

**AURA**  
GREEN ENERGY

# COMPANY PROFILE

AURA-Green Energy Co., LTD.

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.

2020年6月

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

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

Resource-recycling business model using renewable energy,  
We will expand it to Southeast Asia.



# COMPANY PROFILE

## ■ Corporate history

**October,2015** Established as a renewable energy business company in Aomori City, Aomori Prefecture  
Capital 3 million JPY

**August,2016** First small wind power plant started operation

**October,2016** Small wind power generation business started in Hokkaido

**August,2017** Increased capital to 15 million JPY  
Issuance of stock acquisition rights

**October,2017** Full-scale initiatives for small biomass power generation business  
Received the “Best Resilience Award” at Resilience Products Exhibition

**May,2018** Ministry of the Environment JCM Project (Southeast Asia) Initiatives

**March,2019** Ministry of the Environment JCM Project Adopted Aceh (Indonesia) Biomass Power Plant  
Development of GEMCOS (Surplus power storage system)

**August,2019** Increased capital to 45 million JPY

**October,2019** Ministry of the Environment JCM Project Adopted Flores (Indonesia) Hydropower Station

**June,2020** Ministry of the Environment JCM Project Adopted Kandal (Cambodia) Hybrid Power Plant

**September, 2020** Kawasaki City Adopted Intercity Collaboration Consignment Business of Biomass power generation In Riau, Indonesia

**February,2021** Ministry of the Environment JCM Project Adopted Marc (Indonesia) Hybrid Power Plant

## ■ About us

Company Name	AURA Green Energy Co.,Ltd
Head Office	Takashige Bld 2F 2-1-3 Dainitonyacho Aomori City Aomori Japan
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 <a href="http://www.resilience-jp.biz/">http://www.resilience-jp.biz/</a>

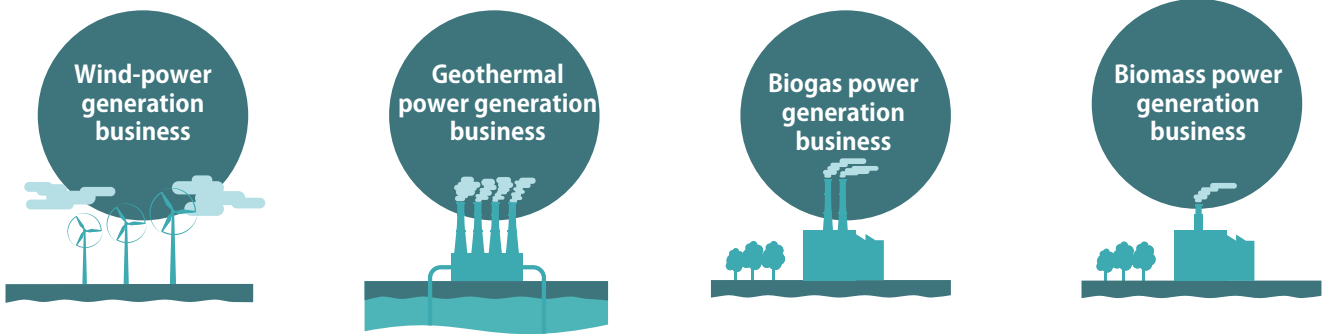
Group company  
agricultural production corporation Aura Smart Agri  
Blue Ocean Japan Co., Ltd.  
PT.AURA ENERGY PREMANUS



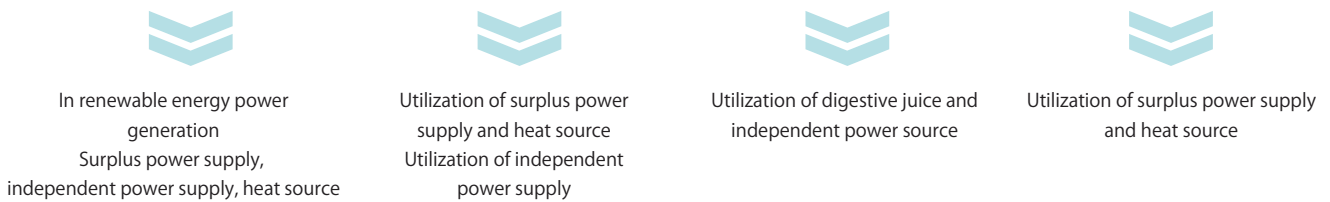
# Resource recycling business model from Aomori

The renewable energy power generation business is an independent power source, and by utilizing the power source and heat source for agriculture and fisheries, etc. We aim to strengthen local industries.

