site surveys for sensitive plants and animals and prepared Biological Assessment for proposed construction along the Ventura River.
- **Honda Barranca Permit Support, Ventura County Flood Control District, Biologist.** Mr. Huntley conducted site surveys for sensitive plants and animals and prepared Biological Assessment for two locations proposed for repairs along the Honda Barranca.
- **Arundel Barranca Permit Support, Ventura County Flood Control District, Biologist.** Mr. Huntley conducted site surveys for sensitive species and prepared Biological Assessment for proposed modification to 3000 feet of existing flood control channel.

- **Looking Glass Networks, CPUC, Mitigation Review and Development.** Mr. Huntley's duties included review and development of mitigation measures for installation of a proposed fiber optic interconnects located across California. Technical areas addressed included biology, soil and water, air quality, and cultural resources.
- **Slender Horned Spineflower Survey, US Army Corps of Engineers, Biologist.** Mr. Huntley conducted sensitive species surveys for the slender-horned spine flower covering approximately 5,300 acres in the Santa Ana River Wash, below the Seven Oaks Dam in San Bernardino County, to assess species impact from changes in hydrology once the Seven Oaks Dam is operational. The survey and mapping required extensive use of GPS equipment for the mapping of transects surveyed and the location of spine flower Populations.
- **INS Air Station, Otay Mesa Biological Assessment, US Army Corps of Engineers, Biologist.** Mr. Huntley conducted sensitive plant and animal surveys and prepared biological assessment for proposed and alternative station sites, including preparation of detailed vegetation maps.
- **Visalia Land Fill Biological Assessment, Biologist.** Surveyed potential expansion sites for sensitive biological species including San Joaquin kit fox, burrowing owls, and several endangered plant species. Prepared Biological Assessment for sensitive and plant and wildlife species.
- **Rancho Cucamonga, Biologist.** Mr. Huntley conducted site surveys for sensitive plants species for site suitable for future wetland revegetation. Prepared detailed vegetation maps and site assessment documenting site botany.

Selected Technical Experience/Training and Certifications

- SWPPP trained 2006
- California Energy Commission Outstanding Performance Award, 2001
- CDFG Scientific Collecting Permit for pond turtle and garter snake.
- Certified Caltrans Horizontal Directional Drilling Inspector 2001
- Desert Tortoise Handling Workshop, Ridgecrest California 2001
- CEC Expert Witness Training 2001
- Railroad Right-of-Way Safety Training 2002
- Small boat handling, licensed and certified since 1993
- Research Scuba-diving certification and training since 1989

DECLARATION OF GEOFFREY LESH

I, **Geoffrey Lesh** declare as follows:

1. I am presently employed by the California Energy Commission in the Siting, Transmission and Environmental Protection Division as a **Mechanical Engineer**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony on **Hazardous Materials Management**, on **Worker Safety / Fire Protection**, and on **Appendix BIO1 – Biological Resources Risk Assessment of Avian Exposure to Concentrated Solar Radiation** for the **Hidden Hills Solar Electric Generating System [HHSEGS] (11-AFC-2)** project based on my independent analysis of the Application for Certification and any supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 10/30/2012 Signed: _____

At: Sacramento, California

A handwritten signature in black ink, appearing to read "Geoffrey Lesh", written over a horizontal line.

Geoffrey Lesh, PE

WORK HISTORY

California Energy Commission Mechanical Engineer 2002 - Current

- Analyze siting permit applications for gas-fired and solar-thermal power plants in the technical areas of hazardous materials management, fire safety, security, and worker safety plans
- Provide written and oral expert witness testimony at Commission Hearings on power plant fire protection plans, risk assessments, and adequacy of local fire departments
- Recommend mitigations as needed
- Inspect power plants during construction and operational phases
- Investigate accident, fire, and hazardous materials incidents at power plants

Self-Employed Independent Investor 2000 - 2002

- Wrote market analysis computer software

Read-Rite Corp Wafer Engineering Manager 1994 - 2000

- Designed and developed wafer manufacturing processes for computer data storage systems. Managed team of engineers and technicians responsible for developing wet and dry chemical processes for manufacturing, including process and safety documentation
- Managed product line process and equipment selection for manufacturing processes
- Processes included vacuum processed metals and ceramics, annealing, grinding-polishing, plating, etching, encapsulation, process troubleshooting, and SPC reporting

Dastek Corp (Komag Joint Venture Start-up) Wafer Engineering Manager 1992 - 1994

- Developed wafer processes for new-technology recording head for hard disk drives
- Managed team of engineers and technicians
- This position included start-up of wafer fab, including line layout, purchase, installation, and startup of new process equipment, etc.

Komag, Inc Alloy Development Manager 1989 - 1992

- Developed new vacuum-deposited recording metal alloys
- Responsible for planning and carrying-out tests, designing experiments, analyzing results, managing test lab conducting materials characterizations
- Extensive process modeling, experiment design and data analysis

Verbatim Corp (Kodak) Process Development Manager 1983 - 1989

- Mechanical engineering for computer disk manufacturing, including product, process, and equipment including metal-ceramic-plastic processes for optical disk development
- Production processes included metal plating, metal evaporation, reactive sputtering, laser-based photolithography, injection molding
- Steering Committee Member, Center for Magnetic Recording Research, UC San Diego
- Steering Committee Member, Institute for Information Storage Technology, Santa Clara University

IBM Corp Mechanical/Process Engineer 1977 - 1983

- Product and process development for photocopiers, semiconductors, and computer data tape-storage systems

EDUCATION

Stanford University, Master of Science Degree	Materials Science and Engineering
UC-Berkeley, Bachelor of Science Degree (Double Major)	Mechanical Engineering, Materials Science and Engineering
University of Santa Clara, Graduate Certificate	Magnetic Recording Engineering

PROFESSIONAL LICENSES and CERTIFICATIONS

Registered Professional Engineer, California (PE)	Mechanical #M32576 Metallurgical #MT1940
Certified Safety Professional (CSP)	Board of Certified Safety Professionals
Certified Fire Protection Specialist (CFPS)	Certified Fire Protection Specialist Board (NFPA)
Certified Fire and Explosion Investigator (CFEI)	Board of National Association of Fire Investigators
OSHA 40-hr HAZWOPER Hazardous Materials Incident Training	

PROFESSIONAL ASSOCIATIONS

National Fire Protection Association – member
Society of Fire Protection Engineers – Professional-level member
National Association of Fire Investigators - member

PUBLICATIONS

All-Solid Lithium Electrodes with Mixed-Conductor Matrix, J. Electrochem. Soc. 128, 725 (1981).
Proc. Symp. on Lithium Batteries, H.V. Venkatesetty, Ed., Electrochem Soc (1981), p. 467.

PATENTS

Method of Preparing Thermo-Magneto-Optic Recording Elements, US Patent# 4,892,634, (assigned to Eastman Kodak Co.)

Geoffrey Lesh, PE

WORK HISTORY

California Energy Commission Mechanical Engineer 2002 - Current

- Analyze siting permit applications for gas-fired and solar-thermal power plants in the technical areas of hazardous materials management, fire safety, security, and worker safety plans
- Provide written and oral expert witness testimony at Commission Hearings
- Recommend mitigations as needed
- Inspect power plants during construction and operational phases
- Investigate accident, fire, and hazardous materials incidents at power plants

Self-Employed Independent Investor 2000 - 2002

- Wrote market analysis computer software

Read-Rite Corp Wafer Engineering Manager 1994 - 2000

- Designed and developed wafer manufacturing processes for computer data storage systems. Managed team of engineers and technicians responsible for developing wet and dry chemical processes for manufacturing, including process and safety documentation
- Managed product line process and equipment selection for manufacturing processes
- Processes included vacuum processed metals and ceramics, annealing, grinding-polishing, plating, etching, encapsulation, process troubleshooting, and SPC reporting

Dastek Corp (Komag Joint Venture Start-up) Wafer Engineering Manager 1992 - 1994

- Developed wafer processes for new-technology recording head for hard disk drives
- Managed team of engineers and technicians
- This position included start-up of wafer fab, including line layout, purchase, installation, and startup of new process equipment, etc.

Komag, Inc Alloy Development Manager 1989 - 1992

- Developed new vacuum-deposited recording metal alloys
- Responsible for planning and carrying-out tests, designing experiments, analyzing results, managing test lab conducting materials characterizations
- Extensive process modeling, experiment design and data analysis

Verbatim Corp (Kodak) Process Development Manager 1983 - 1989

- Mechanical engineering for computer disk manufacturing, including product, process, and equipment including metal-ceramic-plastic processes for optical disk development
- Production processes included metal plating, metal evaporation, reactive sputtering, laser-based photolithography, injection molding
- Steering Committee Member, Center for Magnetic Recording Research, UC San Diego
- Steering Committee Member, Institute for Information Storage Technology, Santa Clara University

IBM Corp Mechanical/Process Engineer 1977 - 1983

- Product and process development for photocopiers, semiconductors, and computer data tape-storage systems

EDUCATION

Stanford University, Master of Science Degree	Materials Science and Engineering
UC-Berkeley, Bachelor of Science Degree (Double Major)	Mechanical Engineering, Materials Science and Engineering
University of Santa Clara, Graduate Certificate	Magnetic Recording Engineering

PROFESSIONAL LICENSES and CERTIFICATIONS

Registered Professional Engineer, California (PE)	Mechanical #M32576 Metallurgical #MT1940
Certified Safety Professional (CSP)	Board of Certified Safety Professionals
Certified Fire Protection Specialist (CFPS)	Certified Fire Protection Specialist Board (NFPA)
Certified Fire and Explosion Investigator (CFEI)	Board of National Association of Fire Investigators
OSHA 40-hr HAZWOPER Hazardous Materials Incident Training	

PROFESSIONAL ASSOCIATIONS

- National Fire Protection Association – member
- Society of Fire Protection Engineers – Professional-level member
- National Association of Fire Investigators - member

PUBLICATIONS

All-Solid Lithium Electrodes with Mixed-Conductor Matrix, J. Electrochem. Soc. 128, 725 (1981).
Proc. Symp. on Lithium Batteries, H.V. Venkatesetty, Ed., Electrochem Soc (1981), p. 467.

PATENTS

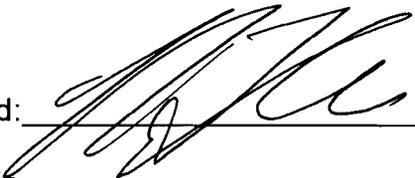
Method of Preparing Thermo-Magneto-Optic Recording Elements, US Patent# 4,892,634, (assigned to Eastman Kodak Co.)

DECLARATION OF RICK TYLER

I, **Rick Tyler** declare as follows:

1. I am presently employed by the California Energy Commission in the Siting, Transmission and Environmental Protection Division as a **Sr. Mechanical Engineer**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I supervised and or prepared staff's testimony on **Hazardous Materials Management, on Worker Safety / Fire Protection, and on Appendix BIO1 – Biological Resources Risk Assessment of Avian Exposure to Concentrated Solar Radiation** for the **Hidden Hills Solar Electric Generating System [HHSEGS] (11-AFC-2)** project based on my independent analysis of the Application for Certification and any supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 10/30/12 Signed: 
At: Sacramento, California

RICK TYLER

Associate Mechanical Engineer

CALIFORNIA ENERGY COMMISSION

EDUCATION B.S., Mechanical Engineering, California State University, Sacramento. Extra course work in Statistics, Instrumentation, Technical Writing, Management; Toxicology, Risk Assessment, Environmental Chemistry, Hazardous Materials Management, Noise Measurement, and regulations regarding control of toxic substances.

Near completion of course work necessary to obtain a certificate in hazardous materials management from University of California, Davis.

EXPERIENCE

Jan. 1998-
Present

California Energy Commission - Senior Mechanical Engineer
Energy Facility Siting and Environmental Protection Division

Responsible for review of Applications for Certification (applications for permitting) for large power plants including the review of handling practices associated with the use of hazardous and acutely hazardous materials, loss prevention, safety management practices, design of engineered equipment and safety systems associated with equipment involving hazardous materials use, evaluation of the potential for impacts associated with accidental releases and preparation and presentation of expert witness testimony and conditions of certification. Review of compliance submittals regarding conditions of certifications for hazardous materials handling, including Risk Management Plans Process Safety Management.

April 1985-
Jan. 1998

California Energy Commission - Health and Safety
Program Specialist; Energy Facility Siting and Environmental Protection Division.

Responsible for review of Public Health Risk Assessments, air quality, noise, industrial safety, and hazardous materials handling of Environmental Impact Reports on large power generating and waste to energy facilities, evaluation of health effects data related to toxic substances, development of recommendations regarding safe levels of exposure, effectiveness of measures to control criteria and non-criteria pollutants, emission factors, multimedia exposure models. Preparation of testimony providing Staff's position regarding public health, noise, industrial safety, hazardous materials handling, and air quality issues associated with proposed power plants. Advise Commissioners, Management, other Staff and the public regarding issues related to health risk assessment of hazardous materials handling.

Nov. 1977-
April 1985

California Air Resources Board - Engineer (last 4 years Associate level)

Responsible for testing to determine pollution emission levels at major industrial facilities; including planning, supervision of field personnel, report preparation and case development for litigation; evaluate, select and acceptance-test instruments prior to purchase; design of instrumentation systems and oversight of their repair and maintenance; conduct inspections of industrial facilities to determine compliance with applicable pollution control regulations; improved quality assurance measures; selected and programmed a computer system to automate data collection and reduction; developed regulatory procedures and the instrument system necessary to certify and audit independent testing companies; prepared regulatory proposals and other presentations to classes at professional symposia and directly to the Air Resources Board at public hearings. As state representative, coordinated efforts with federal, local, and industrial representatives.

