



SUSTAINABLE BUSINESS FOR CARBON NEUTRALITY

For a Virtuous Cycle of Environment and Growth Vol.3



Intro

This catalog is compiled as part of a project named “Thailand-Japan Sustainable Business Seminar and Business Matching for Carbon Neutrality (CN)”, organized by Japan External Trade Organization (JETRO) Bangkok.

Both Thailand and Japan are working on achieving carbon neutrality, with the former promoting “BCG Economic Model” as its national strategy and the latter formulating the “GX (Green Transformation)”. In the pursuit of accelerating a virtuous cycle of environment and growth, the need for government-private collaboration and international cooperation between the two countries is an important key point.

In January 2022, JETRO Bangkok renewed and signed the Memorandum of Cooperation (MOC) with the Eastern Economic Corridor Office (EECO) and Thailand Board of Investment (BOI). This will help further deepen our existing close partnership with the EECO and BOI, and build an even more resilient supply chain between Japan and Thailand, making contribution to the policies of both countries including BCG policy of Thailand and stimulating investment from Japanese companies to Thailand.

As the concrete initiative based on the MOC, JETRO Bangkok held a webinar on sustainable business for achieving carbon neutrality in February 2022 with the EECO, in November 2022 with the BOI, and co-organized with the BOI and the EECO in November 2023. In the webinars, we introduced the government-private efforts, made in line with the policies of both countries. We also conducted a business matching event between Japanese and Thai companies. As a result of this event, new businesses are being created.

This catalog introduces the products, technologies and services of the Japanese companies that joined the business matching event in Japanese, Thai, and English languages, as examples of sustainable businesses aiming towards achieving carbon neutrality. We hope that this catalog contributes to promoting more sustainable businesses in Thailand and eventually in the ASEAN region.

Lastly, we would like to express our sincere gratitude towards the EECO, the BOI and everyone involved in the project.

February, 2024

Japan External Trade Organization (JETRO) Bangkok



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Fields for Potential Application







In this catalog, we introduce sustainable businesses by Japanese companies with the potential of contributing to achieving carbon neutrality globally. These businesses are categorized into nine categories based on their potential field(s) of application with indication by corresponding icons. For businesses that can be applied to more than one field, you will find multiple icons.





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Providing sustainable plastic material. Tapioca-based biomass plastic compound	Hitachi High-Tech (Thailand) Ltd.	 	24
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Chemical-free water treatment system using electrolysis technology High-efficiency electrolysis wastewater treatment system "MICRO WATER SYSTEM"	Igaden Co., Ltd.	  	26
Supporting the CO ₂ reduction goals in factory Energy-saving Solutions for factory	IHI ASIA PACIFIC (Thailand) Co., Ltd.	  	27
Liquid filter with zero industrial waste Element-less filter "FILSTAR"	Industria (Thailand) Co., Ltd.	 	28
Up Cycle project from clothing to clothing RENU	IPA (Thailand) Co., Ltd.	 	29

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Upcycling the by-products of sugar manufacturing Plant-based PET resin	Iwatani Corporation (Thailand) Ltd.	 	30
Next generation innovative photovoltaic system integrated with building's exterior walls and windows T-Green® Multi Solar (Abbreviated material name: T-GMS)	Kaneka (Thailand) Co., Ltd.		31
Contributing to the realization of a sustainable circular economic society. High standard recycling factory	KI-ECOTECH Co., Ltd.		32
Solutions for Decarbonization Installation of Solar Power System (Corporate PPA, Self-Investment)	Marubeni Green Power Asset (Thailand) Co., Ltd.		33
Next generation air-cooled sealed dry cooler. ecobrid	MATSUI (ASIA) Co., Ltd.	 	34
Achieving non-coagulation and small-footprint rainwater treatment High Rate Filtration system	METAWATER Co., Ltd.		35
Large-scale cost reduction by reducing sludge volume Sludge volume reduction technology that achieves near-zero excess sludge in oil-bearing water treatment	Mitsubishi Chemical Aqua Solutions Co., Ltd.		36
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CO ₂ emission-free hydrogen boiler High efficiency hydrogen-fueled flow-through boiler	Miura Industries (Thailand) Co., Ltd.		38
Polymeric flocculant that promotes a circular society ARON FLOC C series, E series	MT AquaPolymer, Inc.	 	39












