



## 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.





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## 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](#).

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