

Scientex Great Wall Ipoh

Sg. Siput & Chemor, Perak

Project Overview

Scientex Great Wall Ipoh (SWGI) Sdn. Bhd. (formerly known as Mondi Ipoh Sdn. Bhd.) was acquired by Scientex Bhd., a global packaging manufacturer and leading property developer in 2015. This acquisition of two manufacturing plants located in Sg. Siput and Chemor, Perak boosted Scientex's consumer-packaging production capacity by nearly 30% to 76,800 metric tons per annum. The segment's promising growth potential then prompted Scientex Bhd. to plan for a 50% expansion of SWGI's production capacity by 2017.

Project Challenge & Our Involvement

The ambitious expansion plan had called into question the sustainability of the facilities' common approach to addressing evolving process-cooling needs alongside water scarcity by installing dedicated air-cooled water chillers for new production lines. This set about our crafting of the value proposition for the plant upgrade:

- Significantly improved energy efficiency and control of cooling for new production lines.
- Greater cooling reliability and redundancy.
- Compliance with water-use restrictions for cooling and demands for similarity of maintenance needs.

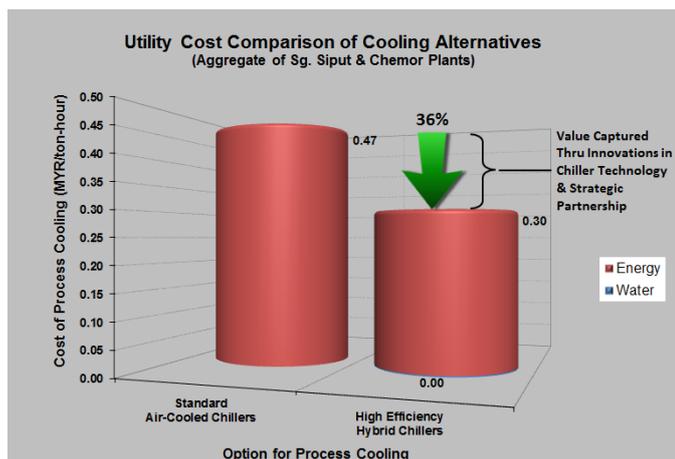
Our value proposition resonated with the owner's aspirations and thus, resulted in our selection as their design-build partner for the aforementioned endeavor.

Project Offerings

The core value that we have delivered for the project derives from the following features of the new plastic extrusion process cooling plants:

- Hybrid-cooled chillers to provide cooling
- Best design practices

Each plant was configured to help its extrusion lines maximize productivity and reliability through enhanced efficiency and redundancy of chilled-water production.



Project Outcomes

The process improvement realized through the higher-efficiency cooling systems is expected to generate combined operating-cost savings exceeding MYR 525K (36%) per annum. This remarkable gain demonstrates the value of the hybrid chiller's evaporative-condensing technology in conserving both energy and water usage.

Financial Value of Improved Process-Cooling Efficiency (15% corporate hurdle rate & 5-year analysis term)

Financial Metric	Sg. Siput Plant	Chemor Plant
Simple Payback Period (years)	1.0	0.9
Average Incremental EPS (sen)	0.10	0.05
Modified IRR	19.6%	19.9%
Net Present Value (MYR)	576,052	320,103
Savings-to-Investment Ratio	2.7	2.9

Innovations in hybrid-cooled chillers have yielded further gains in resource productivity for Scientex:

- Higher availability of process-cooling service due to added reliability of chiller's heat-rejection method.
- Better utilization of floor space through ability to install greater cooling capacity in same space owing to significantly smaller footprint of new chillers compared with predecessors of equal capacity.
- Conservation of electric-power demand through ability to incorporate more cooling capacity without increasing connected electrical load.

Project Distinctions

The leverage of process-cooling innovations as well as strategic partnership has enabled Scientex to not only unlock greater value from new opportunities but also overcome challenges posed by resource constraints and environmental protection. These capabilities will make the conglomerate stand out from the competition as it seeks to sustain growth in the given market segment.