

Geothermal test results confirm Wallan is good to go

The thermal response test drilling at the Crystal Group's St Hilaire site provided positive insights into the effectiveness of a district geothermal system being applied to the whole of the estate and commercial buildings. The mix of soil types on the site coupled with an active groundwater environment means that a smaller than normal ground loop field is required compared to other parts of Victoria. [Due to the active ground water environment and the mix of soil types experienced, the size of the ground loop field required is smaller than is necessary in many parts of Victoria]. The planned lake and vast expanse of parkland areas available, offers a suite of inputs to the geothermal system that proves the aspirational project to be more than feasible. Both the lake and the parklands can be used for open/closed loops and horizontal loops respectively, providing an ideal platform for low cost heating and cooling technologies to be applied.

The Crystal Group continues to work alongside industry professionals to bring this important technology forward for the benefit of future residents of St Hilaire.

Over the past few months modelling has been confirmed for the contribution that 1000 homes at St Hilaire would make towards net zero emissions targets. The figures are impressive. By switching out gas and embracing geothermal heat pumps for heating, cooling and hot water and electrical hot plates, 1000 houses would deliver 14.1 GW of energy savings every year. This equates to 1960 t CO_{2-e} saved each year. The energy switching results in a 58% decrease in energy usage. In contrast switching to all electric would see an increase of 10.5% energy usage on a traditional home or 68.5% increase in energy usage than a geothermal/electric home.

The project will work with industry leading suppliers like those who have created an integrated heat pump box that contains a 165 litre hot water tank. Unlike other heat pumps where the hot water unit needs to be added on, this unit sits within the heat pump that will heat and cool a home. Heat pumps are uniquely able to run hot water, heating, cooling and pool heating functions at once. Effectively residents will have the equivalent of instantaneous hot water without the guilt that a greenhouse-gas emitting gas-fired hot water system comes with.

A Crystal Group spokesperson said, "our philosophy is simple, we put the resident at the centre of the design of this master planned community and we think long term about the positive impacts this focus will have for our future residents." The journey towards being the first geothermal embedded, networked community in Australia has not been an easy one but the Crystal Group is committed to paving the way for residents to have access to a truly sustainable home energy solution, an opportunity that isn't available elsewhere and that will make home owners feel very good about a decision to live at St Hilaire.