PROFESSIONAL
AFFILIATIONS/
LICENSES

Past President, Professional Engineers in California
Government Fort Sutter Section;
Past Chairman, Legislative Committee for Professional Association of Air Quality
Specialists. Have passed the Engineer in Training exam.

PUBLICATIONS,
PROFESSIONAL
PRESENTATIONS
AND
ACCOMPLISHMENTS

Authored staff reports published by the California
Air Resources Board and presented papers regarding
continuous emission monitoring at symposiums.

Authored a paper entitled "A Comprehensive Approach to Health Risk
Assessment", presented at the New York Conference on Solid Waste Management
and Materials Policy.

Authored a paper entitled "Risk Assessment A Tool For Decision Makers" at the
Association of Environmental Professionals AEP Conference on Public Policy and
Environmental Challenges.

Conducted a seminar at University of California, Los Angeles for the Doctoral
programs in Environmental Science and Public Health on the subject of "Health
Risk Assessment".

Authored a paper entitled "Uncertainty Analysis -An Essential Component of
Health Risk Assessment and Risk Management" presented at the EPA/ORNL
expert workshop on Risk Assessment for Municipal Waste Combustion:
Deposition, Uncertainty, and Research Needs.

Presented a talk on off-site consequence analysis for extremely hazardous materials
releases. Presented at the workshop for administering agencies conducted by the
City of Los Angeles Fire Department.

Evaluated, provided analysis and testimony regarding public health and hazardous
materials management issues associated with the permitting of more than 20 major
power plants throughout California.

Developed Departmental policy, prepared policy documents, regulations, staff instruction, and other guidance documents and reference materials for use in evaluation of public health and hazardous materials management aspects of proposed power plants.

Project Manager on contracts totaling more than \$500,000.

RES.RT

DECLARATION OF
Christina Snow

I, Christina Snow, declare as follows:

1. I am presently employed by the California Energy Commission in its Siting, Transmission and Environmental Protection Division as a Planner II.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on the **Land Use** section of the **Final Staff Assessment** for the **Hidden Hills Solar Electric Generating Station** Application for Certification (AFC), based on my independent analysis of the AFC, supplements, data, documents, analysis and testimony from other staff and reliable sources, and based upon my own professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: November 2, 2012 Signed: Christina Snow

At: Sacramento, California

Christina Snow

PLANNING PROFESSIONAL Environmental • Land Use • Transportation

CALIFORNIA ENERGY COMMISSION, SACRAMENTO, CA

2010 to PRESENT

PLANNER II

Review and analyze the Application for Certification (AFC) for projects submitted by applicants in the areas of land use, visual, alternatives and traffic. Prepare staff analysis and provide staff supporting documentation and testimony for proposed projects during the environmental review process. Review submittals for approved projects to determine compliance with the approved AFC and Conditions of Certification.

PLANNER II (2010-2011)

Processed amendments for operational power plants: Included the review of existing Conditions of Certification, preparation of the analysis and other supporting documentation for management and the California Energy Commission. Managed projects and coordinated with applicants, technical specialists and the public to deliver appropriate determination in a timely manner under the CEQA regulatory program. Presented analysis and made recommendations regarding project approval to the Energy Commission at hearings.

PLACER COUNTY, AUBURN, CA

2006 to 2010

SENIOR PLANNER

Process various entitlement applications including use permits, sign permits, design review, and tree and grading permits. Researched and analyzed application materials to determine appropriate project requirements according to County, State and Federal regulations leading to the preparation of environmental documents, regulatory permit requirements, staff reports, PowerPoint presentations, conditions of approval and other supporting documents for public hearings (Zoning Administrator, Planning Commission and Board of Supervisors). Provided environmental analysis assistance to Planning staff. Assisted in the preparation of the Placer County Conservation Plan (Habitat Conservation Plan/Natural Communities Conservation Plan), which included extensive coordination with stakeholders, preparation of agendas and meeting minutes, providing guidance on pertinent issues, coordination of staff and sub-consultants, re-writing portions of the plan, prioritization of work elements and communication with the public and stakeholders.

LSA ASSOCIATES, INC., ROCKLIN, CA

2005 to 2006

SENIOR ENVIRONMENTAL PLANNER

Responsible for managing and writing NEPA/CEQA environmental documents for transportation and development projects (private and public sector). Managed and administered workload to assistant planner(s) and staff biologist. Involved in all aspects of technical reports developed for environmental document and analysis.

CALIFORNIA DEPARTMENT OF TRANSPORTATION, SACRAMENTO, CA

1993 to 2005

ASSOCIATE ENVIRONMENTAL PLANNER/COORDINATOR (2002-2005)

Acted as lead for environmental review and managed the timely completion of project delivery milestones and products essential to the environmental approval phase of transportation projects. Examined assigned transportation projects to determine level of environmental documentation, associated technical studies and other appropriate courses of action in accordance with NEPA and CEQA. Prepared environmental documents for projects, which included researching, gathering and compiling information, analyzing and interpreting data and developing formats to present and display data. Proposed solutions and provided information on environmental issues while working effectively with others in an interdisciplinary team setting. Participated in public workshops, regulatory meetings, external project meetings and internal management meetings regarding environmental information, solutions and other pertinent environmental issues.

- Worked extensively on the final Environmental Impact Statement/Report for the Lincoln Bypass overseeing and participating in completion of significant milestones including: Biological Assessments, NEPA 404/MOU Least Environmentally Damaging Practicable Alternative (LEDPA) concurrence, CWA 404 permit application submittal, FESA Section 7 formal consultation and draft Habitat Mitigation and Monitoring Plan.

ASSOCIATE TRANSPORTATION PLANNER (1999-2002)

Planned, developed, administered, evaluated and monitored transportation plans, programs and projects. Prepared system plans of transportation facilities and services. Participated in environmental review, policy development, implementation strategies and analyzed proposed policies and legislation from other government agencies as it related to the development of the California Transportation Plan. Performed and evaluated transportation planning research. Participated as a departmental representative on transportation planning issues at inter- and intradepartmental meetings and public or private meetings and hearings. Facilitated workshops designed to obtain public input on transportation issues within Los Angeles area for incorporation into the development of the California Transportation Plan.

PROFESSIONAL DEVELOPMENT/EDUCATION

Professional Development/Training:

Alternatives and Cumulative Impacts, Subdivision Map Act, Oak Woodland Planner's Workshop, Design Review, Implementing SB375, Successful CEQA Compliance, Environmental Planning Academy, Project Management, Boundaries of Local Governments, Local Government Planning, Planning Academy, Community Impact Assessment Workshop, Total Quality Management, Managing Yourself on the Job, Arcview, Comprehensive Financial Management Workshop, FHWA Statewide Transportation Planning, Dreamweaver Web Application, Governmental Accounting, Highway Capacity Manual, Intergovernmental Review (IGR/CEQA), and Business Writing.

Relevant Coursework – U.C. Davis Extension:

Environmental Planning and Site Analysis, Financial Aspects of Planning, Planning in California: Overview and Update, Professional Planning Practice and Communication, CEQA compliance, Subdivision Map Act, Design Review.

Education:

Sacramento State University, 1993 - B.S. in Accountancy

**DECLARATION OF
SHAHAB KHOSHMAHRAB**

I, **SHAHAB KHOSHMAHRAB**, declare as follows:

1. I am presently employed by the California Energy Commission in the **ENGINEERING OFFICE** of the Siting, Transmission, and Environmental Protection Division as a **SENIOR MECHANICAL ENGINEER**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I participated in the preparation of the staff testimony on **Power Plant Efficiency for Hidden Hills Solar Electric Generating System** based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 10/30/2012

Signed: 

At: Sacramento, California

**DECLARATION OF
SHAHAB KHOSHMAHRAB**

I, **SHAHAB KHOSHMAHRAB**, declare as follows:

1. I am presently employed by the California Energy Commission in the **ENGINEERING OFFICE** of the Siting, Transmission, and Environmental Protection Division as a **SENIOR MECHANICAL ENGINEER**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I participated in the preparation of the staff testimony on **Facility Design** for **Hidden Hills Solar Electric Generating System** based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 10/30/2012

Signed: 

At: Sacramento, California

DECLARATION OF SHAHAB KHOSHMAHRAB

I, **SHAHAB KHOSHMAHRAB**, declare as follows:

1. I am presently employed by the California Energy Commission in the **ENGINEERING OFFICE** of the Siting, Transmission, and Environmental Protection Division as a **SENIOR MECHANICAL ENGINEER**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I participated in the preparation of the staff testimony on **Noise and Vibration** for **Hidden Hills Solar Electric Generating System** based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 10/30/2012

Signed: 

At: Sacramento, California

**DECLARATION OF
SHAHAB KHOSHMAHRAB**

I, **SHAHAB KHOSHMAHRAB**, declare as follows:

1. I am presently employed by the California Energy Commission in the **ENGINEERING OFFICE** of the Siting, Transmission, and Environmental Protection Division as a **SENIOR MECHANICAL ENGINEER**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I participated in the preparation of the staff testimony on **Power Plant Reliability for Hidden Hills Solar Electric Generating System** based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 10/30/2012

Signed: 

At: Sacramento, California

Shahab Khoshmashrab
Senior Mechanical Engineer

Experience Summary

Seventeen years experience in the Mechanical, Civil, Structural, and Manufacturing Engineering fields involving engineering and manufacturing of various mechanical components and building structures. This experience includes QA/QC, construction/licensing of electric generating power plants, analysis of noise pollution, and engineering and policy analysis of thermal power plant regulatory issues.

Education

- California State University, Sacramento-- Bachelor of Science, Mechanical Engineering
- Registered Professional Engineer (Mechanical), California

Professional Experience

2001-Current—Senior Mechanical Engineer, Systems Assessment and Facilities Siting—California Energy Commission

Perform analysis of generating capacity, reliability, efficiency, noise and vibration, and the mechanical, civil, and structural aspects of power plant siting cases.

1998-2001—Structural Engineer – Rankin & Rankin

Engineered concrete foundations, structural steel and sheet metal of various building structures including energy related structures such as fuel islands. Performed energy analysis/calculations of such structures and produced both structural plans and detailed shop drawings using AutoCAD.

1995-1998—Manufacturing Engineer – Carpenter Advanced Technologies

Managed manufacturing projects of various mechanical components used in high tech medical and engineering equipment. Directed fabrication and inspection of first articles. Wrote and implemented QA/QC procedures and occupational safety procedures. Conducted developmental research of the most advanced manufacturing machines and processes including writing of formal reports. Developed project cost analysis. Developed/improved manufacturing processes.

DECLARATION OF
Huei-An (Ann) Chu

I, Huei-An (Ann) Chu, declare as follows:

1. I am presently employed by the California Energy Commission in its Siting, Transmission and Environmental Protection Division as an Air Resources Engineer.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on the **Public Health** section of the **Final Staff Assessment** for the **Hidden Hills Solar Electric Generating Station** Application for Certification (AFC), based on my independent analysis of the AFC, supplements, data, documents, analysis and testimony from other staff and reliable sources, and based upon my own professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: November 2, 2012 Signed: Huei-An Chu

At: Sacramento, California

Huei-An (Ann) Chu

1516 Ninth Street, MS 46, Sacramento, CA 95814
Phone: (916) 6510965, Email: Ann.Chu@energy.ca.gov

EDUCATION

PhD, Environmental Sciences and Engineering, 05/2006
School of Public Health, University of North Carolina at Chapel Hill
Area of Specialization: Environmental Risk Assessment, Environmental Management and Policy, Risk-Based Regulation, Biostatistics, Environmental Epidemiology

MEM, Environmental Management, 05/2000
School of Forestry and Environmental Studies, Yale University, New Haven, CT

MS, Environmental Engineering, 06/1998
National Taiwan University, Taipei, Taiwan

BA, Geography, with honors, 06/1996
National Taiwan University, Taipei, Taiwan

SKILLS

Language: Fluent in Chinese and English.

Computer software and programming skills: HARP, SAS, Stata, Minitab, ArcGIS, ArcView, ArcInfo, Stella, Crystal Ball, ISC, ERMMapper, Microsoft Excel, PowerPoint, Word.

WORK EXPERIENCE

Air Resources Engineer, California Energy Commission, 1/12/2012 - Present

- Independently performs responsible, varied analyses assessing air quality and public health impacts of energy resource use and large electric power generation projects in California.
- Model air quality and public health impacts of stationary sources using HARP (Hot Spot Analysis and Reporting Program).
- Identify air quality and public health impacts of stationary sources and measures to mitigate these impacts following California Environmental Quality Act and regulations of US EPA (including the National Environmental Policy Act), ARB, and the Districts.
- Collect, analyze, and evaluate data on the effects of air pollutants and power plant emissions on human health, and the environment.
- Ensure conditions of certification are met and recommending enforcement actions for violations.

Research Associate, Taiwan Development Institute, 10/01/2010 – 12/31/2011

- Provided professional consultation for the environmental risk assessment of Taiwan's techno-industrial development initiatives
- Reviewed the environmental risk assessment reports of Taiwan's techno-industrial development initiatives
- Presented in various distinguished lecturer series about environmental risk assessment

Consultant, Chu Consulting, 08/2007 - 07/2010

- Conducted a cumulative risk assessment to evaluate the risk associated with the emissions of VOCs from a petrochemical plants in southern Taiwan
- Used EPA's ISC3 model (based on Gaussian dispersion model) to simulate the dispersion and deposition of VOCs from this petrochemical plant to the neighboring areas, then used ArcGIS to spatially combine the population data and VOC simulation data (and further calculated risks)

- Built a framework of risk-based decision making to set the emission levels of VOCs to reduce people's exposure and the risk of experiencing health problems
- Presented in conference: SRA 2007
- Awarded: CSU-Chico BBS Faculty Travel Funds (2007)

Environmental Justice Intern, Clean Water for North Carolina (CWFNC), Summer, 2005

- Reviewed and critiqued key state environmental policies and the federal EPA Public Participation Policy.
- Interviewed impacted communities, member organizations of the NC Environmental Justice Network, state policy officials about how those policies are actually implemented.
- Wrote a report about the survey and review of environmental justice needs for key state policies.
- Report Publication: "Achieving Environmental Justice in North Carolina Public Participation Policy" (Aug, 2005).

