11th March 2022

This installation consists of a 40-ton Aermec Air-Cooled Water Chiller with two 12.5 ton & two 7.5-ton Copeland scroll compressors retrofitted with 2 ABB ACH-580 Drives with 2 Smart Compressor Controls (SCC's). During the initial site survey, we found that the compressors were set up on two circuits with two compressors on each circuit, one lead and the other lag. Due to the load behaviour on this system, we worked out that two compressors are normally on full time and the other two compressors were on intermittently. The engineering decision was to install only on the two full-time compressors.

Customer Scenario

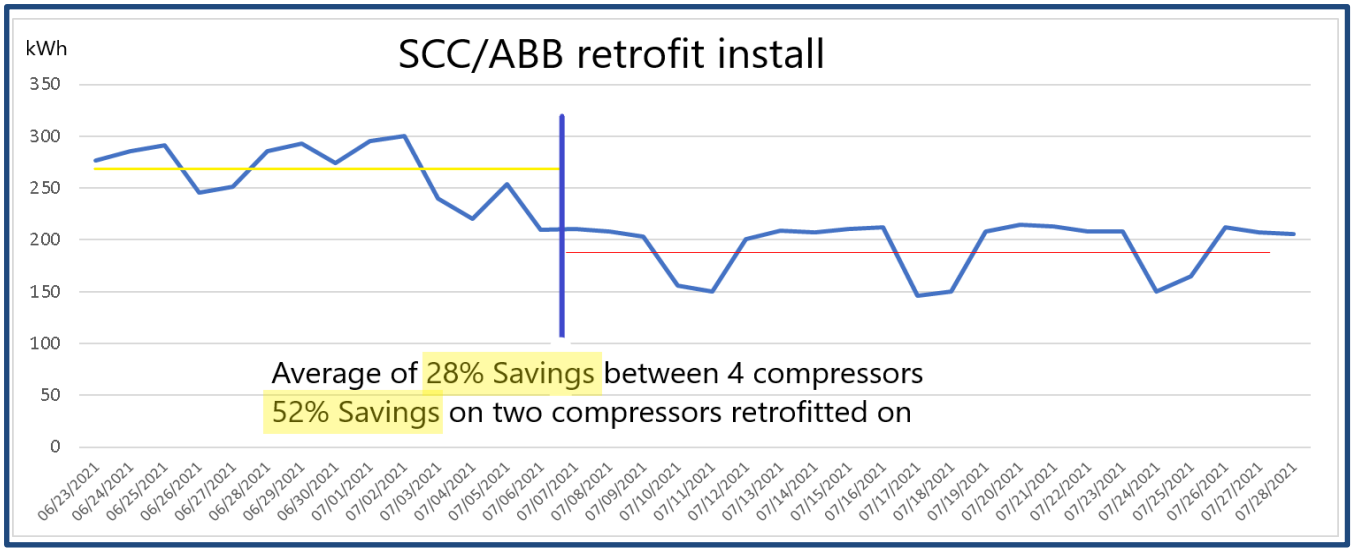
The customer had an abundance of systems consuming energy, and due to a little customer scepticism, we offered to install on a 30-day free trial.

The reason for the customer's scepticism was that they already had Variable Frequency Drives (VFDs) installed on their refrigeration compressors controlled by pressure.

As our IP product controls and monitors by temperature sensors, this was new to the customer and the only solution for their Copeland scroll compressors.

40-ton Air-cooled Water Chiller cooling the main process packing area.

Pre-Consumption **Post Consumption**



Benefits

*Reduced electricity overhead
*Reduced ongoing equipment maintenance costs
*Extended equipment lifespan
*Reduced CO2 production
*Improved working temperatures
*Improved compressor safety
*Reduced compressor noise
*Reduced peak demand
*Reduced compressor failures

Falkonair Technical comments on the above findings:

The Smart Compressor Control would have saved at least 50%+ savings, if installed on all 4 compressors not including the fan motors.

Due to this is a processing facility with not more than 10 hours of full production over a 24-hour period, it was not cost effective to install on all 4 compressors.