

KIUC Chooses Emerson's Smart Wireless Bridging Solution for Reliable Communication Between Two Plant Areas

BENEFITS

- Smart Wireless bridging solution provided savings of \$30,000 over wired
- Redundant wireless maintains uninterrupted communication between plant areas separated by 250 feet
- Robust and trouble-free performance since installation



CHALLENGE

Kaua'i Island Utility Cooperative (KIUC) generates electric power for the Hawaiian island of Kaua'i. KIUC produces power with a steam generator, diesel engines, gas turbines, and hydroelectric generators. The utility has two generation facilities on Kaua'i, with their largest plant being located in Port Allen.

KIUC upgraded the controls of two of the diesel engines to increase reliability and replace obsolete equipment. This expansion included an addition to the plant's DeltaV process control system. KIUC wanted to cost effectively and reliably integrate and control the steam plant operations area and the diesel operations area, each located in separate buildings with one DeltaV system. The buildings are approximately 250 feet apart and are separated by a warehouse/garage. Installing a fiber-optic cable for communications would have meant tearing up and repairing asphalt and concrete at a high cost. KIUC looked to Emerson to provide a cost effective and reliable wireless bridge solution to maintain uninterrupted communication between the two plant areas.

SOLUTION

KIUC implemented Emerson's Smart Wireless bridging solution to connect control functions between the two plant areas. A redundant Wi-Fi bridge provides encrypted communications for both the primary and secondary DeltaV control network thereby ensuring no disruption in wireless communications between the buildings. If any single access point fails or the wireless signal is disrupted for the primary wireless link, the DeltaV communications automatically switches to the secondary network and Wi-Fi bridge.

RESULTS

By installing Emerson's Smart Wireless redundant wireless control bridge solution, KIUC saved an estimated \$30,000 over a wired solution. The wireless bridging solution was commissioned in October 2009 and has performed flawlessly since being installed.

"The Wi-Fi bridge has been robust and trouble-free since installation. The wireless system has seamlessly integrated the bridged data into our DeltaV system. Additionally, the wireless solution saved us a lot of time and expense when compared to a fiber-optic cable installation."

Richard Vetter
Maintenance Superintendent

For more information:
www.EmersonProcess.com/SmartWireless

