



Classification: Mechanical Engineer	Position No. 3100-3583-XXX
CBID: R09	Office: Energy Efficiency Research Office
Date Prepared: December 21, 2017	Division: Energy Research and Development
KEY: (E) IS ESSENTIAL, (M) IS MARGINAL	

Under the general direction and supervision of the Energy Commission Supervisor II in the Energy Efficiency Research Office, the incumbent provides mechanical engineering support to the Industrial, Agriculture and Water Team. As such, the incumbent develops, implements and administers energy research, development and demonstration (RD&D) efforts related to the industrial, agriculture and water sectors with the goal of advancing science and technologies not adequately addressed by the competitive or regulated markets. The incumbent performs a wide variety of mechanical engineering assignments, such as reviewing and/or preparing engineering studies or evaluations related to energy systems, technologies and practices; reviewing specifications, designs and proposals; and calculating and estimating energy savings, project economics and environmental benefits (e.g., greenhouse gas reductions). The incumbent conducts detailed field inspections during project construction and installations.

The incumbent performs responsible and complex mechanical engineering analyses to support energy RD&D funding; manages RD&D projects; and consults with mechanical engineers and other experts in the field.

WORKING CONDITIONS:

The work is performed in an indoor office and meeting room setting involving sitting, standing, and walking. The candidate must work well with people inside and outside the Energy Commission, including members of the general public. Travel is required to conduct detailed field inspections of projects and assessment of mechanical installations, and to attend workshops, hearings and 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; use a personal computer and appropriate Energy Commission software such as word processing, electronic mail and Internet; and participate in and lead meetings with other staff and with other agencies.

DUTIES AND RESPONSIBILITIES:

- 40% Technology Assessment. The incumbent will:
- a) Evaluate and/or prepare comprehensive technical engineering assessments and complex evaluations of new, innovative and emerging energy technologies and designs for industrial systems;
 - b) Monitor and validate calculations to determine energy savings, project economics, tons of greenhouse gas emissions avoided and their impact on industrial processes;
 - c) Evaluate performance and suitability of components, efficiency and economics of engineering design options for proposed projects;
 - d) Read and interpret plans, drawings, specifications and regulations governing mechanical equipment/systems installations and procedures related to industrial processes; and,



- e) Identify and recommend technology gaps that could benefit from RD&D to advance industrial sector energy savings and greenhouse gas reductions. The incumbent also provides technical assistance to other staff in analyzing engineering problems. (E)
- 30% Project Management. The incumbent serves as the project manager for complex research projects with engineering tasks. As such, the incumbent will be responsible for all phases of project management, such as:
 - a) Prepare work statements, budgets, schedules, and contract amendments;
 - b) Identify measurable technical and economic objectives to determine project success;
 - c) Maintain technical and business relationships with the contractor;
 - d) Review monthly progress reports and prepare evaluation of the projects and brief management, as needed;
 - e) Inspect projects to ensure they meet technical, fiscal, and administrative objectives; and,
 - f) Review and approve contractor invoices. (E)
- 10% Proposal Evaluation. The incumbent participates in a technical scoring committee and provides his/her mechanical engineering expertise in reviewing proposals to determine how well the project addresses the scope of the solicitation criteria. Examples include the extent the project will:
 - a) Include projected benefits and energy savings that are consistent with engineering laws and principals;
 - b) Address market issues and needs and the resulting impact on the marketplace, and;
 - c) Indicate a likelihood of success based on adequate project budget and identified staff resources. The incumbent prepares written findings of such evaluations for use by a technical scoring committee. (E)
- 10% Research Results Dissemination. 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 and others with a focus on transferring information that provides significant public benefits to California and meets the state’s energy policies and goals. (E)
- 5% Consult with Stakeholders. The incumbent consults with research organizations, federal and state government agencies, utility representatives and other technical experts to identify RD&D opportunities for alternative and advanced energy systems or technologies in California. Through on-going discussions and interactions with market stakeholders, the incumbent defines, develops and implements projects that provide significant public benefits to California and meet the policy and technical objectives of the Energy Commission’s RD&D Program. (M)
- 5% Other Duties. Other duties as required consistent with the specification 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 Mechanical Engineer	_____ Date	_____ Supervisor Energy Commission Supervisor II (TED)	_____ Date