



# Renewable Energy at



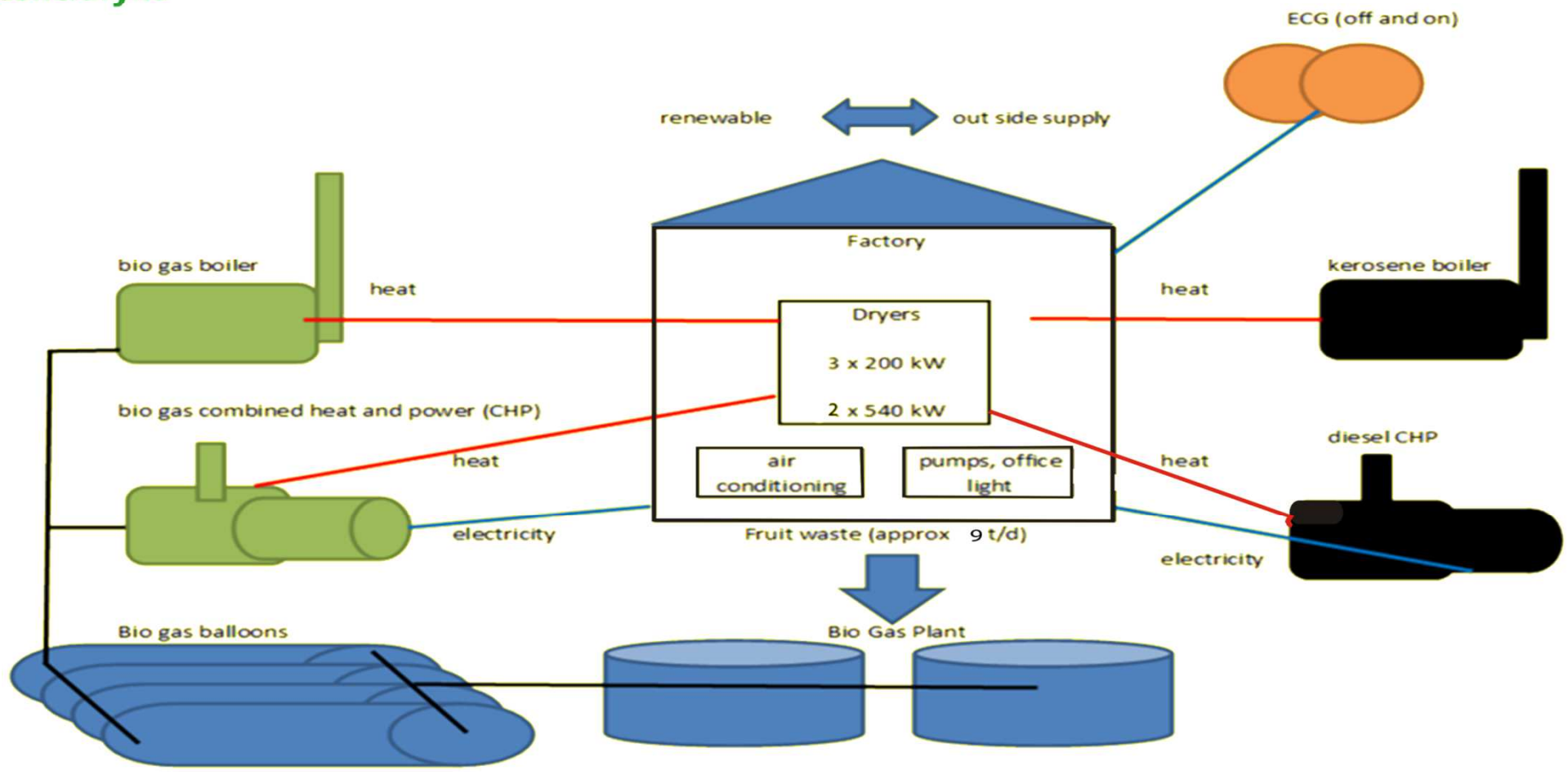


## *Hpw Fresh & Dry Ltd in Short*

- Producer and exporter of dry tropical fruits
- 400 staff
- Process pineapple, mango and coco nut
- Process 20 to 25 t of raw material per day
- Use 15'000 kW of heat and 1'800 kW of electricity per day
- In operation since May 2011



