STATE OF CALIFORNIA
DUTY STATEMENT
CEC-004 (Revised 2/2022)

Classification(s): Utilities Engineer
Working Title: Utilities Engineer
Position Number: 535-350-3518-XXX (3 positions)
Division/Office: Energy Research and Development/Energy Deployment and Market Facilitation
Collective Bargaining Identifier (CBID): R09
Work Week Group (WWG): 2
Effective Date: March 2022
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 supervision of the Energy Resources Specialist III (Supervisory), the incumbent supports interdisciplinary teams focused on the development and deployment of technologies for the CEC’s Energy Research & Development Division’s (ERDD) research programs. The incumbent is part of an integrated technical team that is evaluating and managing new and emerging technologies that will help California meet the future carbon neutral energy system goals while maintaining reliability while also remaining resilient to climate variations and threats such as wildfires, earthquakes, floods, and other challenges to the energy infrastructure. The incumbent performs mechanical, electrical, and chemical engineering work in the evaluation, design, construction, operation, and maintenance of emerging electrical or gas energy technology systems designed to improve the operations of the California Utility Grid or to assist in the integration of higher concentrations of renewables and distributed energy resources. Conducts investigations and prepares reports involving engineering economics work which includes studies of capital costs, financial structure, depreciation, physical plant inspections, valuations, revenues, and expenses as they pertain to the ensuring the reliability, resiliency and safety of the utility grid and end customer systems that are connected to the utility grid on both the utility side and the customer side of the utility meter. The incumbent manages research projects that may include advanced energy storage technologies, vehicle/grid integration, renewable generation, energy efficiency and other evolving technologies that may support grid decarbonization and reliability. The incumbent may also manage projects that address the future needs of the electric grid. The incumbent may also manage research efforts in the decarbonization of the California gas pipeline system and oversee efforts to evaluate and develop solutions that will result in a carbon neutral system by 2045. The incumbent helps the CEC complete time critical research that will help
ensure the future energy systems are clean, reliable, equitable and safe. The incumbent may also conduct analysis on the data collected through these research grants to inform future research grant investments.

**Essential Duties**

50%  **Technology Assessment.** Reviews and prepares engineering and economic analysis of technologies and designs related to smart grid technologies, distributed energy resources (DER), microgrids, electric vehicles, and NG infrastructure. Evaluates or performs calculations to determine estimated and actual energy savings, greenhouse gas emission reductions, and costs for projects. Evaluates rate/tariff structures for different technologies. Conducts detailed engineering analyses of new and emerging technologies to determine potential to increase grid reliability/resiliency, reduce greenhouse gas emissions, increase safety, and provide benefits to the electric grid and/or NG system. Identifies and recommends RD&D for smart grid technologies, DER, microgrids, electric vehicles and NG infrastructure. Performs complex engineering evaluations such as engineering economics, system reliability, quality of service, heat transfer, mechanical methods of power, system safety, and material transmission, thermodynamics, pump analysis, mass and energy balances, material selection and specifications, performance and suitability of components, efficiency and economics of engineering design options, cost, and performance, power electronics, transmission and distribution equipment/systems, power flow systems, and safety and integrity of NG infrastructure. Reads and interprets plans, drawings, specifications, and regulations governing energy and NG systems, as it relates to the installation of GHG reduction equipment. Provides technical assistance to other staff in analyzing engineering problems.

30%  **Program Planning.** Serves as the lead person or may act as a technical lead over other technical personnel on complex engineering research projects to support adoption and demonstration of cutting-edge and emerging technologies and impacts to the electricity grid and NG infrastructure, including interactions to increase grid resiliency and reliability and decarbonization of services; transmission and distribution systems, major electrical installations as applied to underground and overhead electric delivery systems, communications, automation and control systems, advanced power electronics, energy storage, microgrids and technologies such as NG sensors, risk assessment tools, and right of way encroachment technologies used to improve the safety and integrity of NG systems (i.e., pipelines and storage). Evaluates research project for performance, quality control/assurance, interim research products (e.g., results of surveys, test results, design drawings, etc.), technical changes to project budget/scope. Participates in critical project reviews/site visits and reviews/approves final products from completed projects.

15%  **Project Results Dissemination.** Oversees completion of the most complex project reports, fact sheets, correspondence, and other documents to disseminate project results and lessons learned to Energy Commission staff, management, and the public with a focus on transferring information that provides significant public benefits and value to California meeting the state’s energy policies and goals. Engages public and private entities addressing research results and related issues important to the Commission. May be required to testify in formal proceedings before the Public Utilities Commission, public interest groups, regulated industries, and various governmental agencies, as well as the Legislature. Effectively communicates research to other engineers, researchers, and the public at large, requiring both a good degree of technical knowledge and expertise and
sensitivity to policy issues. May also assist with interactions and detailed negotiations related to other projects or programs both internally and externally, including national organizations such as the U.S. Department of Energy, the California Public Utilities Commission, US Environmental Protection Agency, American Gas Association, the US Global Change Research Program, California Air Resources Board (ARB), other state agencies, Local Air Districts, investor owned utilities, local disadvantage community groups, and others as needed.

Marginal Duties

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

Working Conditions

The California Energy Commission offers a hybrid workplace model that is designed to support a distributed workforce of both office-based and remote-centric workers that relies on a high level of telework. Limited-in-person attendance and occasional travel may be required based on the needs of the division. Regular and consistent attendance - whether office-based or remote-centric - is essential to the successful performance in this position. This position is remote centered which means the incumbent works 50 percent or more of their time monthly from an alternate work location (i.e., teleworking).

Diversity and Inclusion Statement

As a state agency serving all Californians, the California Energy Commission is committed to being an organization that embodies diversity, equity, and inclusion. The Energy Commission plays an active and meaningful role in creating an environment that enables each employee to thrive.

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: __________