Southern District Health Board reduces energy by 10% water by 40% and costs by $13m over 15 years.

When Southern District Health Board wanted improvements in energy efficiency and the tools to manage energy better in the future, partnering with Honeywell for four Energy Performance Contracts delivered the results they needed, leading to substantial carbon reductions.
The Customer

Southern District Health Board (DHB) is New Zealand's southernmost provider of public hospital and health services - supporting a population of 304,000 and employing 4,500 staff. The Board wanted improvements in energy efficiency and the tools to manage energy better in the future. Honeywell was chosen to meet these requirements through a number of Energy Performance Contracts (EPCs) which guaranteed the cost reductions for the hospital.

Business Drivers

With growing pressure to reduce operation costs through efficiency, Southern DHB required a solution to:

- Reduce energy use, water use and maintenance costs.
- Control energy use at a localised level.
- Integrate the Building Management Systems across 2 hospitals to enable remote management and identification of further energy savings.

The Solution

Honeywell has been engaged in four Energy Performance Contracts to help meet these aims:

- The first EPC at Dunedin Hospital included conversion of the pneumatic controls to Direct Digital Controls (DDC) in the main plant rooms, minor mechanical system improvements and optimisation of the Building Management System (BMS).
- The second EPC, also at Dunedin included lighting upgrades, water conservation measures across the entire ward block, power factor correction to reduce penalty charges from the electricity retailer, conversion of reheat box controls to DDC and the installation of Honeywell Enterprise Building Integrator software that helps monitor, track and optimise energy efficiency across the campus. This EPC is accumulating cost savings at a rate that is 78% higher than the guaranteed level, already achieving $3m and is on track to deliver $4.46m over the term.
- The third EPC includes the improvements in metering and the Building Management System at Southland Hospital, allowing remote management and diagnosis of energy performance, plus the implementation of Variable Speed Drives in the air distribution system to more closely match energy use with ventilation needs.
- The fourth EPC, at Wakari Hospital, replaced the LPG boiler with one using carbon-neutral woodchips - producing less pollution as well as reducing energy costs.
- Honeywell helped secure Crown Loans from EECA for all four EPCs, supplemented with a Commercial Sector Electrical Energy Efficiency grant for the second one. This funding accelerated project delivery.

Business Outcomes

- More than 10% reduction in annual energy use and cumulative reduction of 6,680 tonnes of carbon emissions delivered in the first 5 years of the guarantee period.
- 19% steam tonnage reduction through improved controls approaches to space and water heating in 2009-2010, exceeding the guarantee overall.
- Flow rate reductions of 40% per fitting through retrofitting of old water fittings.
- The District Health Board will save over $13m in energy costs over 15 years.
- Improved reliability leading to better comfort.
- Improved support for energy management and more accurate forecasting of energy spend. A more environmentally friendly fuel source for Wakari Hospital.

Find Out More

To learn more about Honeywell Building Solutions, visit www.honeywell.com.au/hbs

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