JOB DESCRIPTION AND POSITION CLASSIFICATION

CLASSIFICATION	DWR POSITION NUMBER	SAP POSITION NUMBER	MCR
Associate HEP Utility Engineer	**2821-3675-012**	**50002668**	**1**

APPOINTEE	SAP PERSONNEL NO.	DIVISION/SECTION
Vacant	**TBD**	**O&M/ADM-POM/PSP&CB/Power Resources Unit**

COLLECTIVE BARGAINING IDENTIFIER

Management Related BU:	Supervisory Related BU:	Confidential Related BU:	Rank and File BU:
☐	☐	☐	☑ **R09**

RESPONSIBILITIES EXERCISED	IMMEDIATE SUPERVISOR (Print)	SUPERVISOR'S CLASSIFICATION
☐ Supervisory ☐ Lead Person	**Wenxi Zhao**	**Sr. HEP Utility Engineer (Supervising)**

APPROVED BY (Personnel Analyst's Name)	DATE
Taylor Marshall	**10/30/2026**

Percent of Time	*Activity*
	POSITION SUMMARY **Under direction of the Power Resources Unit's Senior Hydroelectric Power (HEP) Utility Engineer (Supervisor), the Associate Hydroelectric Power Utility Engineer is responsible for performing energy demand and supply optimization studies as part of the Department of Water Resource's (DWR) integrated resource planning for the State Water Project (SWP); assisting in developing strategies to meet renewable and green house gas portfolio standards; and developing strategies that will promote reliable and cost-effective energy supply for water deliveries.**
	ESSENTIAL FUNCTIONS **This position requires the incumbent to work cooperatively with others; possess excellent analytical abilities and technical writing skills; exercise sound judgment; and maintain regular, consistent, and predictable attendance. Incumbent is also responsible for maintaining and improving technical skills by attending meetings and training events. The specific essential duties include, but are not limited to, the following:**
25%	**In support of developing business case documents, conduct power planning studies involving replacements and modifications to existing SWP facilities; within the context of improving the SWP's operational and financial position for participating in the current and future wholesale energy market. Review contractors' hydroelectric generating or pumping plant equipment design proposals, including technical calculations, reports, and drawings. Based on the study findings, propose solutions and evaluate associated risks, costs, benefits, and challenges of each solution.**
20%	**Contribute to the preparation of the SWP's Integrated Resource Plan (IRP). On behalf of the middle branch and along with the unit supervisor, conduct qualitative and quantitative assessments of parameters that have the potential to impact the SWP's energy portfolio, including water delivery operations, clean energy and environmental policies, energy market evolution, and other industry related parameters. Where applicable, gather information and insights on parameters from their associated subject matter experts. Utilize technical writing skills to document the assessments of these parameters in the IRP report, identifying their risks and benefits (including opportunities).**

SUPERVISOR'S STATEMENT: **I HAVE DISCUSSED THE DUTIES OF THE POSITION WITH THE EMPLOYEE.**

SUPERVISOR'S NAME (Print)	SUPERVISOR'S SIGNATURE	DATE
Wenxi Zhao	➢	

EMPLOYEE'S STATEMENT: **I HAVE DISCUSSED WITH MY SUPERVISOR THE DUTIES OF THE POSITION AND HAVE RECEIVED A COPY OF THE DUTY STATEMENT.**

EMPLOYEE'S NAME (Print)	EMPLOYEE'S SIGNATURE	DATE
Vacant	➢	

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Percent of Time	*Activity*
25%	**Contribute to the preparation of a quantitative and qualitative analysis of the SWP's future potential power portfolio for the IRP as well as support long-term energy and capacity sales and purchases. Develop and propose strategies to procure future energy resources from conventional and renewable energy sources to help meet renewable and green house gas reducing portfolio standards, while promoting an adequate and cost-effective energy supply for water deliveries over the long-term.**
10%	**Prepare SWP energy demand and generation studies based on the SWP's water delivery demands utilizing CALSIM and other system models and/or historical data. Forecast future energy positions that will be used to support the IRP in meeting future energy demands and associated resource sales and purchases; as well as to support power planning studies and their potential operational and financial impacts to the SWP.**
10%	**Participate in formal and self-directed training events to acquire and maintain an in-depth knowledge of California Independent System Operator (CAISO) market processes. Communicate how CAISO processes and procedures impact DWR long term energy supply strategies.**
10%	**Monitor and participate in statewide water and energy planning forums to acquire and maintain in depth knowledge on policy changes that may impact SWP operations. Prepare reports or memos to identify the potential risks, costs, benefits, and challenges that may result from the policy changes.**
	KNOWLEDGE, SKILLS, AND ABILITIES **Must have strong written and verbal communication skills; ability to work independently as well as cooperatively in a team environment and maintain professional, effective communication; have good organizational and time management skills to keep tasks on schedule; must be able to work concurrently on multiple projects, be responsive with strong problem-solving skills and have ability to make sound independent technical decisions; must have ability to apply sound engineering principles in multidisciplinary engineering projects/problems; be detail oriented; and have ability to comprehend large regulatory and technical documents.**
	SPECIAL REQUIREMENTS **Must be willing to work occasionally outside of normal business hours, travel, and stay overnight in various locations throughout the State of California or other states which may require air travel or other means of transportation. Travel throughout the State may require driving a vehicle on public roadways.**
	All employees are responsible for contributing to an inclusive, safe, and secure work environment that values diverse cultures, perspectives, and experiences, and is free from discrimination.
	Under the provisions of the North American Electric Reliability Corporation Critical Infrastructure Protection Standard CIP-004 as part of the Energy Policy of 2005, this position has authorized cyber access to or unescorted physical access around critical cyber assets and is subject to a satisfactory background check prior to appointment and every seven years thereafter.

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Percent of Time	*Activity*
	The Department of Water Resources is committed to its mission and employees, and we are grounded in our commitment to public safety. Regular, consistent, and predictable attendance is essential to the successful performance in this position. **OTHER RESPONSIBILITIES** **This position provides necessary support to the Divisions of Flood Management, Safety of Dams, Operations and Maintenance, Engineering, and/or the Public Affairs Office during Governor declared emergencies, flood, dam, SWP, and other incidents and emergencies. Additionally, this position may participate in emergency operations in the capacity of area teams, field inspection, coordination, and assist agencies such as Cal OES and FEMA in disaster work, including performing fieldwork to complete damage survey reports for droughts, flooding, earthquakes, and other emergencies. This position may also serve in one of the sections as established in the Incident Command System to assist the Department in performing its emergency preparedness, response, recovery, and mitigation functions. These functions are established in the California State Emergency Plan and the Department's Administrative Orders.**