



Irrigation upgrade increases almond production to meet world demand

Client Jubilee Almonds

Project River Irrigation pump house electrical and automation system

Location Waikerie, South Australia

Background: Waikerie-based Jubilee Almonds is an almond producer determined to lead Australia's rapidly expanding almond industry. It prides itself on sustainable production and produces 1,500 tonnes of kernels annually toward a national total of 80,000 tonnes.

Challenge: As part of an expansion into international export markets, Jubilee Almonds needed to enhance their irrigation system – a vital component of almond production.

Solution: SAGE Automation delivered a complete refit of the existing pump house and installed a new control system, which allows scalability for new pumps, greater control through real-time alerts and remote monitoring via mobile devices.

Jubilee Almonds CEO Brendan Sidhu said, *"SAGE worked with us to understand our problem and they provided just the solution we wanted"*.



Key Outcomes:

- Flowrate increased from 600 to 650litres/sec and eliminated a booster pump and has increased flexibility from 60–650litres/sec.
- A robust power design allows Jubilee to maximise available power and increase water capacity while they experience increased energy efficiency via variable speed drives.
- A smart state of the art automation system provides flexibility and reliability.
- Best of all, remote device monitoring and real-time alerts means the team can instantly respond to changes in conditions.

Capabilities Demonstrated

SAGE worked closely with the Jubilee Almonds stakeholders to develop a conceptual design and preparation of tender documents.

SAGE were the successful tender and delivered the project which included an electrical system and an automation system:

The electrical system includes:

- A new 2500A main switch board with 2500A generator changeover switch
- Automation system control panel
- 4x 315kW Variable Speed Drives
- 1x 150kw variable Speed Drive
- 2x 300A Active Harmonic Filters
- Back channel cooling to limit the heat dissipation into the controlled environment
- Climate control

“With the new system from SAGE, we have the flexibility to pump anywhere from 60 to 650 litres/second. This is very important as we expand our operation to take account of booming world demand for premium almonds.”

Brendan Sidhu, CEO Jubilee Almonds

The state of the art automation system includes:

- PLC based control system
- Local touch screen interface
- Ethernet telemetry system to connect the pump house to rest of the property
- Remote SCADA System for control at orchard office
- Alarm paging system (allows critical system alarms to be sent out)
- Remote connectivity to system via smart phone or tablet
- Remote access for Engineering support
- Integration into site irrigation controller



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