

Case Study - Sun City

Hot Water Storage - Air to Water Heat Pump Solution



The Cabanas



The Main Hotel



The Cascades

Sun City is a large resort in the North West Province of South Africa. The resort includes four hotels, two of which are five star hotels.

These are the world famous Lost City, Sun City Main hotel, Sun City Cabanas, Cascades Hotel and the self-catering Sun City Vacation Club.

Facts & Figures

A total of 280 000 litres of hot water needed to be heated to 58°C.

Three air-to-water heat pump solutions were engineered as per specific site requirements for The Main Hotel, The Cascades and The Cabanas.

Need

Sun International wanted to reduce its impact on the national grid and work towards Eskom's aim of reducing demand by 10%.

The group also wanted to maintain aesthetics. Sun International wanted to improve its Heritage® score by participating in an ESCo project.

Solution

Solahart engineered a unique solution for each plant room. The air to water heat pump transfers heat from the air, through a process of exchange, into the hot water tanks.

While the rate of transfer is highest on warm and humid days, heat gain is even made in sub zero temperatures or overnight providing the potential for year round heating.

The ESCo project is partially funded by Eskom and results in a demand saving of over 500 kW.