Media Release

IMAGES SAVING LIVES AND DOLLARS

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A portable thermal imaging device is potentially saving people and money at one of Australia's most significant infrastructure assets.

State Water Corporation's maintenance and services team at Hume Dam is seeing the benefits of a thermal imaging camera, purchased to identify faulty electrical equipment before it can malfunction.

State Water Senior Project Manager, Anthony Burrell, said the device gives the team the ability to detect and fix potential problems.

"The device can detect differences in the state of a component from what is considered to be the normal operating temperature," Mr Burrell said.

"It uses infrared radiation to detect potential wiring issues before they turn into capital expenses and allows us to control power hotspots.

"This is the first time we have had the capacity to find problems at the source. Beforehand something had to blow up first and we had to try and detect where it had happened."

Designed to locate heat sources, the thermal imaging device captures temperature differences in a digital image, which is then loaded onto a computer for reporting.

Potentially faulty components can be identified through a report produced from data obtained by the camera.

"You point the camera at a contactor or panel, the camera will seek and automatically focus on a hotspot and a glow comes up red in the report produced from downloading the image onto a computer," Mr Burrell said.

The glow indicates a difference in temperature from surrounding equipment, and the report will provide an actual temperature reading based on what is emitted from of the hot spot.

The camera is currently being trialed at Hume Dam with plans for it to be used elsewhere around the organisation.

"Essentially it will be used on electrical control cabinets. You can scan the whole control circuit and identify any potential issues with contactors or fuses for example," Mr Burrell said.

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"This device will form part of our preventative maintenance program. The immediate success of the current trial at Hume, where we found various potential faults on the first day of use, suggests we may look at purchasing more devices for our other sites.

"Obviously we don't want our guys working on faulty equipment that can be dangerous. It is cutting risks from a safety perspective and reducing costs from a capital perspective."

State Water Manager, Maintenance and Services, Glenn Baker said he was impressed with the results found by two new employees, Sam Dutton and Mitch Boswell.

"The results found by the guys on the very first day of use suggest we will make good use of this device," Mr Baker said.

"It has the ability to be used for many other types of industrial applications as well.

"It can determine where bypassing hydraulic valves may be an issue, and is regularly used in air-conditioning units and sealing of windows in buildings.

"The guys also decided to check each other for swine flu!

"Once this type of technology is embedded in our culture, and is part of our Facilities Management Maintenance System planning, the intention long term is to evaluate other forms of relevant data collection and assessment."

Other imaging equipment could be used for monitoring microscopic metal particles in oil in gearboxes and brakes that are heating due to wear.

"Depending on the application, we may have equipment suitable for 'in-situ' brake wear and function monitoring of overhead cranes; or spectrographic oil analysis of gearboxes."

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