AURA
GREEN ENERGY

AURA Group Business Summary 2019

DRAFT Strictly Confidential

COOPORATE HISTORY

AURA GREEN ENERGY

2008

In Aomori, we started a nursing care business such as Nursing home for elderly. With the advent of an aging society, we are steadilyexpanding our business in Aomori Prefecture.
（AURA Co.,Ltd)

A big earthquake occurred mainly in Tohoku region on March 11, 2011.
Although the damage caused by the tsunami escaped at our nursing home,we have experiences that the building was damaged and the residents were put in danger of life due to blackouts.

On the occasion of the earthquake disaster, from the perspective of resilience against disasters and business continuity, we started a renewable energy power generation business to secure our own power supply and heat source. After that, we promoted a business model that combines renewable energy generation business with agriculture and fishery. That is because we have our business base in local cities.

2019

Today, not only the renewable energy generation business (photovoltaic power generation, wind power generation, biogas power generation, biomass power generation), nursing care business, but also garlic production business utilizing biogas digestive liquid, sea cucumber cultivation business utilizing wind power generation We are making efforts to expand complex related business while making full use of the regional characteristics of the site location.

Business Summary

BUSINESS POLICY

AURA GREEN ENERGY

We promote...

“ New Resources recycle business from Aomori ”

We aim to realize recycling business with 100% renewable energy power supply.
We will strive to realize a harmonious society of "low carbon", "Resource recycle" and "harmony with nature”

Since Renewable energy power generation is an independent power supply, utilizing the power/heat source for agriculture and fishery, it enable to make resilience system for local industries against disasters.

“ From Aomori to Nation wide...to the world ”

We will develop “New Resource recycling business” business to Asian country from Aomori'.

Resource recycling business utilizing renewable energy,
We will expand the model to Southeast Asia.

GROUP INTRODUCTION

株式会社 あうら
Aomori Welfare Life Support

http://www.aura-group.jp/

We operate 20 nursing homes and 15 facilities in Aomori Prefecture, and qualified personnel include 19 nursing care specialists, 46 nurses, 3 physical therapists,1 occupational therapist, and 126 care workers, 241 nursing helpers . We provide a comprehensive residential-type nursing home for the elderly and nursing care services that take into consideration the aging society of Aomori Prefecture.

LIST OF FACILITIES

Aomori City, Aomori

Visiting care
Aura Welfare Equipment
Home care support center Aura
Visiting nursing station Aura
Day Service Center Aura
Senior garden
Senior Garden Apple Village
Senior Garden Sakuragawa
Residential pay nursing home aura
Residential pay nursing home aura Soyokaze
Residential pay nursing home Aura Kagayaki
Senior Garden Hamadate
Residential pay nursing home Aurahamadate
Senior Garden Yaeda
Senior garden Minatocho

Hirosaki City, Aomori

Minori Helper Station
Home care support center Minori
Senior Garden Minori no Sato
Senior Garden Ohara Minori no Sato
Day Service Center Minori

Mutsu City, Aomori

Asunaro Helper Station
Home care support center Asunaro
Home care support center Namiko
Senior Garden Matsukaze Forest A Building
Senior Garden Matsukaze Forest Building B
Senior Garden Matsukaze Forest C Building
Day service Namiko
Residential type nursing home Asunaro

Hachinohe City, Aomori

Helper Station Aura Hachinohe
Home care support center Aura Hachinohe
Senior Garden Naganayo
Senior garden family

Sendai City, Miyagi

Pure Life Kyohara

GROUP COMPANY

SMART AGURI http://kuro229.net/

Cultivating garlic and producing black garlic in the local Aomori,
utilizing residues from biogas power generation as liquid fertilizer.

Company Name	Agricultual Production Company AURA SMART Agri
Head Office	Takashige Bld 2F 2-1-3 Dainitonyamachi Aomori City
Business	Garlic,Mellowed Black Garlic Manufactur

We are producing sweet and delicious black garlic by aging for 30 days
by our own developed warefare equiped with special stone that gives
infrared rays.

