

Tops market & Tops SUPERSTORE

The Owner

- Central Food Retail Group (CFG).
- Part of the Central Group, one of Thailand's five largest business groups with annual revenue of US\$ 10.4 billion.
- Tops market is the no. 1 premium supermarket brand.
- Tops SUPERSTORE aims to be the no. 1 retail store offering the combination of extensive choice and superior quality products at great value.

CENTRAL
Food Retail Group



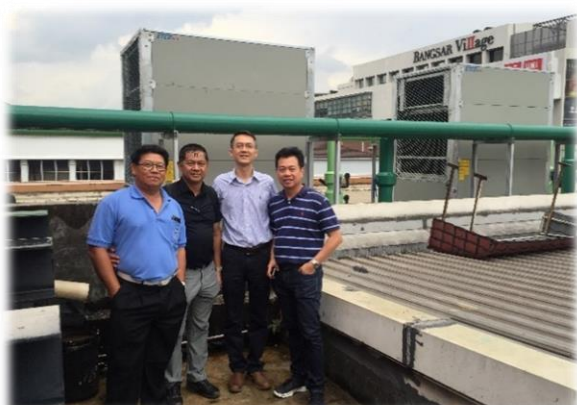
The Challenge

Due to business expansion, CFG wanted a central cooling source that meets their sustainable development goals:

- Higher energy efficiency than traditional cooling equipment.
- Better reliability with simpler design and higher redundancy.
- Improved ease of maintenance and standardization of spare parts.

The Approach

We proposed the ETCO hybrid chiller to promote the growth and success of CFG's business.



In order to assure CFG that the hybrid-chiller solution was the right fit for their needs, we arranged site visits to view existing installations in 2016:

- 1st survey at the Bangsar Village Shopping Mall in Kuala Lumpur.
- 2nd survey at the Scientex Pan Pacific Straptex plant in Melaka.

The Switch



- One Trane air-cooled chiller at the Tops Market outlet at Nang-Linchee Road, Bangkok was replaced by an ETCO hybrid chiller in 2017.

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- Real-time measurements of performance before and after replacement verified the effectiveness of the chiller changeout on reducing energy consumption.
- These measurements also demonstrate that maintaining the condenser coil and therefore, performance of air-cooled chillers over the longer term is very challenging.

The Success

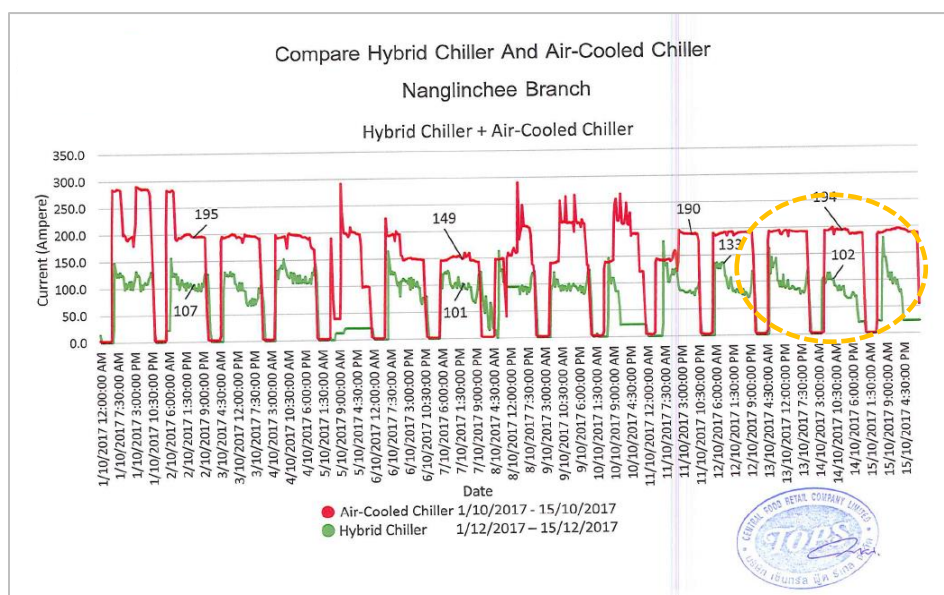
- The verification of performance improvement was done separately by a 3rd party – faculty staff of the Department of Mechanical Engineering at the Prince of Songkhla University.



Summary of improvements found by independent study:

Energy Efficiency	↑	44%
Energy Usage	↓	57%

- The management of CFG then endorsed the findings to guide their decision-making process for future replacement or new construction projects.



- An additional eight hybrid chillers were ordered for the Tops SUPERSTORE outlets at Pichit and Phayao to bring the total number of hybrid chillers purchased by CFG in 2017 to nine.