



## BEST PRACTICES (HONOURABLE MENTION)



### Background of Company

LHT Holdings manufactures wood packaging materials and wood-related products. Overcoming limited space and scarce natural resources, LHT Holdings has transformed from using natural wood to recycled waste wood material. LHT Holdings is recognised for its environmental sustainability strategy with recycling as one of its key pillars. It also plays a vital role in advancing the government's recycling initiative with its pioneering efforts to transform waste wood and horticultural waste into eco-friendly packaging materials and other wood-based products.

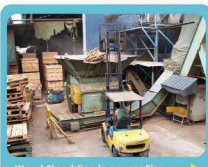
### Project Description

#### Biomass-fired Co-generation System

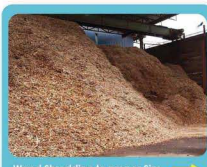
As part of the national efforts in moving Singapore towards a zero-waste nation, LHT began its journey through a "Zero Waste Management" project. Using the wood waste collected from industries and horticulture, LHT converted the wood waste into a fuel source for its 4.5 MW cogeneration plant to generate steam and electricity. The steam and electricity generated were used in drying, pressing, and steaming processes in the production of engineered compressed wood (i.e. Technical wood). As a result, LHT need not operate its natural gas fired boilers.



Waste Wood Collection



Wood Shredding to proper Size



Wood Shredding to proper Size



Metal Separation and hammering



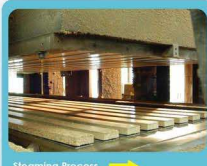
Cogeneration  
4.5 Mega Watt



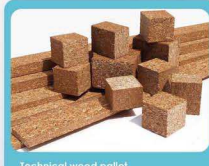
Biomass Energy



Drying + Pressing



Steaming Process



Technical wood pallet

### Results

LHT achieved an annual savings of 878 MWh or S\$99,791. Based on the life cycle carbon analysis done by Singapore Institute of Manufacturing Technology (SIMTECH), the project resulted in 45% reduction in carbon emissions.