BLUE OCEAN JAPAN http://blueocean-j.net/

Sea cucumbers have been loved by Japanese since ancient times, and frequently eaten
in Aomori Prefecture. In recent years its ingredients have been drawing attention.,as studies
have shown that it kills cancer cells. We will increase local produce of sea cucumber and aim to
supply to the world.

Company Name	Blue Ocean Trade Co.,Ltd
Head Office	2-10-13 Minatomachi Aomori City
Business	Dried Sea Cucumber, Sea Cucmber Supplement Sales

GROUP COMPANY

AURA GREEN ENERGY

http://a-ge.jp/

Company Name	AURA Green Energy Co.,Ltd
Head Office	Takashige Bld 2F 2-1-3 Dainitonyacho Aomori City
Representative	Yukio Kawagoe
Established in	Oct. 2015
Capital	45,000,000JPY
Business	Renewable energy business
Major bank	Michinoku Bank, Aomori Bank
Audit corporation	Audit corporation Avantier
Association, Affiliated organization	General Incorporated Assosiation Resilience Japan Promotion Council http://www.resilience-jp.biz/
Group company	agricultural production corporation Aura Smart Agri Blue Ocean Japan Co., Ltd. PT.AURA ENERGY PREMANUS

Directors

Representative	**Yukio Kawagoe** agricultural production corporation Aura Smart Agri
Director	**Hiroshi Kawamura** Ex-General Manager of General Affairs Department , Aura Co., Ltd.
Part time Director	**Yasufumi Furuya** Doctor of Engineering, Professor, Tohoku University, Emeritus Professor, Hirosaki University Visiting Professor, Advanced Science Research Center, Yokohama National University
Auditor	**Kazumasa Odagiri** Ex- Micronics Japan Co.,ltd. Aomori Sales office manager
Part time Auditor	**Shinichi Ibuki** Ex-Aomori Prefecture Planning Policy Department Deputy Director Ex-Mutsu Bay Ferry Managing Director Akita kenjinkai chairman, adviser of international exchange group
Part time Auditor	**Shuichi Yoshimura** Co-representative of Picotec Co., Ltd. Representative Director of Sakura Research Institute, Ltd.

NEW RESOURCES RECYCLE BUSINESS FROM AOMORI

AURA GREEN ENERGY

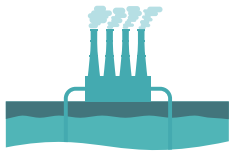
Business Development in Local Resilience system for local industry

Utilization of surplus power source, independent power source,
heat source, waste liquid etc in renewable energy generation

Renewable Energy Power

- Wind Power Generation
- Geothermal power generation
- Biogas Power Generating
- Biomass Power Geting

compact wind power generation project
in Aomori , Hokkaido district
(acquired ID,500 around locations)



at Aomori City

Small Scale Biomass Power Generator
to utilize heat for Nurse care facility or begetable factory.

Development of regional industry by Utilization of surplus power.Heat,etc.

Utilization of surplus power source,
independent power source

Utilization of surplus power source,
heat source, independent power source

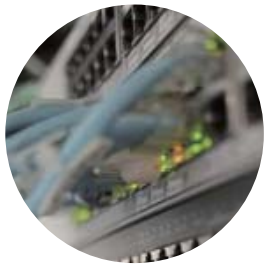
Utilization of independent power source,
waste liquid, etc.

Utilization of surplus power
source, heat source

Collaboration

Agriculture/Fishly

By surplus power supply
Server business



Black garic production
"Severe cold in Aomori"
make it delicious

Sea cucumber
cultivation
business

Container type
begetable
factory

Business Summary

OVERSEAS BUSINESS

AURA GREEN ENERGY

Expansion to Asian Market

Export of “Local production for local consumption type power system” and “Resource recycling business”

Approach to Southeast Asia

- Contribute to mitigating global warming by promoting technologies, products, systems and services to reduce CO2. We also contributes to the sustainable development ofdeveloping countries.
- Help Japan to achieve greenhouse gas emission reduction reduction targets.
- Contribute to the achievement of the objectives stipulated by the UN Framework Convention on Framework Convention.