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Key device for a sustainable society Lithium-ion Capacitor	Musashi Asia Co., Ltd. (Musashi Energy Solutions Co., Ltd.)		40
Plastic that is still eco-friendly even when burnt green nano (functional masterbatch)	Nagase (Thailand) Co., Ltd.		41
Creating an eco-friendly comfortable space LONG FAN Series	NISSHINTOA IWAO INC.		42
Smart city concept with IoT lighting equipment as its core Next generation LED street lights with high extensibility	NMB-Minebea Thai Ltd.		43
First plant-based leather in Asia Pineapple leather	PEEL Lab K.K.	 	44
Next-generation LED lighting RENTIA Demand control system specializing in air conditioning Ai-Glies	RECOMM BUSINESS SOLUTIONS (THAILAND) CO., LTD.		45
Soil analysis, fertilization optimization, and decarbonization of farmland using satellite data Generation and sale of agriculture-derived carbon credits	Sagri Co., Ltd.	 	46
Solution for reducing electricity expenses and CO ₂ emissions: Installation of solar power generation system.	Sharp Solar Solution Asia Co., Ltd.		47
Generating clean energy Steam turbine	Shin Nippon Machinery Co., Ltd.		48
Clean energy implementation that can be started right away Solar energy corporate PPA	Shizen International Inc., Representative Office in Bangkok		49

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Recycling waste organic solvents used in cleaning Distillation and regeneration of used organic solvent	Siam Somar Co., Ltd.		50
From biomass and waste to utilization of steam, electricity, and CO ₂ Biomass / Waste to Energy plant	Siam Takuma Co., Ltd.	  	51
Zero Energy Radiative Cooling Material SPACECOOL®	SPACECOOL INC.		52
Total solution provider for environment and recycling sphere 3Rs solutions for industrial waste, water treatment, energy saving	Sun-up Corporation (Thailand) Limited	 	53
Precious metal catalyst that will contribute to the decarbonized society Reforming catalyst, PROX catalyst and Oxidation catalyst	Tanaka Kikinzoku International (Thailand) Co., Ltd.	  	54
New replacement material for plastic and paper made with limestone as its main material Environment-conscious material LIMEX	TBM Co., Ltd.		55
Evaluating the potential and risk of a land through satellite data and AI Land evaluation engine - Tenchijin COMPASS	Tenchijin, Inc.		56
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Plant-based biomass plastic raw material Bio-polyol "ECONYKOL®"	Thai Mitsui Specialty Chemicals Co., Ltd.		58
CO ₂ Capture and high purity Regeneration Energy-saving CO ₂ capture equipment (ESCAP®)	THAI NIPPON STEEL ENGINEERING & CONSTRUCTION CORPORATION LTD.	  	59

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Sustainable agriculture using microorganism cultivation technology high-performance biochar “Soratan”	TOWING Co., Ltd.	 	61
Challenging the world with new technologies Connecting the circle of ecology with rice husks for warmth Grind Mill・Rice husk solid fuel production equipment	Tromso Co., Ltd.	 	62
Sludge dehydrator that can significantly reduce the amount of sludge generated in water treatment JD Series	TSURUMI PUMP (THAILAND) Co., Ltd.	 	63
Small-sized biogas system that can fit into a container Small-sized methane power plant	Vioce Co., Ltd.	 	64
Visualizing GHG Emissions from Products and Overall Business Operations A Solution for Calculating and Visualizing Greenhouse Gas Emissions	Zeroboard Inc.		65

Recycling fly ash, sewage sludge ash and the likes into adsorbent/antibacterial material CircuLite

AC Biode Co., Ltd.





UPCYCLING ASH TO...
CLEAN SOIL,
OIL SPILLS,
CAPTURE CARBON

CIRCULITE
An ACBIODE product

THE OPPORTUNITY

Ash mostly ends up in landfills, but we can turn ash into:

 Ash Mostly end up at landfills just as waste	 COVID-19 Huge demands for masks and filters	 Agriculture Contamination Contaminated from fertilizer and heavy metals	 Industry Contamination Toxic materials from emissions	 Nuclear Contamination After a Nuclear accident
Antibacterial (filters, masks)	Neutralize NPK fertilizer	Filters	Decontaminate radioactivity	

Service and Technologies

CircuLite = multi-purpose chemical product made by upcycling fly ash, bio-mass ash, sewage sludge ash, alumina waste, lithium by-products etc. They use the ash previously used for landfill or cement as adsorbent and antibacterial material to replace active charcoal and zeolite and used for purposes such as filtering, soil quality improvement, water quality improvement, deodorants, cosmetics and so on. They provide upcycling technology, and also sell CircuLite itself.

