


THE

# Biomass Powerplant

PT Primanusa Energi Lestari Tanjung
Seumantoh, Aceh Project


AURA GREEN ENERGY

PT. GISTEC PRIMA

# *A Cooperation between International Consortium, PT Gistec Prima Energindo of Indonesia and AURA Green Energy of Japan*

PT Gistec Prima Energindo and AURA Green Energy of Japan started International Cooperation Consortium in developing EFB Biomass Power Plant to aim for global emission reduction and improving Indonesian grid stability in Aceh Tamiang, Indonesia

International Consortium focus on Building and Operating EFB Power Plant through **PT Primanusa Energi Lestari** in Aceh Tamiang to focus on EFB Power Generation

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# PROJECT OUTLINE

## PT PRIMANUSA ENERGI LESTARI

The location : Aceh Tamiang province in Indonesia

The fuel for the power plant: EFB , Palm oil mills residue that is not utilized

The capacity of the power plant is 9.8MW electric power that sold to PLN.

The implementation stucture has been comprised by international consoursium.

Shareholders include state own company PTPN 1

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# JCM PARTICIPATION

This Particular Project has big Environment Savings, and already in the development for 5 years, but the performance of the project not very exciting

Now with Support from Japanese Credit Mechanism, the project was able to start and scheduled for operation in 2021

JCM concept of assisting projects of larger carbon savings is really a breakthrough in the industry.

This project has received Subsidy total of JPY899,999,000 through sales of CO2 of 31,322 ton/year or 626,440 tCO2 for 20 years

Reason for the subsidy amount is that the project
1. Replaces Diesel Generators in the area to generate electricity
2. Dispose of properly Empty fruit Bunches that are hazardous to the environment due to high methane content if left untreated
3. benefits social people through creation of Jobs and palm waste industry
4. Use of Japanese Technology in Equipment and Standard

**"WE MET AURA GREEN ENERGY THROUGH CTBN BUSINESS MATCHING 3 YEARS AGO, AND ENCOURAGE FOR OTHER PROJECTS TO APPROACH THEM IN THIS FORUM"**

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# PROJECT IMPACT

## EMISSIONS SAVING

31,322 $tCO_2$/ year or equivalent to 17,401 passanger car commuting 1 year or 20,000 km

## HOUSEHOLD SUPPLIED

9800 kW is good for 4,454 medium house or 10,888 small house

## JOBS CREATED

more than 174,000 tpy of EFB needed will create 6,400 new jobs

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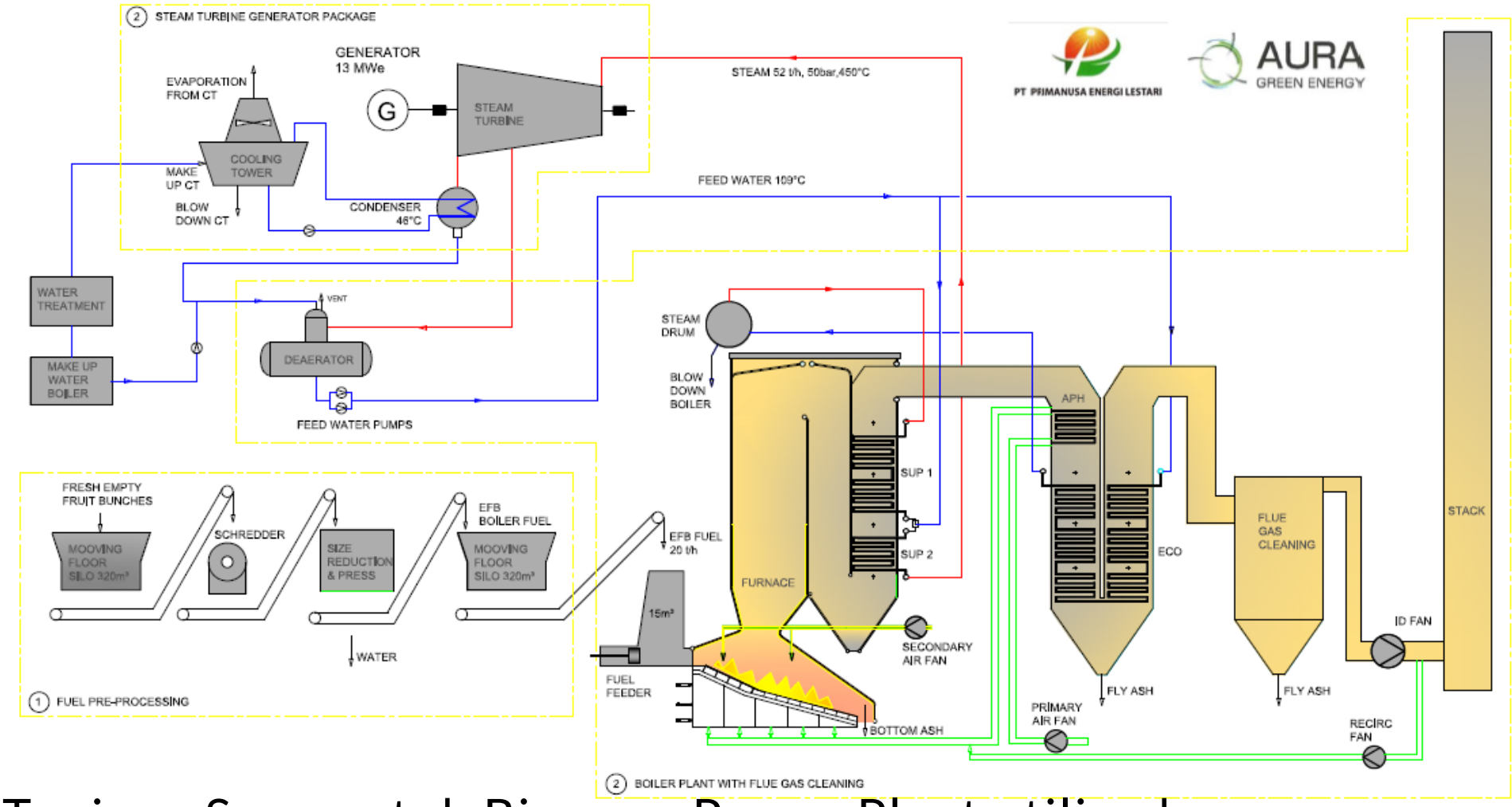
# TECHNOLOGY USED




Tanjung Seumantoh Biomass Power Plant utilized proven, combustion Power Plant

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# TECHNICAL CHALLENGE & SOLUTION

## HIGH MOISTURE CONTENT

*65% Moisture content*

- Low Energy about 1,800 Kcal at 65% Moisture Content
- Need to utilize hammer mill in pressing and shredding for lower moisture content

## CLINKER FORMING IN LOW TEMPRATURE

*Low ash melting point*

- Low Temprature Ash Melting Point
- Clinker Forming at very low temperature (<600 deg)
- Combustion temprature must be lower and air mixture optimized to maintain efficiency

## STICKY TAR FORMING

*High Potasium Tar Forming*

- Low ash melting point forms Tar that might be hazardous to power plant equipment can cause downtime
- Need high degree of automation to control the combustion chamber to preserve temprature
- Automated cleaning in power plant to minimize downtime

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# THANK YOU

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