Volunteer, New Haven Recycles and Yale Recycling, 08/1998 – 05/2000

- Promoted recycling and conservation
- Checked trash cans (chosen randomly) and recycling bins at each entryway of residential college, then gave grades.

Volunteer, Urban Resource Initiative (URI), Summer, 1998

- Planted trees for local community of New Haven for a better and sustainable environment

RESEARCH EXPERIENCE**Postdoctoral Research**

Department of Public Health Sciences, University of California, Davis, 07/01/2010 - present

Research advisor: Dr. Deborah H. Bennett and Dr. Irva Hertz-Picciotto

- Work on two projects: NIEHS-funded ***Childhood Autism Risks from Genetics and Environment (CHARGE)*** and EPA-funded ***Study of Use of Products and Exposure Related Behavior (SUPERB)***.
- Perform statistical and quantitative analyses with SAS to analyze collected house dust data and children's urine concentrations of metabolites.
- Conduct exposure assessment to investigate if pesticides, flame retardants, and phthalates are risk factors for children autism.
- Conduct exposure assessment to explore the relationships between children's exposure to phthalate, benzophenone-3 (oxybenzone), triclosan, and parabens, and the use of personal care products.
- Produce scholarly peer-reviewed publications of methodology and findings, and write the final reports of both projects.

Carolina Environmental Program, University of North Carolina at Chapel Hill, 01/01/2006 – 12/31/2006

Research advisor: Dr. Douglas J. Crawford-Brown

- Applied a framework of risk-based decision-making to perchlorate in drinking water. (Awarded: SRA Annual Meeting Travel Award 2006)
- Conducted a material and energy flow analysis (MEFA) to quantify the overall environmental impact of Bank of America operations, and quantitatively analyze the strategies BOA might adopt to reduce these impacts and achieve sustainability. (Report Publication: "Environmental Footprint Assessment")

Doctoral Research, 08/2000-12/2005

Department of Environmental Sciences and Engineering, School of Public Health, University of North Carolina at Chapel Hill

Research advisor: Dr. Douglas J. Crawford-Brown

- Dissertation topic: "**A framework of Risk-Based Decision Making by Characterizing Variability and Uncertainty Probabilistically: Using Arsenic in Drinking Water as an Example**".
- Conducted risk assessment for arsenic in drinking water.
- Conducted theoretical analysis on the variability and uncertainty issues of risk assessment.

- Conducted a meta-analysis to improve dose-response assessment.
- Conducted analytical and numerical analysis to build a new framework of risk-based decision-making which can be applied coherently across the regulation decisions for different contaminants.
- Presented in conferences: APPAM (2004), SRA (2004, 2005 and 2006), DESE Seminar (2005), CEP Symposium on Safe Drinking Water (2006).
- Awarded: SRA Annual Meeting Student Travel Award (2004 & 2005), UNC-CH Graduate School Travel Grants (2004), UCIS Doctoral Research Travel Awards (2002).

Master's Research

School of Forestry and Environmental Studies, Yale University, 08/1999 - 06/2000

Research advisor: Dr. Xuhui Lee

- Master's project: "**Forest Stand Dynamics and Carbon Cycle**".
- Research project: "Monitoring Forest CO₂ Uptaking"
- Used remote sensing (ERMapper) to investigate the role of forest in the uptake of CO₂.
- Awarded from Teresa Heinz Scholars for Environmental Research Program (2000) and Klemme Award (1999).

Graduate Institute of Environmental Engineering, National Taiwan University, 06/1996 - 06/1998

Research advisor: Dr. Shang-Lien Loh

- Master's thesis: "**The Loads of Air Pollutants from Urban Areas on a Neighboring Dam and its Water Quality**"
- Research Projects: "Research on Air Pollutant Deposition in Urban Areas" and "the Fate and Flow of Recyclable Materials"
- Used Gaussian's Dispersion model (ISC3) to investigate the loads of air pollutants on dam water.

TEACHING EXPERIENCE

Lecturer

Department of Environmental Studies, California State University at Sacramento

- Environmental Politics and Policy, Fall 2011

Department of Geological & Environmental Science, California State University at Chico

- Environmental Risk Assessment, Spring 2009 & 2010
- Applied Ecology, Spring 2008
- Pollution Ecology, Fall, 2007

Department of Geography & Planning, California State University at Chico

- Seminar in Applied Geography & Planning – Environmental Regulation and Policy, Fall, 2007

Department of Forestry and Environmental Resources, North Carolina State University

- Environmental Regulation, Fall, 2006

Teaching Assistant

Department of Environmental Sciences and Engineering, UNC-Chapel Hill

- Environmental Risk Assessment, Spring, 2002
- Introduction to Environmental Science, Fall, 2001
- Analysis and Solution of Environmental Problems, Fall, 2001

Lab Instructor

Department of Environmental Sciences and Engineering, UNC-Chapel Hill

- Biology for Environmental Science, Fall, 2000

Graduate Institute of Environmental Engineering, National Taiwan University

- Water Quality Analysis, Fall, 1997

AWARDS and HONORS

- CSU-Chico BBS Faculty Travel Funds, 2007
- Member of Society of Risk Analysis (SRA), 2006-2008
- SRA Annual Meeting Student Travel Award, 2004-2006
- UNC-CH Graduate School Travel Grants, 2004
- Member of Association for Public Policy Analysis and Management (APPAM), 2004-2005
- UCIS Doctoral Research Travel Awards, 2002
- Graduate Student Teaching and Research Assistantships, 2000-2005
- Teresa Heinz Scholars for Environmental Research Program, 2000
- Yale Forestry & Environmental Studies, Klemme Award, 1999

PUBLICATIONS (SELECTED LIST)

- Huei-An Chu**, Deborah H. Bennett, Irva Hertz-Picciotto, "Phthalates in relation to autism and developmental delay: Exploratory analyses from the CHARGE Study". (In preparation)
- Huei-An Chu**, Deborah H. Bennett, Irva Hertz-Picciotto, "Personal Care Products: Possible Sources of Children Phthalate Exposure". (In preparation)
- Huei-An Chu** and Douglas J. Crawford-Brown, "A Probabilistic Risk Assessment Framework to Quantify the Protectiveness of Alternative MCLs for Arsenic in Drinking Water", *Journal of American Water Works Association*. (Being revised)
- Huei-An Chu** and Douglas J. Crawford-Brown, "Letter to the Editor: Inorganic Arsenic in Drinking Water and Bladder Cancer: A Meta-Analysis in Dose-Response Assessment", *International Journal of Environmental Research and Public Health*, 2007, 4(4), 340-341.
- Huei-An Chu** and Douglas J. Crawford-Brown, "Inorganic Arsenic in Drinking Water and Bladder Cancer: A Meta-Analysis in Dose-Response Assessment", *International Journal of Environmental Research and Public Health* 2006, 3(4), 316-322.
- S.L. Lo and **H.A. Chu**, "Evaluation of Atmospheric Deposition of Nitrogen to the Feitsui Reservoir in Taipei", *Water Science & Technology*, 2006, 53(2), 337-344.
- CSE Consulting and the UNC Carolina Environmental Program (CEP), "Environmental Footprint Assessment", Report for Bank of America, Aug, 2006.
- Huei-An Chu**, "Achieving Environmental Justice in North Carolina Public Participation Policy", Report for Clean Water for North Carolina (CWFNC), Aug, 2005.
- Huei-An Chu**, "Arsenic and its Health Implications", Report for University Center for International Studies Graduate Travel Awards, 2002.

PRESENTATIONS (SELECTED LIST)

- Guest Speaker, "Human Health Risk Assessment – Arsenic in Drinking Water as an Example". Tunghai University, Taichuang, Taiwan. (December 16th, 2010)
- Guest Speaker, "Environmental Problems in Developing Countries", Course Title: Developing Countries, Department of Economics, CSU-Chico (October 31st, 2008)
- "Cumulative Risk Assessment for Volatile Organic Compounds (VOCs) from Petrochemical Plants in Southern Taiwan". Oral Presentation in Society of Risk Analysis (SRA) 2007 Annual Meeting, San Antonio, TX. (December, 2007)
- Guest Speaker, "Arsenic in Drinking Water", Course Title: Environmental Geology, CSU-Chico. (November 13th, 2007)
- "Risk-Based Environmental Regulation for Arsenic in Drinking Water", Oral Presentation in Department of Environmental Health Seminar, East Tennessee State University (February 2nd, 2007)
- "A Framework of Risk-based Decision Making by Characterizing Variability and Uncertainty Probabilistically: Using Arsenic in Drinking Water as an Example", Oral Presentation in Society of Risk Analysis (SRA) 2006 Annual Meeting, Baltimore, MD. (December, 2006)

"A New Policy Tool to Choose Water Quality Goals under Uncertainty", Poster Presentation in Society of Risk Analysis (SRA) 2006 Annual Meeting, Baltimore, MD. (December, 2006)

"A framework of Risk-Based Decision Making by Characterizing Variability and Uncertainty Probabilistically: Using Arsenic in Drinking Water as an Example", Oral Presentation for National Center for Environmental Assessment (NCEA), Environmental Protection Agency (EPA). (October 26th, 2006)

"Probabilistic Risk Assessment for Arsenic in Drinking Water", Poster Presentation in Carolina Environmental Program (CEP) 2006 Symposium on Safe Drinking Water, Chapel Hill, NC. (March, 2006)

"Probabilistic Risk and Margins of Safety for Water Borne Arsenic", Poster Platform Presentation in Society of Risk Analysis (SRA) 2005 Annual Meeting, Orlando, FL. (December, 2005)

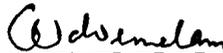
"Using Meta-Analysis in Dose-Response Analysis – Risk Assessment of Arsenic in Drinking Water as an Example", Poster Platform Presentation in Society of Risk Analysis (SRA) 2004 Annual Meeting, Palm Springs, CA. (December, 2004)

DECLARATION OF
Dr. Obed Odoemelam

I, Obed Odoemelam, declare as follows:

1. I am presently employed by the California Energy Commission in its Siting, Transmission and Environmental Protection Division as a Staff Toxicologist.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on the **Transmission Line Safety and Nuisance** section of the **Final Staff Assessment** for the **Hidden Hills Solar Electric Generating Station** Application for Certification (AFC), based on my independent analysis of the AFC, supplements, data, documents, analysis and testimony from other staff and reliable sources, and based upon my own professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: November 2, 2012 Signed: 

At: Sacramento, California

RESUME

DR. OBED ODOEMELAM

EDUCATION:

- 1979-1982 University of California, Davis, California. Ph.D., Ecotoxicology
- 1976-1978 University of Wisconsin, Eau Claire, Wisconsin. M.S., Biology.
- 1972-1976 University of Wisconsin, Eau Claire, Wisconsin. B.S., Biology

EXPERIENCE:

1987

The Present: California Energy Commission. Staff Toxicologist.

Responsible for the technical oversight of staffs from all Divisions in the Commission as well as outside consultants or University researchers who manage or conduct multi-disciplinary research in support of Commission programs. Research is in the following program areas: Energy conservation-related indoor pollution, power plant-related outdoor pollution, power plant-related waste management, alternative fuels-related health effects, waste water treatment, and the health effects of electric and magnetic fields. Serve as scientific adviser to Commissioners and Commission staff on issues related to energy conservation and transmission line health, safety, and nuisance. Serve on statewide advisory panels on issues related to multiple chemical sensitivity, ventilation standards, electric and magnetic field regulation, health risk assessment, and outdoor pollution control technology. Testify as an expert witness at Commission hearings and before the California legislature on health issues related to energy development and conservation. Review research proposals and findings for policy implications, interact with federal and state agencies and industry on the establishment of exposure limits for environmental pollutants, and prepare reports for publication.

1985-1989 California Energy Commission.

Responsible for assessing the potential impacts of criteria and non-criteria pollutants and hazardous wastes associated with the construction, operation and decommissioning of specific power plant projects. Testified before the Commission in the power plant certification process, and interacted with federal and state agencies on the establishment of environmental limits for air and water pollutants.

1983-1985 California Department of Food and Agriculture.

Environmental Health Specialist.

Evaluated pesticide registration data regarding the health and environmental effects of agricultural chemicals. Prepared reports for public information in connection with the eradication of specific agricultural pests in California.

**DECLARATION OF
James Adams**

I, **James Adams**, declare as follows:

1. I am presently employed by the California Energy Commission in the **Environmental Office** within the **Siting, Transmission and Environmental Protection Division** as a **Planner II**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on **Growth-Inducing Impacts** in the **Socioeconomics** section of the **Hidden Hills Solar Electric Generating Station Final Staff Assessment**, based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 10/30/12

Signed: James Adams

At: Sacramento, CA

James S. Adams
Environmental Office
Siting, Transmission and Environmental Protection Division
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5504
PH (916) 653-0702, FAX (916) 651-8868
Adams, Jim@energy.ca.gov

5/1999

Present **Environmental Planner II**

Review applications for certification to acquire permits from the California Energy Commission to build electric generating power plants. Specific technical fields include traffic and transportation, land use, socioeconomics, and visual resources. Provide technical analysis when requested for the Energy Commission's Integrated Energy Policy Report.