Approach to 12MW biomass power generation business by JV with local companies

adopted JCM (Joint Crediting Mechanism) in 2018

Aiming for the creation of a sustainable community by utilizing the JCM “Joint Crediting Mechanism ” to tackle global warming and to export the Aomori local production for local consumption model using enewable energy.

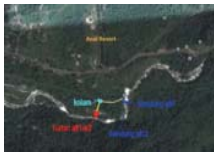
Utilization of power plant waste and heat sources for agriculture, etc.

Collaboration with government companies

PT. GISTEC PRIMA

Approach to 2MW Hydrow power generation business by JV with local companies

adopted JCM (Joint Crediting Mechanism) in 2019



Selling electricity to power companies

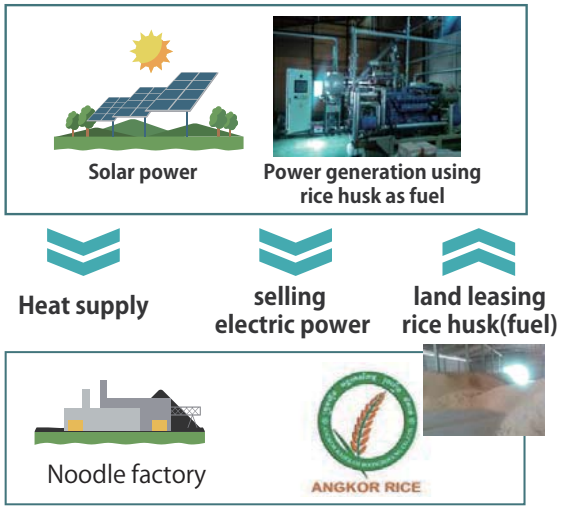
Utilization of surplus power Used as an emergency power source

Business Summary

OVERSEAS BUSINESS DEVELOPMENT

AURA GREEN ENERGY

Hybrid power generation business by solar and biomass power generation in cooperation with Cambodia local companies (Major Rice Mill Company)



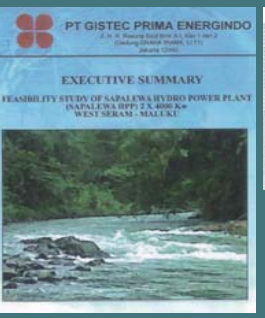
Cambodia has developed to maintain a GDP growth rate of 7% over the last 10 years ,since it it a resource-poor country , power shortages are still an issue.. On the other hand, the main industry is rice production, and there are 20,000-30,000 rice mills om Cambodia.

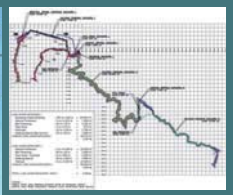
Aimed to build a system model in cooperation with the major rice mill company AKR, 1MW solar power generation and 500kW biomass power generation will installed in the rice mill . The heat generated from Biomass power plant will used in noodle factory to supply optimal energy to the region. (planned to completed in 2020)

Hybrid power generation business by solar and biomass power generation in cooperation with Cambodia local companies (Major Rice Mill Company)

Other power generation projects in collaboration with local companies are under consideration.

Hydroelectric generation project





Indonesia
- 13MW MULUKU
- 8MW JAWA
- 2MW SUMATRA
- 2MW BALI

Biomass power generation project

Power generation business from waste liquid from food factories (Indonesia Sumatra)

Palm Factory Waste Liquid (POME) Power Generation Business (Indonesia Sumatra)

Garbage power generation project

Waste power generation by subcritical water treatment technology (hydrolysis treatment)

Contribute to solving the power shortage problems in Indonesia, Philippines, Cambodia .