## Renewable energy



## Expansion of local industry by utilizing power supply, heat, waste liquid, etc.

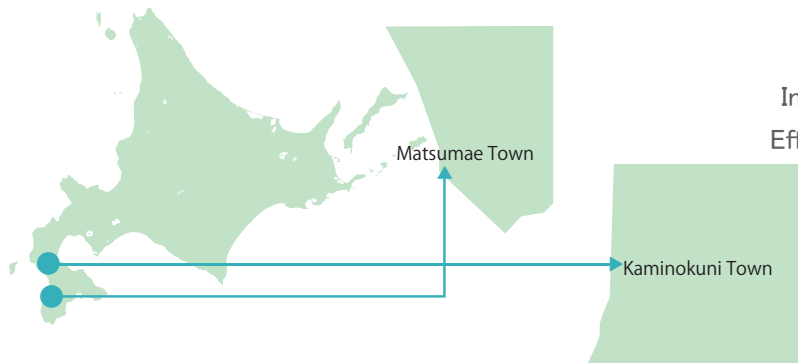


## Collaboration between local farmers and fishermen and renewable energy



# Business development in Japan

## Small wind power generation business



power plant project  
Joint SPC project

Project Finance Initiatives

Installation of solar power generation under the windmill  
Efforts of agriculture and sheep raising under the windmill

GEMCOS (Utilization of surplus electricity)

Emergency power supply   IoT power supply   Server power supply

## Large-scale offshore wind power generation business

Under development in Nemuro, Hokkaido



### Initiatives for large wind farms

- 2MW wind farm under development at Onnemoto, Nemuro
- NEDO Wind condition 8m
- Scheduled to be connected in 2022
- Annual power sales 200 million yen (forecast)



### Initiatives for offshore wind farms

It is one of the global trends in the energy field.  
Offshore wind power generation.  
Environmentally friendly offshore wind power because it is a major marine resource country  
Will be actively commercialized.



## Biomass power generation business

Build the best project for your area and reduce stability and continuity risk.  
Select equipment with high cost performance from manufacturers all over the world to reduce initial cost.  
A lineup that supports various biomass fuels and scales not only in Japan but around the world.  
Effectively utilize the exhaust heat generated during power generation to maximize energy  
Further enhance profitability.

## Power generation product lineup corresponding to the target market (target fuel and power generation scale)

Fuel cost	1kw	~ 50kw	~ 500kw	~ 2MW	~ 20MW
<p><b>Solid fuel</b></p> <p>Abandoned chips Agricultural waste Pruned branches, mushroom waste bed Bamboo chips Rice husk, PKS Wood pellets</p> <p><b>Gas fuel</b></p> <p>methane gas</p>	<p>1) Stirling engine (1~7kw) ● Maker : GPT ● Efficiency: about 10%</p>	<p>1) 50kw gasification power generation ● Maker: ESPE ● Efficiency: 20 ~ 25%</p>	<p>2) Low pressure BTG (steam turbine) ● Manufacturer: Huatai and others ● Efficiency: 7 ~ 12%</p>	<p>4) High pressure BTG (steam turbine) ● Manufacturer: China, EU ● Efficiency: 18 ~ 25%</p>	<p>5) Low cost methane gas power generation system ● Manufacturer: Boselan Tank ● Efficiency: 20 ~ 25%</p>
	<p>● Yamagata Prefecture in operation Utilization of ash (smoked charcoal) Utilization of heat (vinyl house)</p>	<p>● Yamagata Prefecture selling electricity (FIT2018) ● Miyazaki Prefecture plan ● Aomori Prefecture plan</p>	<p>● Yamagata 50kw under construction ● Hyogo 100kw under construction ● Miyazaki 50kw application</p>		

● Indonesia 12MW under construction  
2018 JCM adopted  
● Indonesia horizontal expansion plan  
Adopted urban cooperation in 2020 (FS survey)

# Overseas business development

## Ministry of the Environment JCM Project Adopted Aceh (Indonesia) Biomass Power Plant

This project is Indonesia's national interest, emissions from palm oil production. Fuels such as empty fruit bunches (EFB) and other fuel bunches (EFB) are used as fuel to generate biomass power, and green energy is replaced with renewable energy. Exhaust CO2 emissions.

