



STATE OF CALIFORNIA

DUTY STATEMENT

CEC-004 (Revised 7/2020)

Proposed

Classification(s): Mechanical Engineer

Working Title: Mechanical Engineer

Position Number: 535-330-3583-002

Division/Office: Energy Research and Development/Energy Systems Research

Collective Bargaining Identifier (CBID): R09

Work Week Group (WWG): WWG 2

Effective Date: September 3, 2020

Conflict of Interest (COI): Yes No

If yes, this position is responsible for making or participating in the making of governmental decisions that may potentially have a material effect on personal financial interests. The appointee is required to complete Form 700 within 30 days of appointment, which identifies pertinent personal financial information.

Job Description

Under the general direction of the Energy Resources Specialist III (Supervisory), the incumbent supports interdisciplinary teams focused on the research development and deployment of technologies for the CEC's Electric Program Investment Charge Program and Natural Gas Research Program. The incumbent performs engineering analysis and evaluation and works on new and emerging mechanical systems and technologies that will be key elements of California's clean energy goals. The incumbent works with an integrated team of engineers and scientists and provides mechanical engineering expertise and technical advice as the team reviews new alternative power system designs to the California electricity grid and evaluates new and emerging technologies that support increased natural gas infrastructure safety and integrity. The incumbent performs less complex mechanical engineering work to synthesize research results, identify critical learnings from the research, inform and guide research projects, and identify technology gaps that may inform future program research efforts.

Essential Duties

40% **Engineering Assessment.** Under the guidance of the Technical Lead and Senior Mechanical Engineer (SME), provides technical and engineering assessments and reviews of new and emerging technologies to help achieve California's clean energy goals. Reads, analyzes and interprets plans, drawings, specifications and other technical information for research projects including, but not limited to clean-energy microgrids, renewable

generation systems, energy storage systems, vehicle-to-grid integration, distributed energy resources, and natural gas infrastructure safety and integrity. Uses new and emerging sensors and monitoring technologies, risk assessment models and other tools to assess the integrity of the natural gas infrastructure including pipelines and storage systems, and provide mechanical engineering expertise for all aspects of research that support increased safety and integrity of California's natural gas infrastructure. Performs mechanical engineering evaluations and/or reviews of the mechanical system design, material science assessments, thermal efficiency assessments and other technical results to ensure the mechanical systems perform as expected based on the approved design drawings and engineering specifications. Provides technical assistance to commission staff in analyzing engineering problems, in the preparation of integrated engineering studies, written reports and technical assessments. Conducts field surveys, site visits and inspections of the mechanical systems that are part of ERDD-funded demonstrations to ensure field systems comply with mechanical system requirements and engineering specifications in grants. Supports the synthesis of research results for diverse technical and non-technical audiences, including the Commissioners, Governor's Office, Legislature, California Public Utilities Commission and other state agencies, and the public. Supports the development of materials including presentations and written reports. Supports the team in public forums to describe the team's research focus. May support presentations to international delegations on research being conducted in California on emerging technologies.

- 35% **Agreement Management.** Performs project management activities from research grant negotiation through close out. Works with grant recipients to prepare agreement documents, including negotiating final scope of work, schedule, and funding allocations. Establishes and maintains technical and business relationships with grant recipients and relevant project stakeholders throughout the project. Provides guidance as needed on Energy Commission expectations for grant performance. Monitors progress and verifies performance to grant objectives. Conducts technical reviews of project deliverables and engages with SME and Technical Lead for the most complex deliverables. Verifies appropriateness of all grant charges in invoices against work performed. Works with grant recipients, SME, and Technical Lead to identify solutions to technical and contractual research challenges, leveraging the expertise of Technical Advisory Committees. Conducts project site inspections to ensure the project meets technical, fiscal, and administrative objectives. Briefs management on the status of the project. Initiates and approves grant amendments with leadership.
- 10% **Research Development.** Supports the Technical Lead and SME in market analysis to identify the most pressing technological research needs by end use customers and the maturity levels of new technologies. Supports the development of grant funding opportunities to address the gaps identified. Supports proposal scoring committees. Analyzes proposals to ensure projects address the solicitation criteria including, addressing market needs, advancing science or technology to market adoption, meeting goals/objectives in the grant funding opportunity, and providing a skilled team that can perform the technical tasks within budget/schedule. Prepares written findings of such evaluations for use by a scoring committee.
- 10% **Technology Transfer.** Oversees the finalization of project reports, fact sheets, annual reports 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.

Marginal Duties

5% Perform other duties as required, consistent with the specifications of the classification.

Working Conditions

Due to the COVID-19 pandemic, the majority of the duties will be performed in a telework environment, but may return to an office environment in the future. Regular and consistent attendance is essential to the successful performance in this position. Occasional travel may be required to conduct project site visits. While performing the duties described above, the incumbent will be required to work alone and/or in a team environment; utilize a personal computer and appropriate Energy Commission software such as Microsoft suite of software, electronic mail, Internet and analytical models. The incumbent will be required to plan, organize, assist and/or participate in meetings with other Energy Commission staff, staff from other federal and state agencies, consultants, contractors, and other parties active in energy-related research and development.

Employee's Acknowledgement: I certify that I am able to perform, with or without the assistance of a reasonable accommodation, the essential duties of this position.

Employee's Name (Print): _____

Employee's Signature: _____ **Date:** _____

Supervisor's Acknowledgment: I certify this duty statement represents a current and accurate description of the essential functions of this position. I have discussed the duties of this position with and provided the above-named employee a copy of this duty statement.

Supervisor's Name (Print): _____

Supervisor's Signature: _____ **Date:** _____