11/1997

Present **Energy and Resource Consultant**

Provide clients with technical expertise on various issues related to natural resource use and development. Recent activities include providing expert testimony before the California Public Utilities Commission regarding decommissioning issues concerning Humboldt Bay, Diablo Canyon and San Onofre nuclear reactors.

9/1994--

10/1997 **Senior Analyst - Safe Energy Communication Council (SECC)**

Responsible for developing and/or implementing campaigns on various energy issues involving the promotion of energy efficiency and renewable energy and advocating less reliance on nuclear power. Managed educational outreach efforts to newspaper editorial writers throughout the U.S. to encourage coverage of energy issues. Participated in meetings and negotiations with key Clinton administration officials, members of Congress and staff, national coalitions, and grassroots organizations on important energy issues (e.g. U.S. Department of Energy Budget for Fiscal Years 1996-1998). Successfully raised \$140,000 from private foundations to support SECC activities.

6/1978--

12/1992 **Principal Consultant - Redwood Alliance**

Provided consulting services to the Alliance; a renewable energy/political advocacy organization. Major responsibilities included managing and/or participating in several interventions/appearances before the California Public Utilities Commission, California Energy Commission, California Legislature, U.S. Congress and the U.S. Nuclear Regulatory Commission. Issues included electric utility planning options, greater reliance on energy efficiency and renewable energy, nuclear power economic analyses, decommissioning cost estimates, and nuclear waste management and disposal.

2/1983--

8/1986 **Natural Resource Specialist**

Assisted private consulting, firms, non-profit corporations and government agencies in various projects related to the enhancement and protection of national forests in Northern California and Southern Oregon. This included contracts with the U.S. Forest Service, Fish and Wildlife Service, National Park Service, the California Coastal Conservancy, and private landowners.

6/1978--

12/1984 **Consultant/Journalist/Paralegal**

Throughout the period of work outlined above, I have written a considerable amount of news articles and reports connected to ongoing-projects and issues of personal interest. The legal/administrative interventions have required extensive paralegal work to support attorneys, and technical expertise to identify and assist consultants. In addition, many of the projects required consulting services and lobbying, at the local, state and federal level whenever necessary, as well as working with the print and television media as appropriate.

From 1978 through 1984 I served on the Board of Directors for two local non-profit agencies devoted to sustainable community development, Redwood Community Development Council and Redwood Community Action Agency (RCAA). I also was hired on staff at RCAA as a natural resource specialist which is explained more fully above. I am proficient with computers, printers, fax machines and related equipment.

EDUCATION

- M.A. Social Science. Political science and natural resources emphasis. California State University at Humboldt. Graduated December 1988.
- B.A. Political Science. Political and economic aspects of natural resource development, with a particular emphasis in forest ecology and appropriate technology. California State University at Humboldt. Graduated June 1978.

Academic

Honors. Member of PI GAMMU MU Honor Society since 1986.

MILITARY SERVICE

7/1969--

9/1975 U.S. Navy. Air Traffic Controller.
Honorable Discharge.

**DECLARATION OF
Steven Kerr**

I, **Steven Kerr**, declare as follows:

1. I am presently employed by **California Energy Commission** in the **Siting, Transmission, and Environmental Protection Division** as a **Planner I**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on **Socioeconomics**, for the **Hidden Hills Solar Electric Generating System (11-AFC-2)**, based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: October 30, 2012 Signed: original signed by S. Kerr

At: Sacramento, California

Steven Kerr

Professional Experience:

California Energy Commission
January 2012-Present

Sacramento, CA
Planner I

- Review power plant applications and amendments for socioeconomic, land use, transportation, and visual impacts.
- Evaluate projects in accordance with CEQA, the California Energy Commission siting regulations, and federal, state and local laws, ordinances, regulations, standards (LORS).
- Participate in public workshops regarding proposals.
- Write environmental analysis documents.

Thomas P. Kerr Inc.
August 2011-January 2012

Sacramento, CA
Property Manager

- Management of properties and assets throughout California and Oregon.
- Assist in the preparation of mobile home park closure impact report for Port of San Luis.
- Use various software applications to produce and review billing and financial records.
- Work with local agencies to coordinate infrastructure improvements.

Ground(ctrl)
February 2010-August 2011

Sacramento, CA
Director of Customer Support

- Coordinate and provide customer support for A-list musical artist fan clubs, online stores, e-mail marketing, ticketing, aggressive online marketing, and much more.
- Resolve escalated customer support issues, credit card disputes, and Better Business Bureau cases.
- Supervise and train customer support team members and interns.

City of Sacramento
General Services Department
July 2009-February 2010

Sacramento, CA
Customer Service Representative

- Perform concurrently multiple customer service related duties for all City of Sacramento departments by phone/email.
- Interpret and apply City regulations and procedures as applicable to billing, fees, and collections.
- Learn and explain the organization, procedure and operation details of the City.
- Use a variety of business software applications and assess maps.

City of Sacramento
Development Services Department
February 2007-July 2009

Sacramento, CA
Assistant Planner

- Project manager for various residential, commercial, industrial, and office development projects.
- Assist customers with zoning, design review, preservation, environmental, subdivision code, and sign questions, both at the public counter and by phone/email.
- Provide customers with required entitlement information, fee estimates, and accept applications for proposed development projects.
- Review applications and plans for consistency with City Codes, General Plan, and applicable community plans, specific plans and planned unit development guidelines.
- Present projects at interdepartmental meetings and coordinate project review with other city departments and government agencies.
- Present projects at community meetings and work with neighborhood association leaders on controversial projects.
- Brief city council members on controversial projects.
- Write staff reports and conditions of approval.

- Prepare and post legal notices for public hearings.
- Present projects at Zoning Administrator, Planning Commission, and City Council public hearings.
- Create maps using geographic information systems (GIS) software.
- Research development and entitlement histories of parcels.

City of Atascadero
Community Development Department
March 2005-June 2006

Atascadero, CA
Planning Intern

- Prepare environmental review documents.
- Review business licenses and building permits.
- Draft letters and staff reports.
- Respond to questions from the public on planning and zoning related issues.
- Access and update information in GIS and Excel

Education:

2005-2006 California State Polytechnic University, San Luis Obispo, CA
Coursework toward MS in Public Policy

2000-2005 California State Polytechnic University, San Luis Obispo, CA
Bachelor of Science in City and Regional Planning

**DECLARATION OF
Testimony of Richard McCann**

I, **Richard McCann**, declare as follows:

1. I am presently employed by Aspen Environmental Group, a contractor to the California Energy Commission, Siting, Transmission and Environmental Protection Division, as a **Socioeconomic Technical Specialist**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on **Socioeconomics** for the **Hidden Hills Solar Electric Generating System Final Staff Assessment** based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: November 1, 2012

Signed: _____



At: Sacramento, California



Academic Background

PhD, Agricultural and Resource Economics, University of California, Berkeley, 1998
MS, Agricultural and Resource Economics, University of California, Berkeley, 1990
MPP, Institute of Public Policy Studies, University of Michigan, 1986
BS, Political Economy of Natural Resources, University of California, Berkeley, 1981
Dissertation: "California's Evolving Water Management Institutions: Markets and Agricultural Water Districts"

Selected Professional Experience

Dr. McCann specializes in environmental and energy resource economics and policy. He has testified before and prepared reports on behalf of numerous federal, state and local regulatory agencies on energy, air quality, and water supply and quality issues. Dr. McCann has been involved in developing and assessing climate change policies and action plans for two decades. He started with Proposition 128 (a.k.a. "Big Green") in 1990 by compiling and analyzing a comprehensive set of statewide and local reduction measures—the first ever such plan. He has continued to conducted large-scale studies on the costs of meeting GHG reduction targets for California, and proposed alternative policy approaches for addressing global climate change issues. He has compiled GHG and fuel use inventories at the local and statewide level. Most recently, he analyzed the AB 32 Scoping Plan and policies for controlling high global warming potential (HGWP) gases. He also critiqued the proposed low carbon fuel standard (LCFS) proposal. He has been developing a scenario-based analytic method to assess vulnerabilities and opportunities arising from uncertainty and risk for designing climate change and renewable energy policies. He also has analyzed other specific GHG reduction measures, including the pumping engine conversions eventually implemented statewide, vehicle fuel choices, community-based environmental programs and incentive-based programs in numerous settings.

Aspen Environmental Group.....2008-present

Regional Economics and Fiscal Impacts

- **Desert Renewable Energy Conservation Plan, California Energy Commission (2011-present).** Developing estimates for cost of implementing different alternatives for managing the environmental consequences from developing renewable power in southeast California. This analysis involves collecting program and project data on environmental mitigation and habitat conservation efforts, and estimating the cost of acquiring land for habitat restoration and rehabilitation.
- **Hidden Hills Solar Energy Generator Fiscal Impacts, California Energy Commission (2012).** Assessing reasonably expected to occur fiscal impacts in Inyo County from constructing and operating the proposed HHSEGS solar photovoltaic utility-scale power projects. The report will be submitted in the AFC docket on behalf of the Commission Staff.
- **Burning Man Festival Environmental Assessment, Black Rock LLC and Bureau of Land Management (2011-present).** Preparing analysis of the socio-economic impacts and contributions in northern Nevada from the annual Burning Man Festival. The analysis is part of environmental assessment prior to BLM renewing Black Rock LLC's permit for the festival.
- **Diesel Powering the U.S. Economy, Diesel Technology Forum (2011).** Prepared a report and presented results on analysis of how production and use of diesel technology affects the U.S.



economy. The analysis relied on supplementing an IMPLAN regional economic model data set with other data sources and reports.

- **Solar Power Plant Fiscal Impacts, San Benito County Planning Department (2010).** Assessed reasonably expected to occur fiscal impacts from constructing and operating the proposed Panoche Valley Solar Farm solar photovoltaic utility-scale power projects.
- **Solar Power Plants Fiscal Impacts, San Luis Obispo County Planning Department (2010).** Assessed reasonably expected to occur fiscal impacts from constructing and operating the proposed California Valley Solar Ranch and Topaz Solar Farm solar photovoltaic utility-scale power projects.
- **Review of AB 32 Proposed Scoping Plan Economic Modeling, Environmental Defense Fund (2008).** Reviewed economic modeling by the California Air Resources Board Staff used to assess the Proposed Scoping Plan to meet greenhouse gas emission reduction goals specified in AB 32.
- **Review of Economic Analysis of Proposed In-Use On-Road Diesel Fleet Regulations, Construction Industry Air Quality Coalition (2008).** Highlighted key issues in CARB Staff analysis if potential health benefits and costs to complying firms for proposed accelerated scrappage and retrofit program.
- **Habitat Restoration Economic Impacts Analysis, Solano County Water Agency (2008-2009).** Prepared an economic and fiscal impact analysis from proposed wetlands conversion and restoration of productive agricultural lands in the Cache Slough area from agricultural and wetlands use in Solano County. Analysis estimated lost agricultural revenues and activity, and changes in revenues and expenditures for affected reclamation districts.

M.Cubed..... 1993-2008

Regional Economics and Fiscal Impacts

- **Construction Fleet Emission Standard Impacts, Construction Industry Air Quality Coalition (2006-2007).** Reviewed ARB Staff regulatory proposal and analysis. Prepared responding economic impact analysis using the ARB’s emission inventory database of 170,000 pieces of equipment.
- **Socio-economic Impacts of Stationary Engine Air Regulations, San Joaquin Valley Agricultural Industries Association (2005).** Testified before the SJVUAPCD on a proposal to change Rule 4702 which would impose emission controls on existing agricultural pumps and other stationary engines. A cost-effectiveness analysis was conducted based on estimated pump populations and regional agricultural characteristics. IMPLAN was used to estimate the regional economic impacts on incomes and jobs.
- **Proposed Tribal Casino Impacts, Elk Valley Rancheria (2004).** Developed a socio-economic regional impact analysis for the casino proposed by the Elk Valley Rancheria in Del Norte County. The analysis included accounting for local substitution effects on the economy and fiscal impacts on local government..
- **Proposed Tribal Casino Impacts, Analytical Environmental Services (2004).** Developed a socio-economic regional impact analysis for the casino proposed by the Timbisha Shoshone in Hesperia, San Bernardino County. The analysis included accounting for local substitution effects on the economy and fiscal impacts on local government, as well as a portrait of tribal socio-economic conditions.
- **Monterey Amendment EIR, California Department of Water Resources (2003-2007).** Evaluated the potential growth inducing impacts from implementing the Monterey Amendment components. This analysis relied on assessing how retail water rates might change under different scenarios, and then estimating the regional economic impacts from those changes.