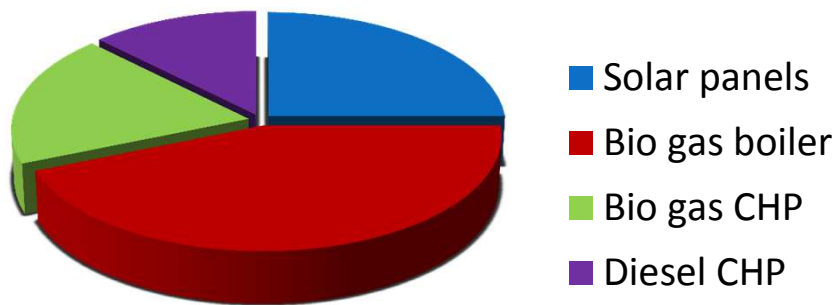
# Energy Supply Concept



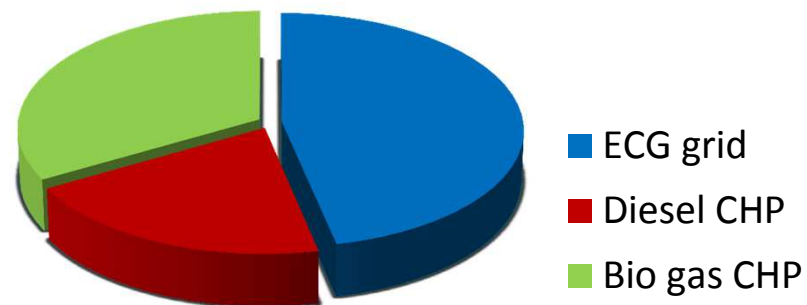


# Energy Supply

### Heat Production

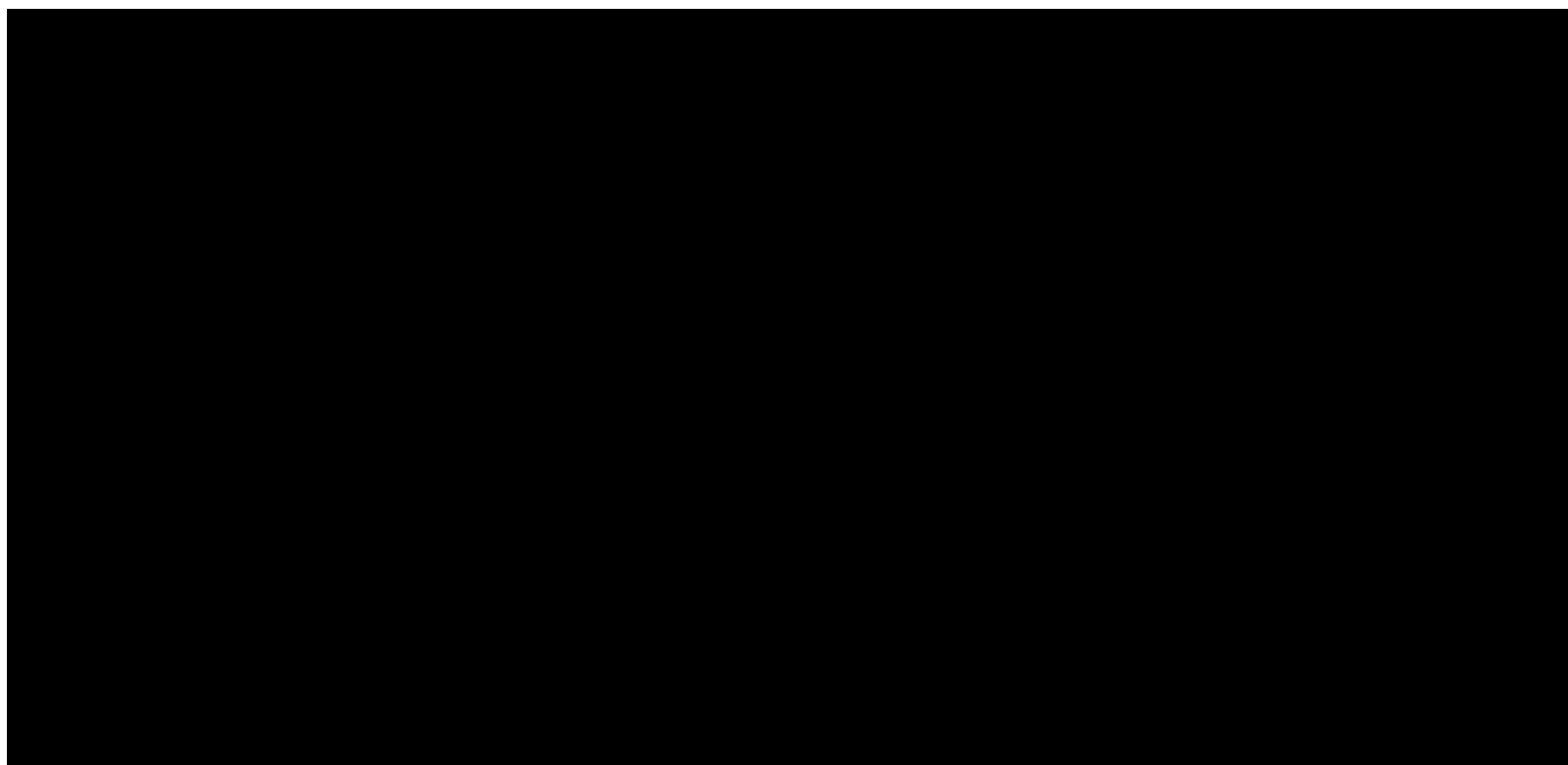


### Electricity Supply





## *Company's Various Activities*





## Feedstock

- Pineapple or mango peels
- Poultry manure
- Palm kernel cake
- Cow dung

Each digester is fed three cubic meters ( $3m^3$ )  
every 2 hours

## *Monitoring*

- pH
- Gas quality
- Air injection pumps (desulphurization)
- Leakages
- Discharge of effluent
- Removal of chaff



## *Gas Production and Usage*

- The average gas produced is 7600m<sup>3</sup> per Week

### **Uses of the gas**

- Boilers
- Biogas generator





## *Benefits*

- Management of the organic waste from the factory.
- Reduction in the use of fossil fuel.
- Reduction in the use of electricity from the national grid.
- Biogas provides about 50% of the heat needed for drying.
- Reduction in the emission of greenhouse gases into the environment.



## *Uses of Effluent*

Used as fertilizer on the organic farm



## *Challenges*

- Capital requirement
- Quality and suitability of equipment
- Gaining experience with specific substrate
- System management
- Access to fresh cow dung

THANK YOU