Sustainability

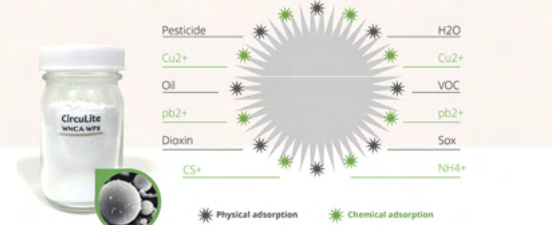
For the treatment of ash, it will cost around a few million to few 100 million JPY. CircuLite enables the upcycling of such ash into a high added value product, and it has been confirmed to absorb carbon dioxide, which can make it a replacement for high-cost adsorbents such as zeolites.

Experience



The company builds an upcycling factory for CircuLite adjacent to a power plant/sewage sludge incineration facility. They already have completed cases in Japan and Taiwan, and investment payback can be expected in around 3 to 4 years. Various types of ash can be used to upcycle into CircuLite with stable quality, and by adding an ion exchange function to it, it can become an adsorbent capable of absorbing both physically and chemically. It has also been confirmed to absorb carbon dioxide, and we can expect that the production will cost less than one-tenth of the previous method.


TECHNOLOGY

CircuLite: $\text{CaO} \cdot \text{SiO}_2 \cdot \text{Al}_2\text{O}_3 \cdot n\text{H}_2\text{O} + a$



Pesticide	H ₂ O
Cu ²⁺	Cu ²⁺
Oil	VOC
Pb ²⁺	Pb ²⁺
Dioxin	Sox
CS ⁺	NH ₄ ⁺

 Physical adsorption
  Chemical adsorption



Company Information

Company Name: AC Biode Co., Ltd.
Industry: Chemical, medicine, petrochemistry and coal product manufacturing
Address: 498-6 Hanazono-cho, Iwakura, Sakyo, Kyoto, Kyoto 606-0024
Website: <https://www.acbiode.com/-circulite>
Affiliated Company in Japan: Same as above
Contact: tadashi.kubo@acbiode.com (Kubo)

Message

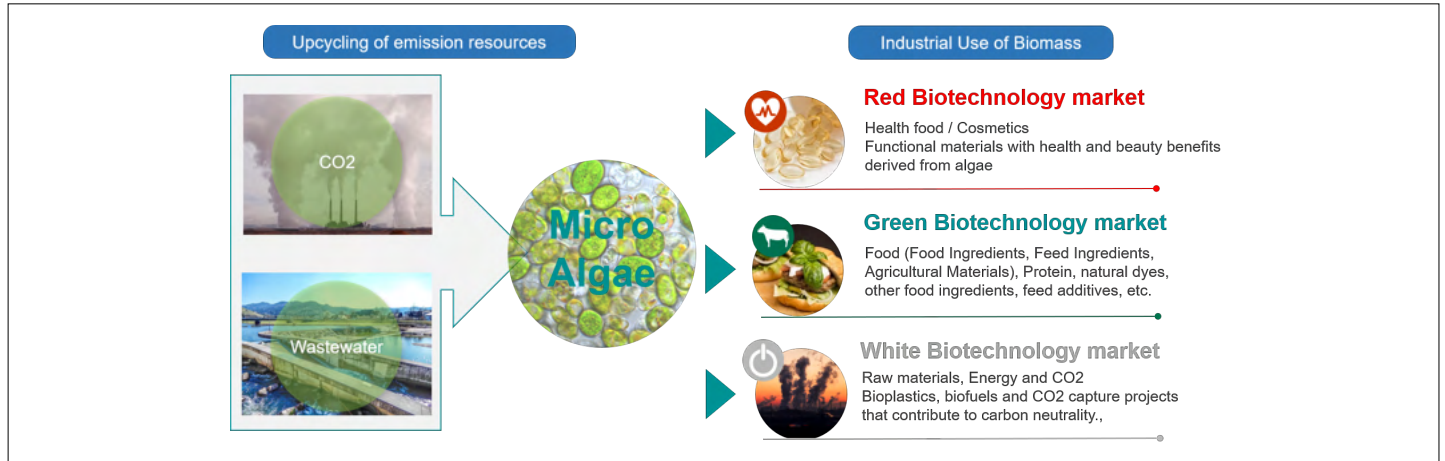
We are a clean-tech start-up based on chemistry and material science, with 4 business fields; (1) Upcycling offly ash, biomass ash, sewage sludge and the likes into adsorbents and antibacterial material, and sales of CircuLite itself; (2) Sales of bio-toilets that do not need water infrastructure; (3) Development of AC battery and circuits; (4) Development of plastic waste depolymerization catalyst.