Business Summary


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

info@gistec-prima.com

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

info@gistec-prima.com

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"

info@gistec-prima.com

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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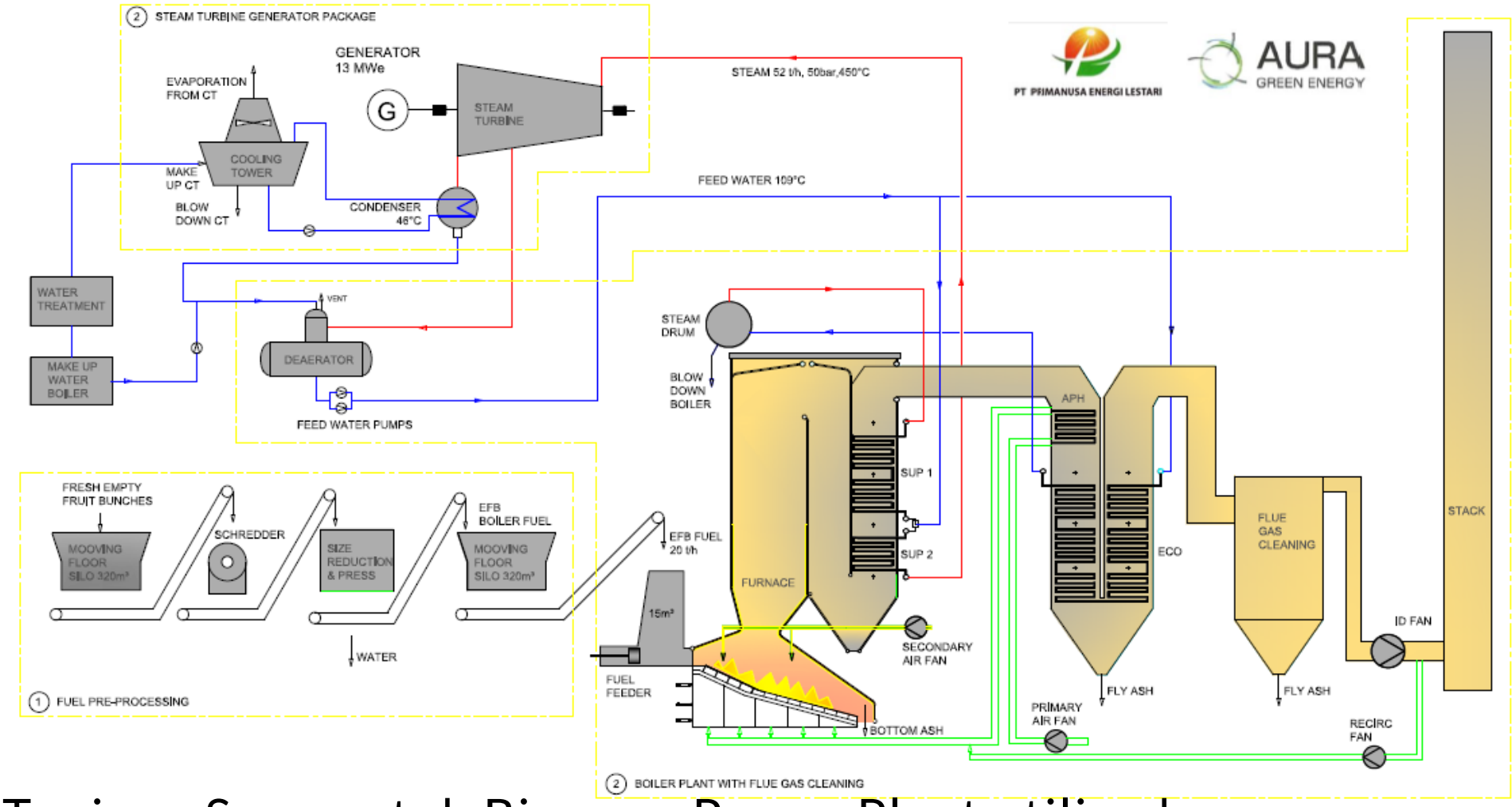
TECHNOLOGY USED



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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www.a-ge.jp

THANK YOU

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