EFB etc. kiss biomass power generation or belt conveyor from the furnace. Boiler biomass, ash-free removal function A solid-state fireplace and a production control system for the temperature inside the furnace are used to realize the generation of clinker in the EFB.



## Ministry of the Environment JCM Project Adopted Kandal (Cambodia) Hybrid Power Plant

Greenhouse gas (GHG) emissions by installing a rice husk-fueled biomass power generation facility (0.5 MW) and a solar power generation facility (1.0 MW) on the premises of a rice mill in Kandal and selling electricity to the rice mill And contribute to solving the power shortage in the country.

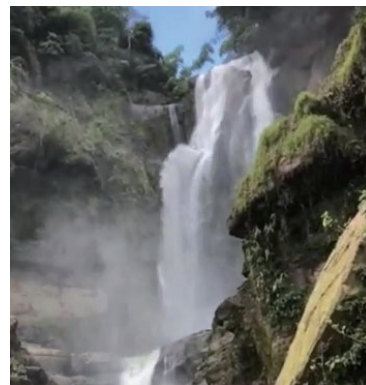
This project embodies the measures of the "Phnom Penh Climate Change Strategic Action Plan" formulated in the intercity collaboration project between Kitakyushu City and Phnom Penh.



## Ministry of the Environment JCM Project Adopted Flores (Indonesia) Hydropower Station

Introduced a 2 MW small hydropower facility on the Wae Lega River (basin area: 20 km2) on the Flores island in East Nusa Tenggara to sell electricity to Indonesian state-owned power companies and greenhouse gases. Reduce (GHG) emissions.

The electrification rate of East Nusa Tenggara is 61.9%, which is the lowest in the country. Therefore, it is expected that this project will improve the electrification rate.



## Ministry of the Environment JCM Project Adopted Marc (Indonesia) Hybrid Power Plant

In this project, 8 MW of small hydroelectric power generation (4 MW x 2 units) will be introduced into the Sapalewa River, which flows through the provinces of West Serum, Maluku, and will be sold to the Indonesian National Power Company (PLN) to produce greenhouse gases (GHG). Reduce emissions.

In addition to direct job creation in Maluku, this project will contribute to building a foundation for industrial creation.



# Business development for the future

## Biogas power generation business



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 .

Development of a logistics system that utilizes energy harvesting, which is responsible for the power of IoT

## Energy harvesting element utilization business



### Expansion into logistics business

Energy harvesting (energy harvesting) is a technology that obtains minute energy from the surrounding environment and converts it into electric power.

Various power generation technologies from different energy sources such as heat, vibration, and radio waves have been studied.

Energy harvesting involves a wide range of fields, including applications in functional materials, power generation devices, and IoT devices.

We share information with researchers and engineers, and are proceeding with development for further development and practical application of energy harvesting.

Uses high-performance thermoelectric conversion element and vibration power generation alloy (under development at Tohoku University).  
Container status monitor IoT sensor power supply + small battery measures will be taken.



vibration



Convert to power

## AURA-Green Energy Sales Strategy

-01-

### Collaboration with alliance partners

• Joint development of power plants with alliance partners, Increase the number of power plants owned by joint SPC

• Biomass power generation business  
Recycling business using waste heat and waste

• Advance into Asian market  
Joint business with overseas partners

Export of business model from Aomori

-02-

### Power plant business

• Pursuit of high performance as an investment management product  
Securing a favorable location for the power plant in collaboration with the local community Efficient system and operation

• Initiatives for commercialization of financial products  
Project finance fund established, carbon credit