Algae Biofoundry Platform

Technology development platform for CO₂ reduction and wastewater purification using microalgae

Algal Bio Co., Ltd.



Service and Technologies

Algal Bio is a cleantech startup company from the University of Tokyo. To solve various global-scale social issues such as human health, more sustainable food supply, and environmental problems, we are promoting the commercialization of new algae-derived products and solutions through the establishment of the “Algae Biofoundry Platform”.

Sustainability

Microalgae absorb carbon dioxide through photosynthesis and contribute to the mitigation of global warming. Due to their ability to multiply quickly, they have potential as a source of biomass energy and can also be used as a food resource due to their high nutritional value. In addition, they are effective in water purification. Microalgae are considered an indispensable biological resource for ensuring environmental sustainability because they can grow in any location, even on land unsuitable for general agriculture and cultivation, from snow-covered mountains to hot springs.

Experience

•Kansai Electric Power Co.

We are working on "Research and Development of CO₂ Fixation by Microalgae and Production of Useful Chemicals". In this project, we are developing a compact and highly efficient microalgae cultivation system by combining the development of microalgae with high CO₂ fixation efficiency using genome editing breeding technology and a highly productive mass cultivation method, aiming at CO₂ fixation in medium and large-scale factories and power plants. Furthermore, we are aiming to establish a sustainable carbon recycling technology by utilizing CO₂-fixing microalgae to produce high-value-added functional chemicals such as fucoxanthin and EPA, and by using the residue after extracting functional components as a raw material for bioplastics.

Other technology

We also provide solutions for upcycling the use of valueless materials such as "factory wastewater," "waste oil," and "food waste" for cultivating microalgae and using the biomass to produce functional chemical products, alternative proteins, and raw materials for bioplastics.



Company Information

Company Name: Algal Bio Co., Ltd.
Industry: Other Manufacturing
Address: Tokatsu Techno Plaza 301,5-4-6 Kashiwanoha, Kashiwa, Chiba 277-0882, Japan
Website: <https://algalbio.co.jp/en/>
Affiliated Company in Japan: Same as above.
Contact: kida@algalbio.co.jp

Message

As a University of Tokyo startup, Algal Bio has been aiming to realize a “circular and sustainable” society with our stakeholders by drawing out the potential hidden in algae under the slogan of “contributing to the future of people and the earth through the research and development of algae.” In order to pass on a better society to the next generation, we will continue to boldly take on challenges as a startup company, together with our like-minded colleagues.

GHG Emission Visualization, Reduction, and Reporting Cloud Service

Asuene Inc.



Service and Technologies

"Asuene" provides a cloud service for companies and municipalities (local governments) to visualize, reduce, and report CO₂ emissions across the entire supply chain according to the GHG Protocol Scope 1-3* as well as SX consulting. We provide comprehensive services to promote corporate decarbonization management, leveraging our strength as a one-stop decarbonization solution.

Sustainability

Not only does our GHG calculation enable data visualization, but through analysis and consulting support, we provide comprehensive assistance that actually results in GHG reductions. By promoting the use of renewable energy, installing solar panels, switching to energy efficient equipment, and implementing EMS and BMS with our partner companies, we offer our clients a broader range of decarbonization options.

Experience

Track Record

More than 5,000 companies have implemented our services. Adopted across a wide range of industries including manufacturing, construction, real estate, logistics, transportation, and finance.

