SUEZ technology shapes Melbourne Water's network of the future

The first stage of Melbourne Water's Water Transfer Network Transformation (WTNA) solution has been seamlessly brought online, harnessing smart water technologies developed by waste and water resource management company SUEZ to optimise the Winneke-Preston distribution network.

The WTNA project aims to optimise distribution, minimise costs and reduce chemical usage throughout Melbourne's drinking water network, using SUEZ's innovative AQUADVANCED® Energy (AAE) software package to automate water distribution flows.

The advanced software offers real-time energy management throughout every stage of water production and distribution for dramatic improvements in operational efficiency. AAE works in conjunction with the utility's existing Supervisory Control and Data Acquisition (SCADA) system, continually assessing consumption and adjusting production based on the half-hourly consumption forecasts. The leading-edge solution delivers high-quality water when and where it is needed, all while reducing energy costs and improving water quality and environmental outcomes.

General Manager – Smart Solutions for SUEZ, Evan Atkinson said that application to Melbourne Water's network has pushed the solution in new directions.

"The collaboration with Melbourne Water staff has been extremely effective and resulted in a smooth transition into optimised network automation." Mr Atkinson said.

"We commissioned AAE across the entire Winneke-Preston transfer network in June 2020 after comprehensive scoping, development and testing programs, keeping to project schedule despite ongoing COVID related challenges."

According to Melbourne Water Automation Team Leader Russell Riding, the SUEZ technology has consistently delivered.

". More water is being shifted using less power; there are smoother flows out of the main treatment facility and more reliable and consistent transfer operations," Mr Riding said.

"The solution allows us to minimise pumping costs, maximise hydro revenue, decrease chemical usage, reduce risks and energy consumption, and improve management of outages – to name but a few of the advantages."

Melbourne Water's General Manager of Service Delivery Wholesale Services, Craig Dixon said that the business is impressed by the project's early success.

"This is a significant project for us, and the combined SUEZ and Melbourne Water team is delivering impressive results," Mr Dixon said.

"The team's shared focus on people and organisational impacts in tandem with the technical aspects have driven the successful and seamless transition into the first phase of operation, without any of the typical challenges that can arise in IT change projects. We are looking forward to progressing to network-wide automation.

The partnership is targeting the complete automation of the water transfer network, which supplies residents with over 400 billion litres of drinking water annually. Based on the success of the first project phase, Melbourne Water is progressing to the remaining two stages of complete network automation, with configuration of the Tarago-Cardinia solution

already underway. The final phase covering the Silvan-Greenvale network is expected to be implemented mid next-year.

The project will deliver a more efficient network to meet future demand and enable Melbourne Water to capture and retain operator knowledge and evolving opportunities in the energy market.

"SUEZ is delighted to partner with Melbourne Water to power its digital transformation," Mr Atkinson said.

"We look forward to seeing these early results amplified as we roll out our AQUADVANCED® Energy smart solution network-wide."

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