

Hydropower Asset Management



PG&E's Bucks Creek Plant

A combination of challenges from aging infrastructure to capital budget constraints makes it difficult for hydropower owners to maintain stability, safety, resilience, reliability and financial performance. A well-crafted asset management program allows utilities to make objective, data driven solutions to suit organizational needs.

A corporate member of the Institute of Asset Management (IAM) and an IAM-Endorsed Assessor for PAS 55 and ISO 55000, Black & Veatch offers industry-leading asset management expertise. We focus on key tenets of effective asset management programs and assist hydropower organizations with solutions to their diverse needs.

Core Elements of Asset Management

- Maintenance Optimization, and Program Development and Support
- CIP Planning and Optimization
- Information Solutions
- Operational Performance
- Condition Assessment

TVA Strategic Alliance and Hydro Modernization Program

Black & Veatch developed a strategic plan for the Tennessee Valley Authority (TVA) for the modernization of electrical and mechanical power trains and balance of plant equipment for the designated generating units at hydroelectric power plants based on Black & Veatch’s condition assessments. The strategic plan included recommended scopes of work, budgets, schedules and unit-specific benefits expected to be achieved.

PG&E Hydro Strategic Alliance Asset Management Services

Black & Veatch has collaborated with PG&E (Pacific Gas & Electric) to establish and direct equipment-based asset programs, from detailed inventory data collection to long-term strategic planning. PG&E is the largest hydropower provider in the U.S. with 67 powerhouses totaling nearly 4000 MW of capacity. The program scope has included dam safety, penstocks, pressure boundaries, PRVs and governors, turbines, shut-off valves, oil spill prevention, and water conveyance structures.

California DWR Program Development

The owner of the nation’s largest state water to launch a practical, transparent and sustainable asset management program. Among its assets, California’s State Water Project includes 700



miles of large canals, the tallest dam in the U.S. and the highest head pumping plant in the world along with multiple hydroelectric plants including Pumped Storage schemes. Work to develop DWR’s O&M Asset Management Program includes the creation of a unified Condition Assessment Program and facilitation of a Risk and Financial Modeling framework.

Hetch Hetchy Water and Power Asset Management and Capital Program

Black & Veatch assisted the SFPUC with management and evaluation of the Hetch Hetchy Water and Power’s (HHWP) power generation, transmission, and civil assets, which included conveyance and storage. The Black & Veatch team was responsible for the prioritization and business case evaluation of HHWP’s capital program. Currently, Black & Veatch is developing dynamic short- and long-term capital planning models which will be operated by HHWP, forming their core strategy to address holistic investment drivers.



Black & Veatch
11401 Lamar Ave., Overland Park, KS 66211
P +1 913 458 2000 | W bv.com

Carlos Araoz, VP, Hydropower & Hydraulic Structures
P +1 916 858 2433 | E AraozC@bv.com

Alex Bjelica, Hydro Asset Management Practice Lead
P +1 916 858 2410 | E BjelicaA@bv.com

David Woodward, Project Manager
P +1 916 858 2466 | E WoodwardD@bv.com