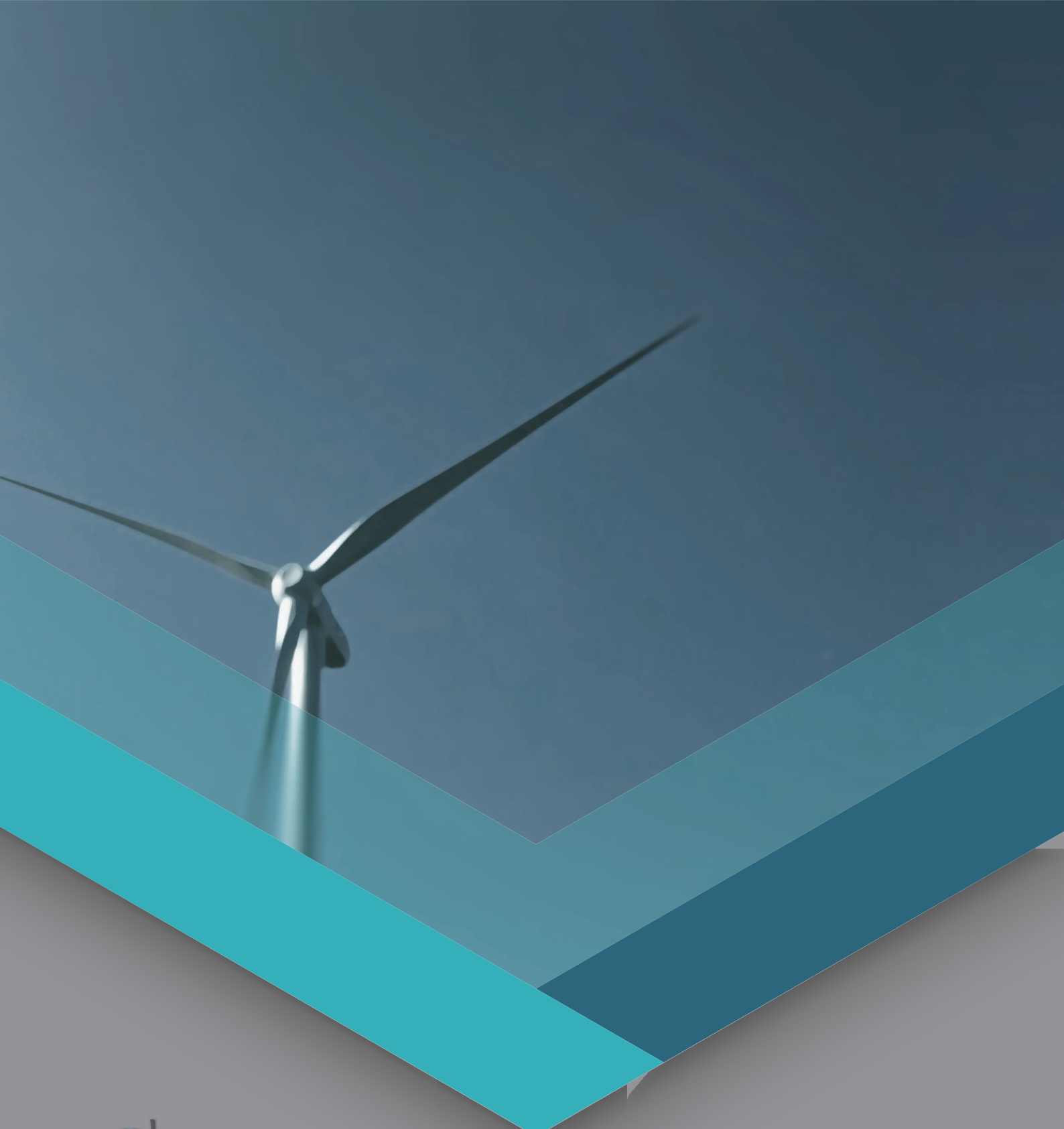
• Aiming for 100% renewable energy

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### Circular business

• Cost reduction effect due to waste heat and waste use

• Support local businesses by utilizing surplus power and independent power sources



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