Classification: Electric Generation System Specialist I	**Position No.** 3200-4841-003
CBID: R09	**Office:** Energy Generation Research Office
Date Prepared: January 2018	**Division:** Energy Research and Development
KEY: (E) IS ESSENTIAL, (M) IS MARGINAL	

The goal of the Energy Research and Development Division is to conduct research, development and demonstration (RD&D) to advance science and technologies not adequately provided by the regulated and competitive markets and to assess the environmental impacts of these technologies. Under the direction and supervision of the Supervisor over the Renewables Team in the Energy Generation Research Office (EGRO), the incumbent serves as part of an interdisciplinary and/or interdivisional team to plan and implement RD&D projects that address technical barriers to renewable energy, distributed generation, other electricity generating technologies and transmission.

The incumbent will address research issues affecting electric generation planning, design, operation, and integration of new energy technologies; assess the ability of new and emerging renewable and conventional generation technologies and other enabling technologies to be designed, developed, and deployed to meet the Renewable Portfolio Standards and greenhouse gas emission targets and goals; identify methods, models, and techniques to evaluate energy system impacts of renewable and conventional energy and distributed generation and make recommendations on effective integration strategies; assess the impacts of community-scale and utility-scale renewable energy technologies; develop, test, and field new computer models to determine the ideal characteristics, design, operation, and location for desirable new electric generation and/or renewable technologies; evaluate existing electric generation plans and technologies to determine technical and economic feasibility, and develop and publish scenarios detailing optimal configuration of new renewable resources and electric generation systems.

WORKING CONDITIONS

Work is performed primarily in an office, conference room, and hearing room environment and may require standing and walking, as well as sitting for long periods of time. Work area is well lit, and ventilation is adequate. The noise level may be often high. Some travel is required to attend off-site meetings. Additional hours beyond an eight-hour workday or forty-hour workweek may be required. While performing the duties described below, the incumbent will be required to work alone and/or in a team environment, utilizing a personal computer and appropriate Commission software such as word processing, electronic mail, Internet and analytical models; participate in meetings with other staff and other agencies; and make oral presentation in workshops and other public settings.

DUTIES AND RESPONSIBILITIES

35% Manage complex technical analysis, evaluations, field demonstrations and environmental tradeoffs of new and emerging renewable generation, distributed generation, and other energy technologies to conform to planning and operational elements of electric generation systems. Analyze, evaluate, design and implement complex generation system models to optimize hydrogeneration operations; provide information on engineering and economic studies of alternative electric generation methods and fuels that evaluate and assess the environmental factors (e.g., terrestrial biology, air quality, atmospheric warming and increased sea levels due to climate change, wildfire potential, etc.) affecting or being impacted by electricity production, distributed generation, storage and transmission; and evaluate alternative site plan scenarios for generation and transmission facilities.

Evaluate and report on new electric or gas technologies and their impacts to present and future resource plans with the benefits, performance, reliability and capability to perform in electricity systems both as individual technologies, and within a larger portfolio of many different new technologies, at community-scale and utility-scale. Using the interpreting the output of computer models, the incumbent will evaluate the potential impacts of the new technologies on state mandated goals such as higher levels of electricity generation from renewable resources, reduction of greenhouse gas and regulated emissions from the energy sector, maintenance of reliable electricity delivery, reduction of natural gas use, and the need for emission reduction credits. Evaluate the economic consequences of generation costs to the electric utilities and members of the public (E)

20% Lead the research, design, and development of projects that evaluate the environmental impacts of the existing and emerging electricity system, and new renewable generation and distributed generation technologies. Review and evaluate project proposals to determine how well the project addresses the scope of the solicitation criteria including, but not limited to: the extent the project will advance science or technology; address market issues and needs; meet specified target goals and objectives; the skill and experience of the project team to carry out the technical tasks within budget and schedule and move the results into the marketplace; the project's benefits to the state and the adequacy of the project funding. The incumbent prepares written findings of such evaluations for use by a technical scoring committee. The incumbent briefs the Office, Division, and Commission management and Commissioners on the status of the projects. (E)

20% Review and edit reports, multiple-technology resource plans, contracts and other documents associated with the program. Establish and maintain project priorities, perform project evaluation, develop the work plans and budgets necessary to meet program and project goals. (E)

10% Consult with and advise the Energy Commission Supervisor II, Team Lead, Office Manager, Division management, Commissioners, and other agencies (as directed) on a variety of issues including impacts from the energy sector, impacts to and stability of the electric grid with respect to the changing climate, energy systems integration and research needs, renewable energy and the share of various forms of renewable energy in California's energy mix, and distributed generation technologies and their application on the electricity generation systems. Participate in identification of issues and analytic methodologies. (E)

10% Oversees the finalization of the most complex project reports, fact sheets, and other documents to disseminate research results and lessons learned to Energy Commission staff with a focus on transferring information that provides significant public benefits to California and meets the state's energy policies and goals. (E)

5% Perform other duties as required consistent with the specifications of this classification. (M)

SIGNATURES	
I Certify That I Am Able To Perform, With Or Without The Assistance Of A Reasonable Accommodation, The Essential Job Duties Of This Position	
Incumbent Date Electric Generation System Specialist I	Supervisor Date Energy Commission Supervisor II (TED)