- **Water Transfer Impact Analysis, Glenn-Colusa Irrigation District (2004).** Evaluated the socio-economic impacts in Glenn and Colusa counties from a proposed water transfer from GCID to the Metropolitan Water District of Southern California (MWDSC).
- **Diesel Phase-Out Impacts, Californians for Sound Fuel Policy (2000).** Estimated the potential economic impacts from adopting statewide policies to phase-out diesel fuel for natural gas.
- **Property Value Impacts from Powerplants, Calpine Corporation (1999).** Analyzed whether residential property values were affected by the announcement of the proposed power project in the vicinity of the site using residential housing sale data. Estimated fiscal impacts on local governments from construction and operation of a new power plant.
- **Proposed Tribal Casino Impacts, Environmental Science Associates (1999).** Developed a socio-economic regional impact analysis for the casino proposed by the Shingle Springs Band of the Miwoks in El Dorado County (now Red Hawk Casino). The analysis included accounting for local substitution effects on the economy and fiscal impacts on local government, as well as a portrait of tribal socio-economic conditions.
- **Regional Forecasting Uncertainty, Western States Petroleum Association (1997).** Reviewed the forecasts used for developing air quality management plans and regulations and highlighted issues that increase uncertainty in these forecasts.
- **Proposed Landfill Impacts, USA Waste (1997).** Evaluated the economic benefits to Riverside County of siting a regional landfill. Assessed the savings and revenues generated for the local waste management district, and the regional economic impacts. Testified before Riverside County Planning Commission on two proposed landfills' economic impacts.
- **Agricultural Land Preservation Analysis, Save Our Agricultural Land (1997).** Testified before County Board of Supervisors on the significance of maintaining a narrow definition of "agricultural land" under Santa Cruz County's Agricultural Preservation ordinance.
- **NGV Impacts, Southern California Gas Co. (1994).** Evaluated regional economic impacts associated with increased use of natural-gas-fueled vehicles in Southern California.
- **CalEPA Evaluation Guidebook, California Air Resources Board (1994).** Developed a handbook for use by California Environmental Protection Agency staff to evaluate reports submitted to CalEPA boards and departments.
- **Agricultural Waste Burning Alternatives Study, California Air Resources Board (1993).** Evaluated crop residue removal and disposal alternatives, such as energy or fiber production, and assessed farm-level and regional economic impacts using a rice farm production model and a computable general equilibrium (CGE) regional economic model of the Sacramento Valley from a ban on agricultural residue burning.

Foster Associates/Spectrum Economics/QED Research1986-1992

Dames & Moore1985-1986

Professional Affiliations

- American Agricultural Economics Association, Association of Environmental and Resource Economists, American Economics Association, Western Economics Association International.
- Member, City of Davis Citizens Electricity Restructuring Task Force
- Member, Western Manufactured Housing Communities Association Utilities Task Force

**DECLARATION OF
Marylou Taylor, PE**

I, **Marylou Taylor**, declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting Transmission & Environmental Protection Division as an Associate Civil Engineer.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony on **Soils and Surface Water** for the Hidden Hills Solar Electric Generating System based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: November 2, 2012

Signed: Marylou Taylor

At: Sacramento, California

MARYLOU P. TAYLOR, PE

REGISTRATIONS/LICENCES:

California Professional Engineer License # C64353

EDUCATION:

B.S. Civil Engineering
University of California, Davis

PROFESSIONAL HISTORY:

Associate Civil Engineer 2010 to Present

California Energy Commission, Sacramento, CA

Duties within the Water and Soils Unit of the Engineering Office in the Facilities Siting Division include review and evaluation of applications for certification of thermal power plants within the state of California. The focus of the work is on sensitive project sites that may have issues involving groundwater and surface water resources, soil erosion, flooding potential, water quality and plant-derived waste generation and disposal. In addition, evaluate construction, operation and maintenance of the facilities and conduct investigations to determine if violations of the program's regulations, the Energy Commission's conditions of certification, or the California Environmental Quality Act (CEQA) have occurred.

Transportation Engineer, Civil 2000 to 2010

California Department of Transportation (Caltrans), District 3, Sacramento, CA

As Project Engineer in the Office of Design, identified storm water quality issues along public highways within the Tahoe Lake area and designed appropriate features in an effort to preserve and enhance the unique natural environment; and prepared reports evaluating alternatives and proposing a design concept and scope for development and programming.

Designed drainage systems for highways throughout Northern California to comply with Caltrans standards, including: analysis of site hydrology and hydraulic design; storm water management near impaired water bodies; and preparing layouts and construction details for contract plans.

Also performed engineering inspections of State contract construction projects and enforced contractor's compliance with plans and State specifications. Duties include: assisting Resident Engineer in re-designing areas where the contract plans conflicted with field conditions; performing inspections of construction site activities; and managing problems that develop in the field.

**DECLARATION OF
Candace M. Hill**

I, **Candace M. Hill**, declare as follows:

1. I am presently employed by **California Energy Commission** in the **Siting, Transmission, and Environmental Protection Division** as a **Planner II**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on **Traffic and Transportation**, for the **Hidden Hills Solar Electric Generating System (11-AFC-2)**, based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: November 7, 2012, 2012 Signed: 

At: Sacramento, California

CANDACE M. HILL

PROFESSIONAL EXPERIENCE

CALIFORNIA ENERGY COMMISSION - December 2009 – Present

Siting, Transmission and Environmental Protection Division, Sacramento, California

Planner II

- Responsible for researching and writing complex technical analyses assessing land use and traffic and transportation implications per the California Environmental Quality Act (CEQA) and related federal, state and local laws and regulations for solar energy projects and gas-fired energy projects.
- Review and comment on approved energy projects for compliance with adopted conditions of certification's.
- Prepare analysis of proposed amendments for existing projects.
- Site visits to projects.

DEPARTMENT OF TRANSPORTATION (Caltrans) – December 2008 – December 2009

Division of Mass Transportation, Sacramento, California

Associate Transportation Planner

- Administered two Federal Transit Administration (FTA) Grant Programs – Job Access and Reverse Commute (JARC) and New Freedom (NF).
- Reviewed and assessed grant proposals, monitored and prepared weekly and bi-weekly status reports for both Programs, managed the day-to-day operations of the grants and budgets for transportation, capital, operating and mobility management grants administered through the Department of Transportation for District 4 and District 5 which covered 14 counties.
- Responded to inquiries from grant recipients and the general public regarding the grants.

DEPARTMENT OF CONSERVATION - May, 2000 – December, 2008

California Geological Survey, Sacramento, California

Associate Planner

- Met with staff of the planning, building, public works and engineering departments of affected cities and counties throughout the State to explain the requirements and implementation of the California Seismic Hazards Mapping Act in the land use development process such as the General Plan, Zoning Code, building process and the California Environmental Quality Act.
- Analyzed and commented on General Plan Draft Safety Elements to incorporate the Seismic Hazard Zone Maps into the Safety Element.

CANDACE M. HILL

- Presented the Seismic Hazard Zone Maps before the State Mining and Geology Board and coordinated with the public affairs office and legislative office regarding the issuance of the Seismic Hazard Zone Maps.
- Maintained a database of affected cities and counties.
- Point person for outreach events.
- Responded to public inquires regarding Zone Maps.

SACRAMENTO COUNTY PLANNING DEPARTMENT July, 1999– May, 2000

Current Planning, Sacramento, California

Associate Planner

- Researched, analyzed and wrote staff reports for land use development proposals.
- Presented staff reports and recommendations for the land use development proposals to the Sacramento County Planning Commission and Sacramento Board of Supervisors.
- Staff Planner for the Cosumnes Community Planning Advisory Council.
- Supervised one Assistant Planner.
- Assisted the public with zoning, planning and general questions via the public counter and telephone.

STANISLAUS COUNTY PLANNING DEPARTMENT – December, 1996 – July 1999

Current Planning, Modesto, California

Associate Planner

- Researched, analyzed and wrote staff reports for land use development proposals.
- Prepared Initial Studies and associated documents per the California Environmental Quality Act.
- Presented staff reports and recommendations for the land use development proposals to the Stanislaus County Planning Commission.
- Assisted the public with zoning, planning and general questions via the public counter and telephone.

IMPERIAL COUNTY PLANNING AND BUILDING DEPARTMENT - October, 1990 – December, 1996

Current Planning, El Centro, California

Planner III

- Researched, analyzed and wrote staff reports for land use development proposals.
- Prepared Initial Studies per the California Environmental Quality Act.
- Assisted the public with zoning, planning and general questions via the public counter and telephone.

EDUCATION

University of California, Riverside

Bachelor of Arts in Administrative Studies – 1989

**DECLARATION OF
John Hope**

I, **John Hope**, declare as follows:

1. I am presently employed by **California Energy Commission** in the **Environmental Protection Office** of the **Energy Facilities Siting Division** as a **Planner II**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on **Traffic and Transportation**, for the **Hidden Hills Solar Energy project**, based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 12/20/12

Signed: _____



At: Sacramento, California

JOHN HOPE

1516 9th Street, MS 40
Sacramento, California 95814

(916) 654-7119
john.hope@energy.ca.gov

Land Use and Environmental Planner

John Hope has twelve years experience with current and long-range land use planning and environmental planning. He has served the public interest through evaluating economic, social, and environmental issues in communities. He is a skilled advocate effective in presenting professional planning knowledge to interest groups, the public, and political affiliations.

PROFESSIONAL EXPERIENCE

CALIFORNIA ENERGY COMMISSION, Sacramento, California **Environmental Planner II**, December 2011 to Current

As part of the Siting, Transmission and Environmental Protection (STEP) division - Environmental Office, I prepare environmental documentation for proposed energy facilities for the Commission as required by the California Environmental Quality Act (CEQA). Specifically, I write technical analyses for facility siting cases and planning studies in the areas of socioeconomic, environmental justice, land use, traffic and transportation, and visual resources, along with and formulate solutions and mitigation unique to each individual energy facility. I provide expert technical expertise and serve as a member of interdisciplinary team that evaluates potential environmental and socioeconomic effects of proposed power plants, policies, and plans for energy development in order to satisfy the requirements of the Warren-Alquist Act and CEQA.

AECOM, Sacramento, California **Noise Analyst**, February 2010 to July 2011

I served as assistant project manager, environmental planner, or air quality/noise analyst for various CEQA/NEPA documents. My work focused on preparing environmental setting and impact analysis sections, such as land use, traffic, public services, for projects related to infrastructure improvements, residential development, fairgrounds, industrial expansion, business parks, mixed-use developments, and economic appraisal. I used various modeling techniques along with SoundPLAN, a software-based noise prediction modeling program, to assess project-generated noise levels in an environment. Through the use of SoundPLAN, I graphically mapped and visually evaluated project-generated noise levels based on principles of acoustics. I also used SoundPLAN to model noise maps, design traffic noise mitigation, and predict combined noise levels. My experience in long-range planning also involved preparation of various elements for general plans and community plans.

EDAW | AECOM, Sacramento, California **Associate Environmental Planner**, September 2004 to June 2009

I wrote technical sections and managed environmental documents that analyze and describe to the public the potential environmental impacts of implementing development projects, including needed on-site and offsite infrastructure. I supervised preparation of environmental documents utilizing information from the client (i.e., state, county, city) and other professionals (e.g., air quality consultant, traffic engineers) to conduct environmental impact analysis of development projects. I also wrote sections and conducted research for general plans and specific plans. I worked as part of a team in preparing these documents to meet the requirements of state and federal permit regulations. I diligently maintained budgets and worked within stringent schedules as part of managing preparation of environmental and community planning documents with local agencies, cities and counties, and environmental specialists. I prepared scopes of work and proposals for new work opportunities.

STANTEC CONSULTING, Sacramento, California **Project Planner**, July 2002 to August 2004

I was responsible for providing land planning and environmental impact analysis in environmental engineering firms with various environmental remediation projects throughout northern California. I conducted hands-on oversight of remediation projects to assess the onsite environmental impacts and analyzed their successfulness. I provided my proficient writing skills through the preparation of site reports

related to remediation projects. I was relied upon to provide my land planning, environmental impact analysis, and entitlement processing expertise.

I was also responsible for providing assistance to land developers through the entitlement process including preparing development applications, preparing due diligence reports, and representation of the project to the public-at-large. I assisted cities and counties with the preparation of environmental documents and the processing of proposed land development projects. I managed the implementation of land development projects including large residential subdivisions, commercial development, public facilities, and business parks by coordinating efforts being pursued by other associates including surveyors, engineers, environmental specialists, public agencies, and the developer themselves. I also wrote technical sections that analyzed the environmental impacts associated with large infrastructure improvement projects and prepared the environmental document articulating the team's findings. Co-workers relied upon me to provide land use and environmental planning expertise towards a team effort.

PACIFIC MUNICIPAL CONSULTANTS, Rancho Cordova, California
Assistant Planner, July 1999 to July 2002

As part of my work experience I evaluated proposed development projects, provided code enforcement, and assisted the public-at-large. I gained experience in long-range planning from diligent researching, and writing technical sections for General Plans and environmental documents.

As part of a team effort, I was responsible for the expedited review and management of proposed development applications through the entitlement process and conducting environmental review while working as a land use planner for the City of Elk Grove. I was responsible for processing and reviewing current planning projects applications such as subdivision maps, use permits, design review applications, staff level discretionary review, and other entitlements as assigned by the Community Development Director. As part of this process, I evaluated proposed projects with the requirements of the municipal code and General Plan, presented development projects, and portrayed issues surrounding the project to decision makers and the public through writing staff reports and articulating my professionalism to Planning Commissions and City Councils. As time went on, I worked my way up for the opportunity to process larger and more complicated development projects.

In addition, I worked on the City of Elk Grove's first General Plan by writing and analyzing all the quantitative and statistical data for the Housing element and administered public meetings and workshops. I wrote the draft Housing Element, started the State certification process with the Department of Housing and Community Development, and assisted with the preparation of other required elements of the General Plan. I also utilized GIS software for manipulating and visually presenting information related to the community.

I gained experience with the environmental impact review process which resulted from analyzing and comprehending technical studies and incorporating their information by writing technical sections for environmental documents and I coordinated the implementation of mitigation monitoring and reporting programs. As my experience with the environmental review process grew, my work ethic allowed me to increase my responsibilities as related to more environmentally controversial projects.