Case Examples

By scanning invoices and other documents with AI-OCR, we achieved a 70% reduction in data entry while ensuring the accuracy of the data entered. (Retail industry)

Our supply chain management capability enabled comprehensive GHG calculation management, integrating data from global subsidiaries and partners. (Food/Manufacturing Industry)

Our product LCA capability enables the calculation of both total corporate GHG emissions and GHG emissions per product/service on a single platform. (Semiconductor/Manufacturing Industry)

Consultants with extensive experience as a CDP Certified Climate Change Scoring Partner support comprehensive reporting for various initiatives such as CDP, TCFD, SBT, etc. (Real Estate Industry)

We provide a one-stop solution for decarbonization, including CO₂ credit offsetting and clean power procurement, to help achieve corporate goals aligned with SBTi. (Financial Institutions)



Company Information

Company Name: Asuene Inc.
Industry: Information and Communication Industry
Address: WeWork, KDX Toranomon 1Chome Building 4F, 1-10-5 Toranomon, Minato-Ku, Tokyo 105-0001
Website: <https://earthene.com/en>
Affiliated Company in Japan: Carbon EX Inc.
Contact: sato.yuna@asuene.com

Message

Guided by our mission to "create a better world for the next generation", we operate the CO₂ emission visualization, reduction, and reporting cloud service "Asuene", the ESG evaluation cloud service "Asuene ESG", and the carbon credit and emission rights exchange "Carbon EX". In addition, in November last year, we established our overseas subsidiary "Asuene APAC" in Singapore, furthering our commitment to promoting decarbonization in the Asia-Pacific region.



Saving Energy Solution For Factory : ENEOPT™ For Building : ESCO

for Energy Conservation to Contribute Sustainable CO₂ Reduction

Azbil (Thailand) Co., Ltd.



Service and Technologies

[Saving Energy Solution for Factory : ENEOPT™]

- ENEOPT is one of energy conservation solutions towards a decarbonized society by Optimization Control.
- The target applications: ENEOPT is energy-saving improvement support system that minimizes CO₂ emissions and energy costs of Utility Plant such as Boiler, Turbine facilities.
- General step for ENEOPT solution service.
 - Step1: Find Opportunity for Energy Saving from Operation Improvement
 - Step2: Feasibility study to estimate CO₂ reduction by using actual operation data
 - Step3: ENEOPT Installation/Customized and set up to suit customer's plant's need.
 - Step4: Operational support and maintenance services by Azbil to ensure the performance of ENEOPT

[Saving Energy Solution for Building : ESCO]

• Optimization of overall facility operation

For larger energy savings, we not only install high-efficiency equipment that is common in Bldg. energy savings, but also optimize the overall operation of HVAC equipment with a control & monitoring system (BMS) and tuning service.

• No initial investment with Lease financing

Initial investment will be unnecessary, if lease financing can apply in ESCO scheme (Depends on the potential of energy saving through site surveying.)

• Energy saving performance guarantee by Azbil

Azbil guarantees energy saving performance when utilize ESCO scheme
Azbil will compensate the unachieved amount, if not achieve the saving performance target.

• Long-term Support

Report quarterly with advices until ESCO term completion.
No worries regarding BMS system maintenance because that maintenance is packaged in ESCO service scope.

Sustainability

In 2020, Joined an infrastructure development survey project (International Contribution Quantification and JCM feasibility study) which conducted by the New Energy and Industrial Technology Development Organization (NEDO), a national research and development agency, for obtaining the Joint Crediting Mechanism with the Thai government.

Experience

- Energy saving results through compressor optimization control :
- Siam Kraft Industry Co., Ltd. (https://www.azbil.com/jp/case/aac/nou_477/index.html)
- 250+ ESCO projects in Japan
 - 20+ Energy-saving projects by utilizing ESCO scheme in Thailand
 - References in Thailand: Shopping mall 450,000 kWh down in annual, Hotel 570,000 kWh down in annual

Company Information

Company Name: Azbil (Thailand) Co., Ltd.
Industry: Electrical / Electronic
Equipment Manufacturing Industry
Address: No.9 G Tower Grand Pram 9,
14th Floor, Rama 9 Road,
Huay Kwang, Bangkok
Website: <https://th.azbil.com/index.html>
Affiliated Company in Japan:
Azbil Corporation
Contact: o.uchiyama.dr@th.azbil.com

Message

The Azbil Group has pursued measurement and control technology and delivered unique solutions since its founding in 1906.

