



WWF Low Carbon Manufacturing Programme (LCMP)

Quarterly Newsletter

April 2019 Issue

Success Story

Ningbo Klite Electric Manufacture Co., Ltd. (“Klite”), located in Ningbo City, is a subsidiary factory of the Zhejiang Klite Lighting Holdings Co., Ltd., which specializes in the manufacture of LED lighting. In addition to technology development, implementation of production facilities automation and real-time intelligent monitoring systems, Klite also strongly supports green activities and actively implements national policies aimed at energy-saving and carbon emissions reduction. The company designed and built a demonstration classroom in compliance with national lighting health standards and produces their own classroom lighting system that has no strobe, glare or blue light. Klite has completed its fourth verification and received the Platinum label. The company has also adopted numerous carbon reduction measures:

- The company installed 2,200 solar PV panels, with each panel’s capacity of 270W on 10,000 square metres of rooftop area. The system has a total capacity 0.6MW and generates around 750,000 kWh annually, which amounts to about 7% of Klite’s total consumption and helps the company to reduce its carbon emissions by 488 tonnes annually.



Solar PV panels

- Recovering waste heat from air compressors, transferring heat through insulation pipe and blower to tampo printing production area, replacing their original heaters and providing heat for drying printing ink, reducing annual electricity consumption by maximum 570,000 kWh and lowering carbon emissions by maximum 370 tonnes annually.



Waste heat insulation pipe

- Coating thermal insulation material on surface of SMT reflow machines and preventing heat escape from reflow chambers to the workshop. This not only reduces power consumption by avoiding continuously raising the temperature due to heat loss in reflow machines, but also reduces cooling needs in the workshop. This helps reduce annual electricity consumption by about 370,000 kWh and lowering carbon emissions by about 243 tonnes annually.



Reflow machine Before improvement



Reflow machine After improvement

Transaction in Guangdong carbon market exceeded 100 million tonnes

The cumulative transaction volume of Guangdong carbon market exceeded 100 million tonnes on March 22, 2019, reaching 100,691,964 tonnes and accounting for 34.33 per cent of the national total, marking Guangdong as becoming the first pilot carbon market in China with a transaction over 100 million tonnes. One of the reasons for Guangdong carbon market always being in a leading position is due to the participating enterprises covering all high-emission enterprises, such as the electricity and steel industries, with annual carbon dioxide emissions exceeding 20,000 tonnes in all Guangdong administrative regions except Shenzhen. The well-developed monitoring, reporting, and verification MRV system also provides a good data foundation for the carbon market. In addition, the diversified carbon products (such as Pu Hui Certified Emission Reduction “PHCER”) also support the development of the carbon market. These experiences have played a key role in connecting to the national carbon market. Find out more here:

<http://cnemission.com/article/news/jysdt/201903/20190300001611.shtml>

LCMP updates and activities

The LCMP is organizing a series of engagement activities over the coming months:

- TESCO Supplier Conference (April)
- RUN FOR WILD 2019 (April)
- Factories conducting LCMP verification (April - June)
- Webinar on energy efficiency and carbon emissions (May)

For more details, please contact the LCMP team!

How inverter air conditioners save energy

Statistical research indicates that inverter air conditioners can save on average forty per cent of electricity consumption compared with the traditional air conditioner with fixed-frequency. How does the inverter air conditioner save energy? The operational principle of the traditional type is to adjust the room temperature by repeatedly turning the compressor on and off. It consumes more electricity as the compressor motor is designed to run at the highest fixed-speed and start-up with a higher current. However, the inverter type with a lower start-up current and equipped with a variable frequency drive can adjust the power frequency, this means the compressor motor speed can be automatically adjusted according to the room temperature and therefore it can save energy. More advantages of the inverter type include lower noise, faster temperature adjustment and avoiding feeling hot and cold in fits and starts.

Low Carbon Manufacturing Starter Programme (LCMP Starter)

LCMP Starter is a new initiative from WWF-Hong Kong. This programme is a one-day onsite assessment and training, helping the factory to kick-start low carbon production. Eight factories from textile, metal fabrication, wooden plastic and other industries have joined the programme, over forty senior management staff have received the professional training. Once the factory joins the programme, a WWF-Hong Kong assigned expert will visit the factory to:

- conduct an onsite assessment and help the factory identify energy efficiency hotspots
- conduct a training for employees on greenhouse gas (GHG) management policy and carbon accounting



Through LCMP Starter, the factory management and employees can learn the following:

- latest energy efficiency technology and measures as well as energy saving potentials through onsite assessment
- the level of investment and level of environmental impact of potential measures
- carbon accounting principles and usage of LCMP carbon accounting tool
- Identification of carbon emissions sources in the factory
- carbon emissions standards
- monitoring techniques of carbon emissions in the factory
- establishment of carbon emissions reduction policy and target
- the importance of energy saving and carbon emissions reduction

After the on-site visit, a comprehensive report will be issued to the factory for setting up its improvement plan. After the training, the factory should disclose the GHG management policy and demonstrate an understanding of how to calculate the carbon footprint, an LCMP Starter certificate issued by WWF-Hong Kong will be awarded for transparent disclosure of its environmental performance.