EDUCATION

California Polytechnic State University, San Luis Obispo
Bachelor of Sciences, City and Regional Planning

This program provided a hands-on experience which allowed me to execute environmental impact assessments and site analysis, create site designs, research planning law and ordinances, present to several public and private groups, create graphic presentations, and conduct hands-on field research for specific projects located along the California central coast. I gained knowledge of various land use design concepts through hands-on draft work with computers and graphic tools.

**DECLARATION OF
Gregg Irvin, Ph.D.**

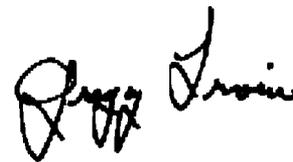
I, Gregg Irvin, declare as follows:

1. I am presently employed by the California Energy Commission in the Siting, Transmission and Environmental Protection Division, as a Planner II.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony for the **Visual Resources section** for the **Hidden Hills Solar Electric Generating Station (11-AFC-2)** based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue(s) addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: October 30, 2012

Signed: _____



At: Sacramento, CA

GREGG E. IRVIN, PH.D.
 3731 Blossom Heath Road
 Dayton, OH 45419
 937-271-2715

EMPLOYMENT

- 2005-Present President, Spectrus, Ltd.
- 1996-2005 Principal Partner and Director of Operations, Mobium Enterprises, Inc.
- 1994-1997 Executive Director, Assistive Technologies Group
- 1996-2000 Employee Consultant, National Security Studies and Strategies Group,
 Science Applications International Corporation (SAIC), McLean, VA.
- 1993-1996 Assistant Vice President, SAIC, Dayton, OH.
- 1995-1996 Division Manager, Human Systems Technology Division, SAIC
- 1992-1995 Division Manager, Aerospace Systems Division, SAIC
- 1990-1991 Chief Scientist, Human Performance Technology Division, SAIC
- 1989-1990 Senior Scientist, Human Performance Technology Division, SAIC
- 1986-2000 Director, ICON Consultants, Birmingham, AL & Dayton, OH.
- 1985-1989 Senior Research Scientist, Systems Research Laboratories, Dayton, Ohio.
- 1984-1985 Visual Neurophysiologist, Vision Science Research Center,
 University of Alabama Medical School at Birmingham.

EDUCATION

- 1982-1984 National Eye Institute, Postdoctoral Fellow, Electrophysiology,
 Vision Science Research Center, School of Optometry,
 University of Alabama Medical School at Birmingham.
- 1981-1982 Postdoctoral Research Associate, Visual Neurophysiology,
 Department of Physiological Optics, School of Optometry,
 University of Alabama Medical School at Birmingham.
- 1981 Ph.D. Physiological Psychology, Syracuse University.
- 1976 B.A. Psychology, Syracuse University.

AWARDS/FELLOWSHIPS/DISTINCTIONS

- 1995-2003 Adjunct Faculty, Department of Biomedical and Human Factors Engineering,
 Wright State University, Dayton, OH.
- 1982-1984 National Eye Institute, Individual National Research Service Award
- 1979 Behavioral Neurobiology Scholarship, Cold Spring Harbor Research
 Laboratory, Syracuse University School of Engineering, Institute for Sensory
 Research.
- 1978-1980 Graduate Fellowships in Biopsychology (two awards), Syracuse University.
- 1977-1978 Graduate Fellowship in Physiological Psychology, Syracuse University.
- 1976-1977 Research Associate, Visual Psychophysics Laboratory, Syracuse University.

PROFESSIONAL SUMMARY

Dr. Irvin is a sensory neurophysiologist/ psychologist with a multidisciplinary background in visual science related fields including; applied experimental psychology, sensory perception, visual physiology and psychophysics, human systems interface, advanced image processing, human information processing, human perception and performance, mathematical visualization, neurobiology and human factors engineering. Dr. Irvin's focus is on applied technology

development and has 25 years of experience in laser exposure effects and laser hardening technologies.

Dr. Irvin is president of Spectrus, Ltd. Spectrus is a diversified small business providing services in engineering, human factors, neuroscience, physics, chemistry and life sciences. Spectrus develops advanced sensing technologies for indirect view multispectral and hyperspectral applications, which incorporate proprietary spectral mapping principles and (active and passive) frequency agile sensing capabilities. Spectrus also provides sensory modeling, image understanding, computational vision, specialized spectral sampling applications, advanced Human-System Interface development, and multidisciplinary sensing strategy services.

Dr. Irvin has strong leadership and managerial skills with a record of success in leading major research and development programs. This includes Air Force Research Laboratory programs developing physiologically based computer vision systems (stereovision, detection, and texture generation), laser eye and sensor protection, laser optical countermeasures, low-observable technologies, and multispectral adaptive and passive camouflage, concealment and deception technologies. Efforts include developing and interfacing both head-steerable and advanced helmet mounted displays with integrated multisensor fusion capabilities for strategic aircraft, developing imaging architectures, information visualization technologies, and display technologies incorporating specialized chromatic, motion, and texture processing. Contributions to visual science include a model of developmental amblyopia, various models of human visual detection, studies of information transfer to primate visual cortex, and structure-function studies of neuronal morphology and visual information processing. Dr. Irvin's experience and qualifications span basic and applied advanced research and development, and technology transfer and application. Dr. Irvin has been featured in National Geographic "The Sense of Sight" and in a PBS NOVA documentary "The Disguises of War."

EMPLOYMENT EXPERIENCE

Spectrus, Ltd. (2005-Present)

President, Spectrus, Ltd. is an Ohio based Limited Liability Company established in January 2005 and provides consulting services to Government and industry. Dr. Irvin is the president and sole partner in Spectrus, Ltd. Spectrus represents a reorganization of Mobium Enterprises, Inc. and Mobium, Inc., for which Dr. Irvin was the president of both.

Representative Research and Development Efforts at Spectrus:

Visor Laser Eye Protection Ground and Flight Testing Support. (2011-). Program lead to the AFRL Human Effectiveness Directorate, Directed Energy Bioeffects Division, Optical Radiation Branch (RHDO) for the development of all ground and flight testing materials (pre-briefs, pilot questionnaires for visual compatibility and life support equipment compatibility, experimenter materials, eyewear fitting procedures, and data analysis) for the evaluation of laser protection spectacles and visors developed under the Visor Laser Eye Protection, Advanced Technology Demonstration (VLEP ATD) program. Effort includes the testing conduct for the Joint Helmet Mounted Cueing System (JHMCS) LEP visor, the F-35 Joint Strike Fighter LEP visor and spectacle, and the ACC/AMC/AFSOC all-dye daytime and hybrid dye-dielectric nighttime LEP visors.

Security Lighting Development Program. (2011-). Consultant to Acuity Brands Lighting, Inc., Northeast Innovation Center (NEIC) for the development of RGB LED lighting hardware,

software and supporting algorithms for visual, physiological and psychological disruption and disabling human performance effects. Lead developer for strategic architecture design and disruptive algorithm development to support a modular and adaptable security lighting system for a variety of industrial and government applications.

Solar Power Plant Develop for the California Energy Commission. (2010-). Providing analytic and modeling support to Traffic and Transportation, Visual Resources, and Biological Resources for the assessment of the visual impacts of heliostat mirror fields and solar power towers for proposed Solar Electric Generation Facilities (SEGF). Ongoing and past research includes determining the magnitude of visual and thermal effects (e.g., glint, glare, aesthetics, avian mortality), their level of significance, and the development of potential mitigating procedures for the proposed Calico, Rio Mesa, and Hidden Hills SEGFs.

Visor Laser Eye Protection, Advanced Technology Demonstration (VLEP ATD) (2009-). Under the Hardened Materials Research and Survivability Studies (HMRSS) contract developing and integrating advanced laser protection technologies for visors and visor helmet mounted display systems. Efforts include identification and optical performance characterization of laser threat systems and the development of laser hardening goals via engagement modeling and simulation with airborne platforms in representative mission profiles. Supporting absorptive and reflective technology development includes modeling and performance characterization of the absorptive spectra of candidate molecular structures for chemical synthesis, and modeling and analysis of dielectric deposition processes for binocular visor protection performance, stress factors and mechanisms of haze generation. Lead for the development of laser protection designs and their performance evaluation for visors and hybrid visor-spectacle systems with various helmet mounted display systems.

Joint Strike Fighter Field Testing of Laser Eye Protection Devices (2009-2010). Program manager for this effort funded by the Office of the Under Secretary of Defense (Acquisition, Technology & Logistics) OUSD (AT&L) JSF, ASC 640th Aeronautical Systems Squadron under the AFRL/RXPJ Laser Materials Testing contract. Responsibilities included the development and conduct of both laboratory and field testing for JSF LEP spectacle and visor configurations. Laboratory visual psychophysical evaluations included contrast sensitivity, visual acuity and color discrimination. Field evaluations included the development of pre- and de-briefing materials and assessment questionnaires for aircrew in-cockpit evaluations visual compatibility and AFE compatibility and user acceptance. Evaluations were conducted at the Naval Air Station Patuxent River on the F-35 Lightning II STOVL F-35B test jet (BF-4).

Agile Visible and Near Infrared Imaging and Analysis (2011-2012). Program manager for this effort under the Hardened Materials Research and Survivability Studies (HMRSS) contract. Research focused on software and hardware solutions to support the analysis of agile filters and detectors operating in the visible and near-infrared (NIR) spectrums. Component and system characterization for the development and assessment of agile filters and detectors was conducted for filters developed under the Advanced Agile Device Implementation Program (AADI) for uniformity mapping, full aperture optical density, contrast grating MTFs, and haze and scatter measurements. Improved measurement techniques and instrumentation for haze/ scatter classification and assessment were developed. Software development efforts included a variety of image processing and image quality assessment techniques such as the Modulation Transfer Function Area (MTFA), Integrated Contrast Sensitivity (ICS) metric, and the Square-Root

Integral (SQRI) metric. The research effort characterized scatterometry measurements of the cosine corrected Bi-directional transmission functions (BTDF) of various filters for differential scatter distributions. Human visual acuity and contrast sensitivity functions were measured and correlated with the scatterometry distribution classes to establish correlative linkages between human perception and performance and scatter distribution properties.

Hardened Night Vision Goggle Program (2005-2009). As a subcontractor to GDIT designed, performance modeled and field evaluated laser hardening for NVGs. Technologies included Optical Power Limiters (OPLs), Cholesteric Liquid Crystals (CLCs), Complimentary Comb Filters (CCombs), Laser Warning Receivers, and fixed filters including Out-of-Band and Flip-in. An extensive laboratory NVG test bed has been developed at AFRL/RXPJ to characterize laser exposure effect and evaluate various laser hardening technologies both in terms of their laser hardening effectiveness and impact on sensor and human-systems performance. Modeling and analysis was conducted to define candidate integrated System Level configurations capable of laser hardening NVGs against both fixed and agile laser threat systems. Several prototype Systems Level configurations were subsequently field evaluated at the WPAFB Laser Infrared Development (LID) range. The field environment provided an opportunity for mission representative levels of illumination, realistic atmospheric turbulence effects, the recording of real-world calibrated targets, and an opportunity for operator psychophysical performance assessments. The experiments conducted enabled an assessment of the laser protection levels provided by the hardening technologies and an assessment of the performance impacts of the technology without and with laser exposure.

Raytheon CV-22 Helmet Mounted Display. (2011) Subcontract to Raytheon for proposal development and review for the Boeing Defense Space and Security Division CV-22 Helmet Mounted Cueing System (HMCS). Activities included HDM architecture and functional capabilities for HMD interfaces, processing and control equipment, NVG capability, resolution, field of view, eye relief and exit pupil, display brightness and internal contrast ratios, luminance uniformities, and helmet tracking, slew and acceleration rates, latency and readout stability.

Advanced Optical Coatings (2007-2010). Designed, performance modeled and field evaluated distributed (spectacle and visor) laser eye protection for the F-35 Joint Strike Fighter. The Advanced Optical Coatings Monolithic Demonstration (AOC Mono Demo) was a design and manufacturing demonstration for a monolithic (non-laminated) LEP spectacle. Additionally, the AOC Mono Demo addressed the LEP design requirements for the F-35 Joint Strike Fighter. Due to visual compatibility issues with the JSF Helmet Mounted Display System (HMDS) the LEP solution required a hybrid approach in which the LEP is split between the spectacle and a visor. A variety of spectacle and visor designs were developed, manufactured, characterized, and both lab and field evaluated.

All-Dye Daytime Army LEP Spectacle Demonstration (2009). This Demonstration represented the first design and prototype manufacturing initiative for an all-dye spectacle which integrated a new visible dye, TBAF-1, into the laser hardening solution space. The laser hardening and visual performance requirements for an Army LEP acquisition were adopted as the demonstration challenge. An optimized all-dye design was developed for a daytime application and was successfully manufactured and evaluated. The demonstration was successful as a prototype manufacturing initiative for an all-dye spectacle which integrated the new TBAF-1 dye into the laser hardening solution space.

**DECLARATION OF
Melissa Mourkas, ASLA**

I, Melissa Mourkas, declare as follows:

1. I am presently employed by the California Energy Commission in the Siting, Transmission and Environmental Protection Division, as a Planner II.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony for the **Visual Resources section** for the **Hidden Hills Solar Electric Generating Station (11-AFC-2)** based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue(s) addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: October 30, 2012

Signed: 

At: Sacramento, CA

MELISSA MOURKAS, ASLA

EDUCATION

MASTER OF ARTS, LANDSCAPE DESIGN & PLANNING, 1994

CONWAY SCHOOL OF LANDSCAPE DESIGN, CONWAY, MASSACHUSETTS

Graduate landscape design program providing professional training in site design and land-use planning. Curriculum emphasis is on sustainable landscape planning and design. Graduate projects included: Master Plan for a 45-acre historic resort, original landscape designed by F.L. Olmsted and Performance Standards for a proposed industrial park.