In order to resolve issues at various manufacturing sites, including buildings, factories, and plants, we provide products and solutions, instrumentation/ engineering, and maintenance services that support the optimal operation of equipment and equipment throughout their life cycles. Through collaboration with people, we aim to develop advanced measurement and control technology, create work and production spaces that are safe, comfortable, and efficient for people, and realize production sites that are safe and allow people to demonstrate their abilities and contributing to reducing environmental load.



Upcycling sugar-cane residue (bagasse)

Feed and chemical material : create cellulose sugar, oligosaccharides, and polyphenols

Cellulosic Biomass Technology Co., Ltd.

Value added products from Bagasse



Service and Technologies

Using sugar-cane residue (bagasse) produced by Thailand's core industry - the sugar industry, as its material, they produce cellulose sugar which has the potential of being biochemical/bioplactic raw material; oligosaccharide with growth promotion and intestinal regulation effect in livestock; and polyphenols which is a functional food with potential in beauty enhancement effects for cosmetics goods and anti-diarrheal effects for livestock.

Sustainability

It can be manufactured by B (using biotechnology), C (producing valuable products from the agricultural residue that's currently being incinerated), and G (low energy consumption using the membrane technology from non-edible material bagasse). We can produce high added value products from bagasse which is discharged in the sugar industry and used for purposes such as power generation. With this we will contribute to solving various social issues such as "reduction of feed usage" in feed industry, "reduction of fossil resource by using carbon neutral material" in biochemical manufacturing, and "competition with food".

Experience

This project has received technology verification and market evaluation by Toray Industries, Inc. and Mitsui Sugar Co., Ltd. as "International demonstration projects for increasing the efficient use of energy / The Demonstration Project for an Energy-Saving Cellulosic Sugar Production System Using Bagasse in the Kingdom of Thailand" by Japan's national research and development agency New Energy and Industrial Technology Development Organization (NEDO) and Thailand's National Innovation Agency (NIA).



Company Information

Company Name: Cellulosic Biomass Technology Co., Ltd.

Industry: Manufacturing of raw materials for biochemicals, feed and food etc.

Address: (Headquarters 6th Floor, Buhajit Building, 20 North Sathorn Road, Silom, Bangrak, Bangkok 10500 Thailand

Website:

<https://www.toray.com/global/>

Affiliated Company in Japan:

Toray Industries, Inc. Mitsui Sugar Co., Ltd.

Contact: metakarn.learkiatratcatcha.ta.t6@cbtthai.com (Bew)(Kubo)

Message

We are looking for communication with corporations who can consider developing a business using our raw material or are interested in our manufacturing system. If any of the below interests you, please feel free to contact us.

Efficient recovery of rare metals DualPore Palladium recovery cartridge

DPS Inc.



Service and Technologies

The metal scavenger for recycling is made from our "DualPore™" material. The product is pre-filled in cartridges for immediate use, and efficiently adsorbs and captures trace metals remaining in solutions and wastewater for recovery, reuse, and sale. The product efficiently adsorbs and traps trace metals remaining in solutions and waste liquids, allowing them to be recovered, reused, and sold. We are currently developing the first practical example of DualPore™, DualPore™ silica, with ion-exchange or chelating surface modification.

Sustainability

We are currently promoting the recycling of precious metals, which were previously difficult to recover, by applying ion exchange or chelating surface modification to DualPore™ silica, the first practical application of DualPore™. We are also exploring new surface modification technologies to provide a wider range of rare metal recovery options.

Experience

In Japan, we have experience in recovering palladium from plating waste at a plating factory and in recovering three-way catalyst metals generated from exhaust gas catalyst production at a major manufacturer's plant.

Palladium recovery at plants of Japanese companies overseas.

Based on our domestic track record, we are actively expanding our business to China and ASEAN countries, which are the world's manufacturing bases.



Company Information

Company Name: DPS Inc.
Industry: Nitrogen Industry, Glass and Stone Product Manufacturing Industry
Address:
 201, Funai Center, Kyoto University Katsura, Nishikyo-ku, Kyoto, Japan
Website: <https://www.dps-inc.co.jp/en/>
Affiliated Company in Japan:
 Same as above.
Contact: info@dps-inc.co.jp

Message

We strive to respond to global issues by enabling the efficient recycling of precious and rare metals through adsorption, separation, and recovery of residual metals using DualPore™. Highly efficient technology that can also deliver high performance is indispensable to maintain high production value and reduce the burden on the environment in all future sectors. By applying our proprietary DualPore™ technology, we believe that it is possible to meet the many needs related to the adsorption, separation, and recovery of trace metals and substances in a more advanced and efficient manner.

