

Wexus Energy and Water Management Mobile Software for the Agricultural Industry

The Issue

California's agricultural industry is one of the state's largest users of energy and water and has been historically underserved by a lack of effective efficiency technologies. The agriculture industry is also rapidly transitioning to the next generation of technology: mobile, cloud-based software, big data, and connected Internet of Things (IoT) devices in the field. The combination of rising energy rates, increasing regulation and reporting, drought and changing weather patterns is driving demand for new agricultural energy efficiency solutions. Farmers currently can't manage what they can't measure, leading to higher operational costs for farms.

Project Innovation + Advantages

This project deployed the Wexus (Water-Energy Nexus) mobile, cloud-based IoT software platform into California's agricultural industry. The Wexus platform leverages existing utility meter infrastructure and helps agribusinesses to quickly assess energy (and water) usage and cost from virtually anywhere on any mobile device. Through customized alerts and reporting, the platform allows farms to quickly respond to changes in energy usage, adjust and optimize equipment in the field, and reduce operational expenses due to energy costs. Through collaboration with project partners, this project further extended existing water-energy data analysis, visualization and remote controlling capabilities to the Wexus platform to further optimize water-energy resource management in the agribusiness sector.

Contacts:

Project Manager: Anish Gautam
Phone: 916-327-2382
Email: ACgautam@energy.ca.gov

Contractor: Wexus Technologies, Inc.
Phone: 415-429-6038
Email: info@wexusapp.com

Program: EPIC

Agreement Number: EPC-14-070

Award: \$4,000,000

Co-funded Amount: \$1,000,000

Project Location: King City, Soledad, Salinas & Hanford, CA

Project Term: 6/30/2015 to 3/29/2019

Project Status: ACTIVE

Mobile Cloud Based Tool Helps Farmers Manage Energy and Water Usage and Costs from the Office and from the Field

BENEFITS

As part of this project, the Wexus IoT software platform was deployed at four farms in California. The project team drove an estimated 5-10% savings across the life of the project and the following benefits were achieved over the three and half year project:

- +1 million kWh of electrical savings
- +8 MW of power demand savings
- 8% average water savings
- +706k lbs CO2 GHG reductions
- +\$160,000 in energy savings costs

Lower Costs: The project reduced energy costs for California farmers used the Wexus IoT software platform.

Greater Reliability: The project reduced demand on the electric grid and prevented GHG emissions.