BACHELOR OF ARTS, HISTORY OF ARCHITECTURE & ART, 1981

SCRIPPS COLLEGE, CLAREMONT, CALIFORNIA

Major studies in Art and Architectural History, Urban Development. Senior thesis: documentation and analysis of the innovative residential designs and construction techniques of California modern architect Rudolf M. Schindler. Minor studies in Art and the Humanities.

PROFESSIONAL EXPERIENCE/QUALIFICATIONS

- Licensed Landscape Architect, California #5139, Montana #211
- Qualified Architectural Historian, Secretary of the Interior's Standards for Historic Preservation, Code of Federal Regulations, 36 CFR Part 61.
- Chair, City of Sacramento Preservation Commission

LANDSCAPE ARCHITECTURE:

1994 to Present: Landscape Architecture and Design. Experience in landscape architecture, landscape construction estimating, site planning and landscape master plans. Provide landscape architecture and consulting services to private clients, public organizations, contractors, and design firms. Preparation of Cultural Landscape Reports. Frequent speaker to various groups on landscape design, construction and cultural landscapes. Owner of Landscape Legacy, est.1998.

PLANNING AND HISTORIC PRESERVATION:

April 2010 to Present: Planner II, California Energy Commission, Siting, Transmission and Environmental Protection Division. Provide technical analysis of proposed energy planning, conservation, and development programs. Review of EIR/EIS documents prepared by other agencies under NEPA. Specific tasks include: the assessment of potential impacts of new electric power plants on both visual and cultural (built environment) resources; identification of suitable mitigation measures under CEQA; preparation of written testimony; participation in public workshops; present sworn testimony during evidentiary hearings, and project monitoring to ensure compliance with local, state and federal environmental laws and regulations.

2005 to 2008: Assistant Planner, Historic Preservation Office, City of Sacramento, CA

Responsible for design review and approval for private and public development projects involving rehabilitation, preservation and restoration of historic resources and districts under CEQA. Prepared staff reports for Preservation Commission and Council, and coordinated with other planning staff on concurrent entitlements. Staff liaison on municipal development projects involving historic resources, including buildings, other structures, parks and roadways.

**DECLARATION OF
Ellen Townsend-Hough**

I, **Ellen Townsend-Hough** declare as follows:

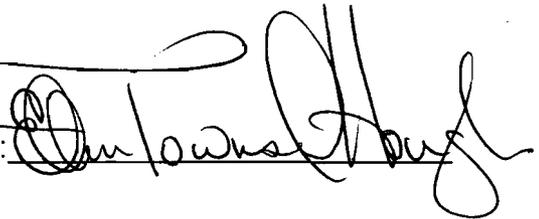
1. I am presently employed by the California Energy Commission in the Environmental Siting Office of the Energy Facilities Siting Division as an Associate Mechanical Engineer.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony on Waste Management for the Hidden Hill Solar Electric Generating System based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: _____

October 31, 2012

Signed: _____



At: _____

Sacramento, California

Ellen Townsend-Hough, REA
(Registered Environmental Assessor, REA 1 – 05465)

SUMMARY

I am a chemical engineer with 30 years of experience. My professional career has afforded me many unique growth and development opportunities. I have a working knowledge of the California Environmental Quality Act. My strengths are in analyzing and performing complex environmental engineering analyses, in areas such as Waste Management, Hazardous Materials Management, Worker Safety, and Water Resources. I worked as a policy advisor to a California Energy Commissioner for three years. I am also an US Environmental Protection Agency Environmental Justice trainer.

PROFESSIONAL EXPERIENCE

Technical Analysis and Presentation

- Provide analysis on projects that require compliance with the Resource conservation and Recovery Act (RCRA) Title 40 CFR Subtitle C and Subtitle D, the Comprehensive Environmental Response, compensation and Liability Act, Title 42, USC, Section 9601, the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program, Title 27, the Hazardous Waste and Management Review, Title 22 and the Integrated Waste Management Act, Title 14.
- Performs mechanical engineering analysis of designs for complex mechanical engineering analysis of designs for systems such as combustion chambers and steam boilers, turbine generators, heat transfer systems, air quality abatement systems, cooling water tower systems, pumps and control systems
- Review and process compliance submittals in accordance with the California Environmental Quality Act, the Warren Alquist Act, the Federal Clean Air Act and the California and Federal Occupational Health and Safety Acts to assure compliance of projects
- Provides licensing recommendations and function as an expert witness in regulatory hearings.
- Provide public health impact analysis to assess the potential for impacts associated with project related air toxic/non-criteria pollutant emissions.
- Evaluate the potential of public exposure to pollutant emissions during routine operation and during incidents due to accidents or control equipment failure
- Provide an engineering analysis examining the likelihood of compliance with the design criteria for power plants and also examine site specific potential significant adverse environmental impacts

Technical Skills

- Deal with the aftermath of improper hazardous waste management by overseeing site cleanups.
- Prevent releases of hazardous waste by ensuring that those who generate, handle, transport, store and dispose of wastes do so properly.
- Take enforcement actions against those who fail to manage hazardous wastes appropriately.
- Explore and promote means of preventing pollution and encourage reuse and recycling.
- Evaluate soil, water and air samples taken at sites and develop new analytical methods.

- Practice other environmental sciences, including toxicology, risk assessment, and technology development.
- Establish mitigation that reduces the potential for human exposure to levels which would result in significant health impact or health risk in any segment of the exposed population.
- Assist with on-site audits and inspection to assure compliance with Commission decisions.
- Review and evaluate the pollution control technology applied to thermal power plants and other industrial energy conversion technologies.
- Work with the following software applications: WORD, Excel, and PowerPoint.

Policy Advisor

- Provided policy, administrative and technical advice to the Commissioner Robert Pernell. My work with the Commissioner focused on the policy and environmental issues related to the Commission's power plant licensing, research and development and export programs.
- Track and provide research on varied California Energy Commission (CEC) programs. Prepare analysis of economic, environmental and public health impacts of programs, proposals and other Commission business items.
- Represent Commissioner's position in policy arenas and power plant siting discussions.
- Write and review comments articulating commission positions before other regulatory bodies including Air Resources Board, California Public Utilities Commission, and the Coastal Commission.
- Wrote speeches for the Commissioner's presentations.

Writing

- Write environmental impact reports, negative declarations that require technical evaluation of mechanical engineering and environmental aspects of pollution control systems, environmental impacts, public health issues and worker safety.

EDUCATION

Bachelor of Science, Chemical Engineering
Drexel University, Philadelphia Pennsylvania

Continuing Education

*Hazardous Material Management Certificate, University California Davis
Urban Redevelopment and Environmental Law, University of California Berkley
Analytical Skills, California Department of Personnel Administration (DPA) Training Center
Legislative Process/Bill Analysis, DPA Training Center
Federally Certified Environmental Justice Trainer*

DECLARATION OF
Mike Conway

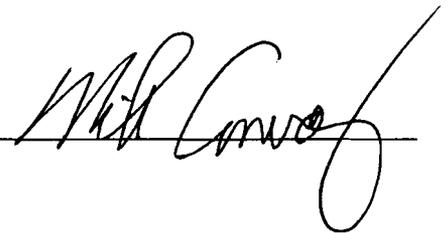
I, Mike Conway, declare as follows:

1. I am presently employed by the California Energy Commission in its Siting, Transmission and Environmental Protection Division as an Engineering Geologist.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on the **Water Supply** section of the **Final Staff Assessment** for the **Hidden Hills Solar Electric Generating Station** Application for Certification (AFC), based on my independent analysis of the AFC, supplements, data, documents, analysis and testimony from other staff and reliable sources, and based upon my own professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: November 2, 2012

Signed: _____



At: Sacramento, California

Resume For: Mike Conway

Education: Bachelor of Science in Geology, University of California, Davis, August 2003.
Master of Science in Geology, California State University, Sacramento, Spring 2012

Certifications: Geologist in Training (GIT)
Certified Professional in Erosion and Sediment Control (CPESC)
Leadership in Energy and Environmental Design Accredited Professional (LEED AP)

Experience:

Engineering Geologist: California Energy Commission, Sacramento, CA 2009

- Conduct analyses of soil and water resource reports submitted to Commission
- Assess impacts to soil and water resources from construction and operation of energy producing facilities
- Perform onsite evaluations of soil and water resources pre and post-project
- Implement a CEQA-like review of proposed energy projects to evaluate environmental impacts

Environmental Scientist: Central Valley Water Board, Rancho Cordova, CA 2009

- Wrote municipal storm water permits for Phase I communities in the Central Valley
- Reviewed storm water annual reports for Phase I and II municipalities
- Conducted audits of industrial sites for compliance with storm water permits
- Conducted audits of municipalities for compliance with municipal permits
- Help communities better understand how to effectively implement storm water programs
- Represented Water Board in large technical workshops and other public forums

Environmental Consultant: Wood Rodgers, Inc., Sacramento, CA 2006-2009

- Consulted clients on how to comply with Federal, State and local storm water quality and environmental regulations
- Helped public and private sector clients gain State Water Resources Control Board (SWRCB) permit coverage under Large and Small MS4 General Permits, NPDES Permits, CWA Section 401 Permits
- Consulted clients on Army Corps of Engineers, 404 Permitting
- Developed a storm water quality manual for Yolo County
- Prepared Caltrans environmental documentation and design for all project phases
- Prepared Storm Water Management Plans (SWMP) and Storm Water Pollution Prevention Plans (SWPPP)
- Drafted water pollution control exhibits using both AutoCAD and MicroStation
- Prepared Caltrans Storm Water Data Reports including cost estimates
- Designed landscaping plans for Caltrans' Modesto Ramp Rehabilitation Project
- Prepared Spill Prevention Control and Countermeasure (SPCC) plans
- Created Hazardous Materials Business Plan for City of Fort Bragg, California
- Prepared proposals for outgoing environmental quality project bids
- Performed field visits to evaluate Best Management Practice (BMP) effectiveness in reducing erosion and sedimentation
- Facilitated multiple storm water quality training workshops for groups up to 20 plus

Storm Water Quality Consultant: Envirosafety Services, Elk Grove, CA 2004-2006

- Wrote site specific SWPPPs to include guidance specific to city, county, and geographical constraints
- Designed BMP exhibits using AutoCAD
- Conducted inspections at construction sites throughout the Central Valley for (SWPPP) compliance
- Resolved storm water compliance issues in cooperation with site superintendents, county and city inspectors
- Researched current storm water protection regulations to best protect clients

Post-Graduate Researcher: Dept. of Land, Air, and Water Resources, U.C. Davis, CA 2003

- Studied the effects of irrigation practices on wetland ecology and water quality
- Independently organized monthly analyses and data processing of selenium contaminated invertebrate, algae, and water samples from the Tulare Lake Drainage District
- Managed concentrated acids, carcinogenic solutions, and final fluorescence measurements
- Compiled research data and presented findings to a team of eight colleagues

Lab Technician: Raney Geotechnical Laboratory, West Sacramento, CA 2001

- Conducted moisture density, unconfined compression tests, Atterburg Limit, curve, plasticity tests, and basic calculations for soil samples
- Administered load tests on concrete cylinders and mortar samples
- Performed percolation tests and Dynamic Cone Penetrator (DCP) tests in the field and gathered water samples for environmental analysis

**DECLARATION OF
Casey Weaver**

I, **Casey Weaver** declare as follows:

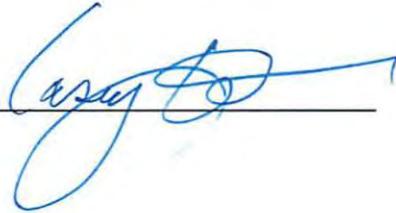
1. I am presently employed by the California Energy Commission in the **Engineering Office** of the Energy Facilities Siting Division as an **Engineering Geologist**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I helped prepare the staff testimony on **Geology and Paleontology**, for the **Hidden Hills Solar Electric Generating Station** based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 12/12/2012

Signed: _____

At: Sacramento, California



CASEY W. WEAVER, PG, CEG
1621 Delta Drive
Woodland, CA 95695
(530) 662-0482

SUMMARY OF EXPERIENCE:

Certified Engineering Geologist with over 20 years of environmental and geotechnical consulting experience. Experience includes remedial investigations and feasibility studies (RI/FS), groundwater investigations, corrective action plans, landfill studies (SWATs, siting, closure), preliminary environmental site assessments (PESA, Phase I), regulatory compliance (RCRA/CERCLA), geotechnical investigation/evaluation, geologic hazard evaluations, active fault evaluations, seismic studies, landslide evaluation/repair, foundation suitability studies, personnel management and business development.

EDUCATION:

B.S. Geology, Humboldt State University, Arcata, CA, 1981
University of California, Davis Extension Courses

REGISTRATIONS/LICENCES/CERTIFICATIONS:

Certified Engineering Geologist, California
Registered Geologist, California, Oregon, Arizona
Registered Environmental Assessor
OSHA 1910.120 Hazardous Waste Operations and Emergency Response - 40hr
OSHA 1910.120 Hazardous Waste Operations and Emergency Response -
Supervising Operations at Hazardous Waste Sites.

PROFESSIONAL HISTORY:

2008 to Present

Engineering Geologist
California Energy Commission, Sacramento, CA

Duties within the Water and Soils Unit of the Environmental Office in the Facilities Siting Division include review and evaluation of applications for certification of thermal power plants within the state of California. The focus of the work is on sensitive project sites that may have issues involving groundwater and surface water resources, soil erosion, flooding potential, water quality and plant-derived waste generation and disposal. In addition, evaluate construction, operation and maintenance of the facilities and conduct investigations to determine if violations of the program's

regulations, the Energy Commission's conditions of certification, or the California Environmental Quality Act (CEQA) have occurred. Selected as the Energy Commission's seismic expert and representative on the multi-jurisdictional Independent Peer Review Panel reviewing seismic evaluations conducted for California's nuclear power plants.

