



**Biomass Power**



Demand for renewable energy is at the unprecedented level driven by the global effort to pursue sustainable growth and mitigate global warming. Biomass energy is one of the main forms of renewable energy. Therefore, extracting energy from industrial and agricultural biomass waste is not only a way of waste recycling but also renewable energy generation. The development and use of biomass energy also create additional revenue and job opportunity for the local society. It promotes global sustainability and enhances Corporate Social Responsibility performance.



### ecoWise Biomass Power

ecoWise is one of the earliest companies who focused on biomass power development. In 2004, ecoWise developed a biomass co-generation demo plant in Singapore dedicated to research and show-case of biomass power. Through years of development, ecoWise has accumulated prominent experience in biomass power development, management and operation.

### Facts of ecoWise biomass co-generation demo power plant in Singapore

- 2005 full operation started
- 15 tons/hr super heated steam at 260°C/22 Bar
- 1 MW electricity generation capacity
- 100 tons /day wood and horticulture waste recycled
- 1st CDM project in Singapore - waste heat recovery project

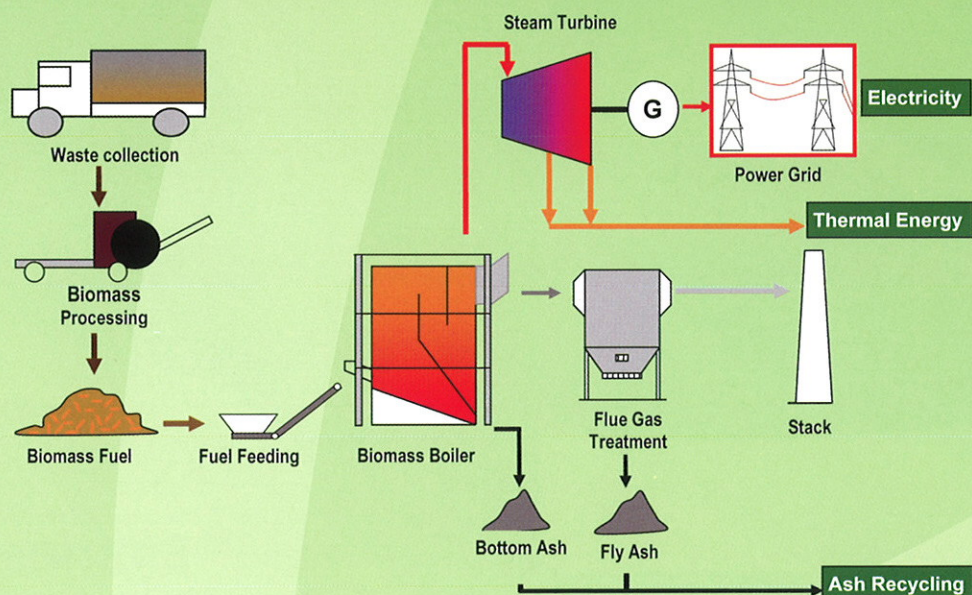
### Suitable Biomass Fuels

- Wood waste
- Horticulture waste
- Agriculture waste, such as straw, stalks, corn cob
- Rice husk
- Palm waste

### ecoWise Experience and Expertise

- Project development, investment and management
- Engineering, procurement and construction
- Management, operation and maintenance (MOM) of biomass power plant
- Biomass fuel management
- Clean Development Mechanism (Carbon Credit) project development
- Ash recycling

### Process Flowchart of Biomass Co-generation Power Plant





全世界追求经济可持续发展以及解决气候暖化的努力决定了对更多可更新能源的需求。生物质能源利用工业和农业生产所产生的生物质固废生产能源,是几种主要的可更新能源之一。它可以在解决固废处理问题的同时生产各种能源。开发和利用生物质能可以充分利用农业废料,增加农民收入,增加就业机会,并生产可再生能源,促进全球可持续性发展。

## 绿科生物质能

绿科是最早开始注重开发生物质能源的公司之一,并于2004年投资建造了新加坡生物质能热电联产示范厂,专用于生物质能源的开发和示范。经过多年的努力,绿科累积了丰富的生物质能发电厂开发,管理和运行经验。

## 绿科新加坡生物质能热电联产厂参数

- 2005年初开始全面运行
- 15 吨/小时 过热蒸汽260°C/22 Bar
- 1 MW 发电容量
- 100 吨废木和园艺固废每天循环量
- 新加坡第一个清洁发展机制(碳汇)项目-废热回收项目

## 适合的生物质能燃料

- 废木
- 园艺废料
- 农业固废,如稻草,各种秸秆,玉米芯等
- 米壳
- 棕油固废

## 绿科在生物质能领域的专能

- 固废处理项目开发,投资和管理
- 工程总承包
- 生物质能厂管理,运营和维修保养
- 生物质燃料管理
- 相关清洁发展机制(碳汇)项目的开发
- 炉灰处理再循环





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