



OUTSTANDING ENERGY MANAGER OF THE YEAR

Panasonic



Mr Mohamed Shahril Bin Jaffar

Mr Mohamed Shahril Bin Jaffar is the Manager of Plant Engineering, Environment, Health and Safety Department at Panasonic Appliances Refrigeration Devices Singapore (PAPRDSG). He is also the Energy Manager who leads the company's Energy Saving Project Team, which consists of engineers and technicians who specialise in energy procurement, energy audits and implementing energy saving projects. Starting as a process engineer, he took on the role of energy manager in 1999 when he was entrusted by the factory to lead energy management activities. Mr Shahril's 22 years of experience in process engineering has helped him to look for energy efficiency (EE) improvements in not only the factory facilities, but also in the manufacturing processes.

Mr Shahril's passion and leadership motivated the team towards achieving the annual Panasonic Corporate Energy Savings Target set for their factory, and led to their factory being accredited as one of the first 'eco ideas' model factories outside Japan. As a result, Mr Shahril and his team had received many awards and recognitions from Panasonic Corporation and local government agencies, such as the Singapore Environment Achievement Merit Award 2010 and the Panasonic Green Factory Challenge Award in 2012, 2013 and 2014. Mr Shahril is very involved in driving EE in his

factory and is constantly looking out for new EE projects, as well as alternative ways to fund EE projects. To avoid utilising his factory's CAPEX expenditure for EE projects, he approached companies to initiate collaborative projects that would not require any initial investment from Panasonic.

These collaborative projects include:

1. Sustainable Green Steam Generation project (collaboration with Biofuel Research Pte Ltd)

This project involved the replacement of diesel with BioOil for PAPRDSG's boiler. It achieved an annual reduction of 1,626 TonCO₂ and fuel cost savings of SGD 29,000.

2. 2.86 MWp Solar PV Generation (collaboration with Sunseap Pte Ltd)

This project involved the mounting of a solar energy system on 7 building roofs. The solar energy system comprised 11,916 pcs of HIT panels, with total solar capacity of 2.86 MWp and an average monthly power generation of 310,000kwh. Through this project, PAPRDSG has achieved an annual reduction of 1,960 TonCO₂ and energy cost savings of SGD 18,600.

3. Air Compressor Efficiency Improvement (collaboration with Sustainable Development Capital Limited (SDCL))

This project involved the replacement of PAPRDSG's old air compressors with 6 new high efficiency air compressors, at no upfront cost to PAPRDSG. The project was commissioned in Q1 of 2016 and has achieved energy savings of 8.43%, which exceeded the potential savings of 6.48% originally estimated through an audit. Through this project, PAPRDSG achieved an annual reduction of 736 TonCO₂ and energy cost savings of SGD 273,000.

Solar Energy System

HIT 2.86 MWp Electricity Generation

Total No. of solar panels: 11,916 pcs installed on 7 building roofs.
Power generation: 310,000 kwh/yr
CO₂ emissions reduction: 1,960 tons/yr

BioOil Project

Benefits:

- 1st Company in Singapore to implement BioOil for Boiler
- ECO (ICEM) educational tour for Students visit.
- SEEA Merit Award 2016 for Continuous Effort in CO₂ reduction activities
- Good "Green" Corporate Image

Air Compressor Efficiency Improvement

8 Units of Air Compressor with COP of 0.9456 W/m³

Replace with 6 Units of New Air Compressor with COP of 0.98956 w/m³

Achieved 8.43% Improvement in COP

To raise EE awareness throughout his factory, Mr Shahril and his team organise a yearly 'Environment Month' campaign to remind employees to appreciate and preserve the environment through EE and energy conservation.

Mr Shahril believes in teaching future generations the importance of environment preservation. For the past 7 years, he and his team have been hosting annual student visits to its 'eco ideas' factory through the Environment Champion Industrial Module (ECIM) programme. Through this programme, students learn about Panasonic's green manufacturing process, including waste metal recycling, waste water treatment process and the use of energy saving products.

Mr Shahril has shown initiative in building his own capability in EE. He is the first Diploma holder to have attained the Singapore Certified Energy Manager certification.