2001 to 2008

Engineering Geologist

State Water Resources Control Board, Headquarters, Sacramento, CA

With the UST Enforcement Unit, under direction from the State Attorney General's Office, conducted inspections of UST systems to evaluate compliance with 1998 upgrade requirements. This work culminated in the largest settlement of its kind in the nation's history. In addition, conducted surveillance of unlawful discharges from remediation systems and conducted investigations of UST Fund fraud cases.

With the USTCF Technical Review Unit, evaluated the technical elements of USTCF claims.

With the Division of Financial Assistance, assisted with the development of program policy for the Agricultural Water Quality Grant Program (\$46 million) and the Integrated Water Quality Grant Program (\$380 million), participated in stakeholder workshops, contributed to multijurisdictional work groups for program development and implementation.

With the Office of Enforcement, conducted investigations of operator misconduct, wrote enforcement investigation reports and prepared disciplinary letters.

1998 to 2001

Senior Engineering Geologist

BSK & Associates, Rancho Cordova, CA

Designed and directed hydrogeologic investigations for use with environmental remediation projects. Supervised field personnel installing groundwater monitoring wells, conducting aquifer tests & SVE pilot tests, reviewed reports and workplans, and conducted business development.

Conducted review of Alquist-Priolo active fault hazard reports as county geologist for Kern County.

1993 to 1998
Leader

Senior Geologist, Geoscience Team Leader and RI/FS Task

LAW Engineering and Environmental Services, Inc., Sacramento, CA

As Geoscience Team Leader, responsible for career development, training and personnel management of ten employees. This group consisted of 3 senior-level geologists, 4 project level geologists and scientists, 2 junior level geologists and 1 technician.

As RI/FS Task Leader, responsible for the development of cost estimates/budgets, preparation of Work Plans and Sampling and Analysis Plans, management of field activities, data collection and documentation associated with the investigation of 15 Installation Restoration Program sites at Beale Air Force Base awarded under several Delivery Orders with combined project budgets of \$18 million. Also responsible for aerial photographic interpretations associated with a basewide (23,000 acres), Preliminary Assessment, and preparation of a basewide Hydrogeologic Evaluation Report.

1990 to 1993

Senior Project Manger/General Manager

Earthtec, Ltd., Roseville, CA

Management of Environmental Department, business development, preparation of cost estimates and proposals, client and regulatory agency interface, supervision and training, report writing, technical review, budget management, and quality control. Initiated and supported the development of company's wetland and wildlife departments. Typical projects included preliminary site assessments, soil vapor studies, detailed hydrogeologic evaluations, waste plume delineations, and development of remediation alternatives associated with landfills, service stations, bulk oil facilities and other potentially contaminated sites.

1981 to 1990

Project Geologist

SHN Group, Inc. Eureka, CA

Managed project work directed toward solving environmental issues at variably contaminated sites and provided geotechnical information for land development and construction. Responsibilities included development of cost estimates/budgets, planned and supervised field operations, collected and interpreted subsurface information, evaluated areas traversed by Alquist-Priolo Special Studies Zones and sites subject to slope stability hazards. Typical projects included geotechnical evaluations and geologic hazard studies for major subdivisions, hospitals, schools, lumber companies, run-of-the-river hydroelectric projects, underground storage tank sites, and solid waste landfills.

1979 to 1981

Geologist/Seismologic Technician
Woodward-Clyde Consultants, San Francisco, CA

Designed and operated a laboratory model to study surface effects of thrust faulting in connection with seismic evaluation studies for the PG&E Humboldt Bay nuclear reactor. In addition, installed and operated field seismographs in the Humboldt Bay region.

**DECLARATION OF
Sudath Edirisuriya**

I, **Sudath Edirisuriya**, declare as follows:

1. I am presently employed by **California Energy Commission** in the **Siting, Transmission and Environmental Protection Division** as an **Electrical Engineer**.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on **Transmission System Engineering**, for the Hidden Hills Solar Electric Generating Station System, based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 10/30/2012 Signed: Sudath Edirisuriya

At: California Energy Commission.

Sudath Edirisuriya
1916 Ackleton Way
Roseville CA 95661

Phone 916-654-4851

EDUCATION:

Bachelor of Science in Electrical Engineering at California State University Fullerton

ATTAINMENTS:

Member of the Professional Engineers in California Government

Vice President Electrical Engineering Society-California State University Fullerton.

EXPERIENCE:

November-2001 to Present: - Electrical Engineer, System Assessment and Facilities Siting Division, California Energy Commission.

Working in the Transmission System Engineering unit on licensing generation projects. Work involves evaluating generation interconnection studies (SIS and FS), their reliability and environmental impacts on transmission system, preparing staff assessment reports, presenting testimony. Perform reliability studies and coordinating data and technical activities with utilities, California ISO and other agencies. Conduct and perform planning studies and contingency analysis including power flow, short-circuit, transient, and post-transient analysis to maintain reliable operation of the power system. Understanding of regulatory and reliability guidelines, WECC and NERC planning and operation criteria, CPUC and FERC requirements. Review technical analyses for WECC/CA ISO/PTO transmission systems and proposed system additions; and provide support for regulatory filings.

June-1998 to November-2001: - Project Electrical Engineer, Design Electrical Engineering Section, Department of Transportation, California.

Electrical Engineering knowledge and skills in the design, construction and maintenance of California state work projects involving all the public work areas; contract administration, construction management, plan checking, field engineering and provide liaison with consultants, developers, and contractors. Plan review in facility constructions, highway lighting, sign lighting, rest area lighting, preparation of project reports, cooperative agreements, review plans for compliance of construction and design guide lines for national electrical code, standards and ordinance. Review process included breaker relay coordination, detail wiring diagrams, layout details, service coordination, load, conductor sizes, derated ampacity, voltage drop calculations, harmonic and flicker determination.

June-1993 to May-1998:- Substation Electrical Engineer, City of Anaheim, California.

Performed protective relay system application, design and setting determination in Transmission & Distribution Substation. Understanding of principles of selective coordination system protection and controls for Electric Utility Equipment. Understanding of Power theory and Analysis of symmetrical components. Ability to review engineering plans, specifications, estimates and computation for Electrical

Utility Projects. Practices of Electrical Engineering design, to include application of Electro-mechanical and solid state relays in Electrical Power Systems. Software skills in RNPDC (Fuse Coordination Program), Capacitor Bank allocation program, and GE Power Flow Program. Design projects using CAD, Excel spread sheets including cost estimates, wiring diagrams, material specifications and field coordination.

Performed underground service design 12kV and 4kV duct banks; pole riser; getaway upgrade; voltage drop calculation, ampacity calculation and wiring diagrams. Design and maintenance of substations in City Electrical Utility System. Upgrade Station Light and power transformers; upgrade capacitor banks; replacement of 12kV-4kV power circuits; Breakers at Metal Clad Switchgear. Design one-line diagrams; three line diagrams; grounding circuits; schematics; coordination of relay settings; conduit and material list preparation. Calculation of derated ampacity; inrush current, short circuit current.

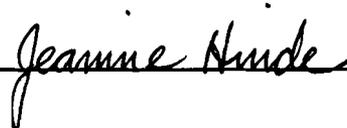
DECLARATION OF
Jeanine Hinde

I, Jeanine Hinde, declare as follows:

1. I am presently employed by the California Energy Commission in its Siting, Transmission and Environmental Protection Division as a Planner II.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on the **Alternatives Analysis** for the **Hidden Hills Solar Electric Generating System** Application for Certification (AFC), based on my independent analysis of the AFC, supplements, data, documents, analysis and testimony from other staff and reliable sources, and based upon my own professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: November 2, 2012

Signed: 

At: Sacramento, California

JEANINE M. HINDE

Professional Experience

Planner II

February 2010–Present

California Energy Commission, Sacramento, CA

Environmental Office of the Siting, Transmission, and Environmental Protection Division

Generalist skilled in research and analysis and preparing environmental assessments for siting of a variety of power plant projects filed with the Energy Commission. Analyzes project-related impacts on land use, agricultural resources, and visual resources. Evaluates project conformance with applicable laws, ordinances, regulations, and standards and recommends appropriate mitigation measures to reduce project effects on environmental resources. Prepared the alternatives analysis for a proposed 500-megawatt (MW) solar power tower project in the eastern Mojave Desert. Prepared the land use analyses for a 159-MW geothermal power plant in Imperial County and a 174-MW electrical generating plant in Ceres. Preparing the visual resources analysis for the Huntington Beach Energy Project, a 939-MW natural gas-fired plant that is proposed to replace the AES Huntington Beach Generating Station.

Environmental Analyst and Project Coordinator

2004–2009

EDAW-AECOM, Sacramento, CA

Coordinated preparation of environmental studies to satisfy the California Environmental Quality Act (CEQA) and the National Environmental Policy Act and related permitting and regulatory requirements. Contributed to the preparation of regulatory compliance documents for projects addressing flood protection, wastewater management, water quality, habitat restoration, and urban development. As an assistant project manager, contributed to the preparation, technical review, and distribution of a variety of environmental compliance documents for projects that included a levee repair project on the Feather and Yuba Rivers, a levee seepage project on the San Joaquin River near the Sacramento-San Joaquin Delta (Delta), a wastewater treatment plant improvement project in Atwater, and a habitat restoration project adjacent to the middle Sacramento River. As an analyst, prepared environmental impact analyses for resource topics that included land use; agricultural resources; visual/aesthetic resources; public services, utilities and service systems; hazardous materials; recreation; and geology, soils, and mineral resources. Prepared mitigation monitoring and reporting program documents and assisted with fulfilling CEQA noticing and filing requirements.

Environmental Analyst, Independent Consultant

2003–2004

Sackheim Consulting, Fair Oaks, CA

Researched and wrote the aesthetics analyses for the CEQA documents on related neighborhood electrical distribution projects in the Natomas and Elkhorn areas of Sacramento. Prepared a similar analysis for a project in Elk Grove. Assisted with the analyses addressing potential impacts on cultural resources and issues related to hazards and hazardous materials.

Environmental Specialist II

1986–1997

Jones & Stokes Associates, Sacramento, CA

Evaluated impacts on land use, visual resources, and recreation for several state and federal projects, including a water supply management program in the East Bay, a project addressing long-term management of resources in the Delta and Suisun Marsh, and a military operations project at Camp Roberts. Provided technical review and coordinated preparation of report sections prepared by staff, and assisted with research and documentation of required federal, state, and local permits and approvals for inclusion in regulatory compliance plans.

Education

B.A. Geography, California State University, Chico

**DECLARATION OF
Testimony of Joseph Douglas**

I, **Joseph Douglas**, declare as follows:

1. I am presently employed by the California Energy Commission, Siting, Transmission and Environmental Protection Division.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on **General Conditions** for the **Hidden Hills Solar Electric Generating System Final Staff Assessment** based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: October 31, 2012 Signed: _____

At: Sacramento, California

Joseph Douglas

Experience

November 2008 – Present

State of California, California Energy Commission

Sacramento, CA

Siting, Transmission & Environmental Protection, Compliance Project Manager

- Coordinate and manage multi functional environmental and engineering team in reviewing and processing complex and controversial renewable energy facility projects.
- Review, edit, and evaluate regulatory/commission reports, testimony, briefs, and position papers.
- Publish project documents including Commission program reports, and Environmental Impact Reports and Initial Studies/Negative Declarations.
- Coordinate with Bureau of Land Management, U.S. Department of Energy, and U.S. Environmental Protection Agency to write and process Environmental Impact Statements for large renewable energy projects.
- Organize and conduct public workshops and meetings among energy staff, energy facility developers, regulatory agencies, government agencies, and the public to discuss siting concerns.
- Oversee the construction of licensed power plants.
- Plan and lead environmental and engineering team in the review of complex and controversial project amendments during construction.
- Represent staff at energy commission business meetings, make presentations, and answer questions from commissioners.

March 2003 – November 2008

State of California, Department of Transportation

Oakland, CA

Office of Environmental Analysis, Environmental Project Manager

- Oversight of large transportation projects with state and federal involvement
- Writing and processing of environmental documents with specific time deadlines requirements
- Coordination with multiple agencies including: Federal Highway Administration, U.S. Fish and Wildlife Service, Army Corps of Engineers, EPA, State Historic Officer, Homeland Security, California Highway Patrol
- Partnership with local governments to implement growth/environmental strategies
- Organized multi-functional teams to determine project cost, scope, risk, impacts, and benefits in order to meet funding and programming deadlines
- Participated in Value Analysis studies and made recommendations regarding least environmentally damaging alternative
- Establish purpose and need of project to justify benefits of future capital cost expenditures
- Quality assurance and quality control for state and federal compliance of environmental regulations
- Participated in field studies to determine project impacts

May 2000 - March 2003

State of California, Department of Transportation

Oakland, CA

Right of Way Office, Cost and Impact Estimation

- Determination of community impacts of large transportation projects
- Estimated costs, and time needed for acquisition of parcels, and relocation assistance
- Coordination with multiple disciplines within the Department including: engineering, survey, legal, and environmental to forecast cost
- Investigation of Assessors Parcel Numbers, Right of Way data maps, and property databases
- Research of city and county zoning codes, general plan, and property records
- Identified utility conflicts and estimated time and cost of relocation
- Property management services