



Hawaiian Island to Boost Renewable Energy Production With Flowserve Pumps

Replacing fossil fuel electricity generation with hydropower and solar sources

The West Kauai Energy Project (WKEP) — a comprehensive, integrated renewable energy and irrigation project — will help the state of Hawaii reach its goal of a future with zero carbon emissions by using QL/APK vertical turbine pumps supplied by Flowserve.

This project will offset the use of 8.5 million gallons of fossil fuels annually for power generation and supply irrigation water to support diversified agriculture on state-owned lands.

Meeting 25% of Kauai’s power needs

WKEP incorporates renewable energy production via hydropower and solar photovoltaic generation, coupled with pumped hydropower and battery energy storage, to shift most of the project’s output into the nighttime peak.

When operational, the solar array will contribute up to 35 megawatts directly to the grid and store up to 240 megawatt hours for use during evening peak.

The project is expected to meet roughly a quarter of Kauai’s electricity needs and will also support the grid with long-duration storage capability.





Hawaiian Island to Boost Renewable Energy Production With Flowserve Pumps

Running on 100% renewables for prolonged periods

Flowserve QL/APK vertical turbine pumps will enable the sophisticated engineering design of the project’s hydropower and pumped storage components.

The pumps will reduce energy consumption through efficiency that delivers the lowest lifecycle costs. This approach will minimize the installation’s carbon footprint while further optimizing its operational expenses by increasing equipment reliability and reducing maintenance.

Upon WKEP’s completion, the pumped hydropower will provide 12 hours of storage daily — compared to the conventional four- or five-hour storage capacity from existing solar battery facilities.

This long-duration storage capacity will enable the island to run on 100% renewable energy for prolonged periods without sunlight. It also will balance intermittent solar power with hydropower in order to provide additional grid stability.

Ambitious energy transition goals

As a leader in advanced fluid motion and control equipment and solutions, our purpose is to make the world better for everyone. Flowserve is well positioned to support Hawaii’s ambitious goals on the path to zero emissions. Our role in WKEP is deeply aligned with Flowserve’s “3D” growth strategy to diversify, decarbonize and digitize. It’s another example of how companies can leverage our global resources and engineering expertise to accomplish their energy transition objectives.

Learn more about our “3D” growth strategy and how our innovative products and services are helping customers through the [energy transition](#).

Discover other ways Flowserve is helping reduce carbon emissions for our customers and in our own operations. Read our [2021 ESG Report](#).



Read Flowserve’s approach to [energy transition](#).

Flowserve Corporation
5215 North O’Connor Blvd.
Suite 700
Irving, Texas 75039-5421 USA
Telephone: +1-937-890-5839

flowserve.com

PUSS000819-00 (EN/AQ) October 2022

Flowserve Corporation has established industry leadership in the design and manufacture of its products. When properly selected, this Flowserve product is designed to perform its intended function safely during its useful life. However, the purchaser or user of Flowserve products should be aware that Flowserve products might be used in numerous applications under a wide variety of industrial service conditions. Although Flowserve can provide general guidelines, it cannot provide specific data and warnings for all possible applications. The purchaser/user must therefore assume the ultimate responsibility for the proper sizing and selection, installation, operation, and maintenance of Flowserve products. The purchaser/user should read and understand the Installation Instructions included with the product, and train its employees and contractors in the safe use of Flowserve products in connection with the specific application.

While the information and specifications contained in this literature are believed to be accurate, they are supplied for informative purposes only and should not be considered certified or as a guarantee of satisfactory results by reliance thereon. Nothing contained herein is to be construed as a warranty or guarantee, express or implied, regarding any matter with respect to this product. Because Flowserve is continually improving and upgrading its product design, the specifications, dimensions and information contained herein are subject to change without notice. Should any question arise concerning these provisions, the purchaser/user should contact Flowserve Corporation at any one of its worldwide operations or offices.

©2022 Flowserve Corporation. All rights reserved. This document contains registered and unregistered trademarks of Flowserve Corporation. Other company, product, or service names may be trademarks or service marks of their respective companies.