



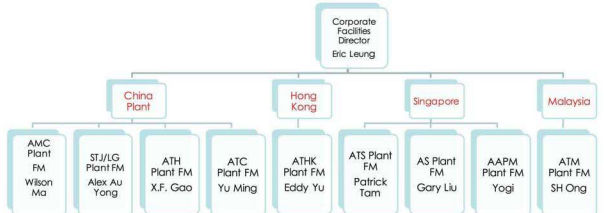
OUTSTANDING ENERGY MANAGER OF THE YEAR

ASM Technology Singapore



Mr Eric Leung

Mr Eric Leung is the Corporate Facilities Director and Energy Manager of ASM Pacific Technology. He is also the overall-in-charge of the facilities management of all nine manufacturing plants in Asia, which include three plants in Singapore. Each plant has a local Facility Manager (FM) who handles the daily operations of facilities management and energy efficiency (EE) improvement programmes, and these nine FMs all report to Mr Leung.



As a Singapore Certified Energy Manager (SCEM), and equipped with a MSc in Facilities and Environment Management and more than 25 years of experience in the industry, Mr Leung has led EE initiatives in his company and worked closely with the FMs to identify EE goals and objectives for each of the plants. He also chairs the monthly EE meetings with the FMs, who will report on their plant's energy consumption and the progress of their energy reduction plans.

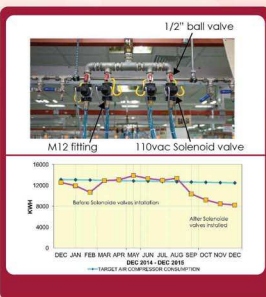
Mr Leung has set a high target of achieving 30% energy reduction from 2012 to 2017. To achieve this target, Mr Leung and his energy team of FMs started with the fundamentals, which included the following:

- Setting up a systematic preventive maintenance for chiller plants and compressed air system
- Working with the production teams to lower the supply of compressed air pressure while ensuring that it is still sufficient for production usage
- Switching off redundant machines
- Identifying and repairing compressed pipe and air guns leakages
- Switching off lights and air conditioning when not in use, especially during the weekends
- Setting room temperature at 24°C -26°C

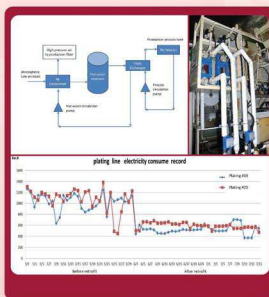
During the past few years, Mr Leung has also led his team in identifying and implementing EE improvement projects across all nine ASM plants. Some of the key projects are listed below:

Project	Achievements (System)	Annual Energy Savings (MWh)
Replace T8 tubes to LED tubes	50% energy reductions	1,555
Retrofit production compressed air pipe system into high pressure and low pressure supply to reduce compressor energy consumption	17% energy reductions	1,100
Adopt VSD control for AHU fan motors, compressors, pumps and air-conditioning units	20% energy reductions	272
Replace the vacuum suction by compressed air by suction pump directly on the point of usage	76% energy reductions	816
Heat recovery from the compressed air system to the production plating lines to replace electrical heaters	46% energy reductions	3,000
Replace R22 package unit with environmental friendly high efficiency HC32 refrigerant	14% energy reductions	1,440
Install cut off solenoid valves in compressed air supply to cut off compressed air supply for idle machines	38% energy reductions	57,40
Captured natural light to office by solar tubes for roof office, 100% replace artificial light at pantry area at sunny days	100% use of natural light during day time for office corridor (trial run)	5,47
Replace 23 years old chillers with a VSD drive chiller plant	34% energy reductions	1,226

Through his dedication and efforts, Mr Leung has helped ASM Pacific Technology achieve a total of 23.1% energy reduction from 2012 to 2015. To raise the awareness of EE among ASM's employees, Mr Leung worked with both the FM teams and the various departments to produce a video and a presentation of energy saving opportunities in the office. The video was displayed at the canteen during lunch break. Energy Saving Posters were put near main office entrance to remind employees to switch off the lights and computers after work. Mr. Leung also worked with the production management to identify energy saving opportunities in production facilities, with the intention of informing all employees that they too had a responsibility in saving energy.



Interlocked Compressed air Solenoid valves for idle machine; energy efficiency improved by 38%



Zero Heaters - Heat Recovery Project for Production Plating Lines; energy efficiency improved by 46%

