

DOCKETED

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**This is an updated Resume for Joseph
Hughes, P. E. for the Puente's Declarations
and Resumes Docketed 7/10/2017
TN # 220107**

Education

California State University, Sacramento, 2003-2008

Sacramento, Ca

Bachelor of Science, Mechanical Engineering Technology, May 2008

Licensures

Professional Engineer, Mechanical (California License No. M 38221)

Experience

California Energy Commission, March 2009-Present

Sacramento, Ca

Air Resources Engineer

Technical expert responsible for completing environmental analysis on thermal power plant project applications seeking a California Energy Commission license, or an amendment or project modification to an existing license, in addition to determining ongoing operational compliance for facilities operating under existing Energy Commission licenses. Specific responsibilities, by technical area, include the following:

Air Quality

- Reviewing project applications to verify engineering data, including worst case emissions during construction and various operating profiles.
- Completing air dispersion modeling to identify the worst case impacts associated with construction and operation, and determining whether the project would result in any significant air quality related impacts.
- Determining whether the project would comply with all local, state, and federal, air quality laws, ordinances, regulations, and standards.
- Coordinating with local Air Quality Management Districts and incorporating Preliminary and Final Determinations of Compliance into Energy Commission Staff Assessments.
- Concluding whether the mitigation measures proposed for the project would reduce potential air quality impacts to a level of less than significant under California Environmental Quality Act requirements.
- Managing ongoing air quality compliance for operational power plant facilities.

Greenhouse Gas

- Reviewing project applications and quantifying potential greenhouse gas emissions associated with construction, commissioning, and operation of the proposed facilities.

- Determining whether the project would comply with all local, state, and federal, greenhouse gas laws, ordinances, regulations, and standards.
- Analyzing the implications the proposed facility may have on California's electricity sector, and how it may affect greenhouse gas emissions in California and globally.

Visible Water Vapor Plume

- Assisting the technical experts authoring the Visual Resources section to identify potential visual impacts as a result of visible water vapor plumes.
- Reviewing operational design data from visible water vapor plume emitting sources and calculating visible plume frequencies and sizes.

Vertical Plume Velocity

- Assisting the technical experts authoring the Traffic and Transportation section to identify potential hazards to aircrafts as a result of vertical plume velocities.
- Reviewing operational design data from vertical plume emitting sources and calculating the vertical plume velocities at various heights above the source.
- Identifying at what height above the plume sources the vertical plume velocities drop below the threshold of concern set by the Federal Aviation Administration.

Noise and Vibration

- Reviewing project applications to verify worst case noise and vibration impacts during construction and operation, and determine whether the project would result in any significant impacts.
- Determining whether the project would comply with all local, state, and federal, noise and vibration laws, ordinances, regulations, and standards.
- Concluding whether the mitigation measures proposed for the project would reduce potential noise and vibration impacts to a level of less than significant under California Environmental Quality Act requirements.

Preparation of Staff Assessments for the following Applications for Certification (AFCs): Genesis Solar Energy Project; Palen Solar Power Project; Oakley Generating Station; Quail Brush Generation Project; Hydrogen Energy California; Alamitos Energy Center; Redondo Beach Energy Project.

Preparation of Staff Assessments for the following project amendments: Carlsbad Energy Center Project; Starwood Power-Midway; Sycamore Cogeneration Company; Palomar Energy Project; Orange Grove Energy Project; La Paloma Generating Plant; Lodi Energy Center; SMUD Cosumnes

River; Genesis Solar Energy Project; Henrietta Peaker Power Project; Hanford Energy Park; Elk Hills Power Project; Avenal Energy Project; Pastoria Energy Facility; Kern River Cogeneration Project; Midway Sunset Cogeneration Company; Panoche Energy Center; Argus Cogeneration Project; GWF Tracy Combined Cycle Power Plant.

Capital Engineering Consultants, Inc, April 2008-2009
Sacramento, Ca

Mechanical Engineer

- Responsible for detailed and accurate take off calculations to ensure successful project completion.
- Completed engineering design for Heating Ventilation Air Conditioning and Plumbing by utilizing complex engineering calculations and software.
- Responsible for meeting code regulation and requirements to the degree acceptable by various organizations.
- Led productive weekly team meetings to discuss project scheduling, cost effectiveness, request for information, and change orders.

Awards

2014 Superior Accomplishment Award – California Energy Commission