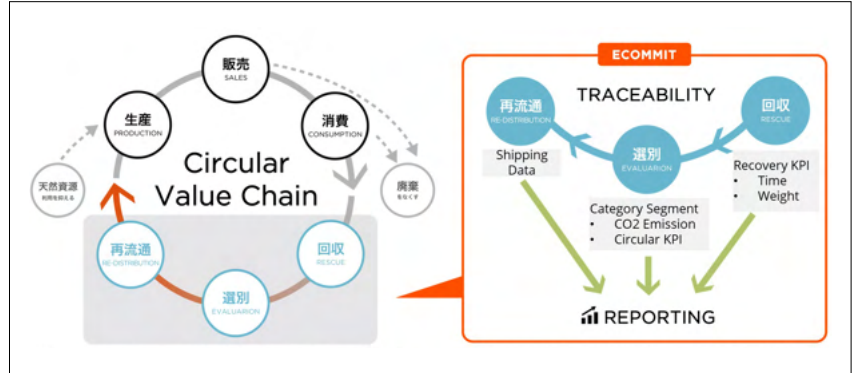
Circular Value Chain Creation Project

New Manufacturing Infrastructure

ECOMMIT Co., Ltd.

Service and Technologies

Circular Value Chain provided by ECOMMIT Co., Ltd. is a project that constructs the societal infrastructure necessary to accelerate the transition from the current linear economy to a circular economy. We take responsibility for everything from collecting to recirculating various unneeded items, with a focus on clothing. We maintain various collection points as nearby infrastructure through cooperative industry with municipalities (local governments), businesses, and public. The collected items are sorted into over 100 item lists by experienced staff. By making use of over 15 years of accumulated data, we minimize the environmental impact while supplying reusable items and recyclable materials to vendors who can maximize their economic value.



Sustainability

Circular Value Chain cooperates with various municipalities, businesses along with the general public to connect "Items that are still usable and/or recyclable" with circular process and aim to reducing resource consumption, decreasing greenhouse gas emissions, and contributing to the construction of a new circular society. We circulate 12,000 tons of reusable items annually from 3,000 sites all around Japan, of which clothing makes up 6,000 tons (1% of the total disposed in Japan), achieving resource recovery of over 98%. Additionally, using our in-house developed traceability system that converts the "flow of materials" into data, we can calculate reuse and recycling rates and report the amount of CO₂ reduced.

Experience

Cooperation with businesses: We signed a business partnership contract with ITOCHU Corporation and developed "Wear to Fashion", a collection service for textile products in the Japanese market. Applicable to operators/municipalities nationwide starting from the spring of 2022, we aim to collect/sort and reuse/recycle textile products disposed of at various sites, including ①worn clothing collected at retail stores, ②textile waste from businesses, and ③clothing collected by municipalities.

Cooperation with municipalities: We collaborate with over 50 cities, towns, and disposal associations across Japan including Osaki Town in Kagoshima Prefecture, Kameoka City in Kyoto Prefecture, Saga City in Saga Prefecture, Saitama City in Saitama Prefecture, Nishinomiya City in Hyogo Prefecture, Yakushima Town in Kagoshima Prefecture. We have begun testing the collection of reused items at clean centers, etc., and are implementing a waste reduction in each region.

Examples of the collection on daily life: Together with Japan Post Holdings, Co., Ltd., we have launched an original brand called "PASSTO" that handles the collection, sorting, and redistribution of unnecessary items all at once. Starting on April 20, 2023, we are the first in the country to set up "PASSTO" at post offices in Shibuya and Nagareyama and begin collecting unwanted items free of charge.



ECOMMIT

Company Information

Company Name: ECOMMIT Co., Ltd.
Industry: Infrastructure and System Development for a Circular Society, and Reuse and Recycling Business
Address: 2-30 Kandachō Satsumasendai, Kagoshima, Japan
Website: <https://www.ecommit.jp/en/>
Affiliated Company in Japan: Same as above.
Contact: sakano@ecommit.jp, okuno@ecommitt.onmicrosoft.com

Message

With the theme of "Realizing a Zero-Waste Society where nothing is thrown away," we are a company that aims to create a new manufacturing infrastructure by making a structure that recycles everything.

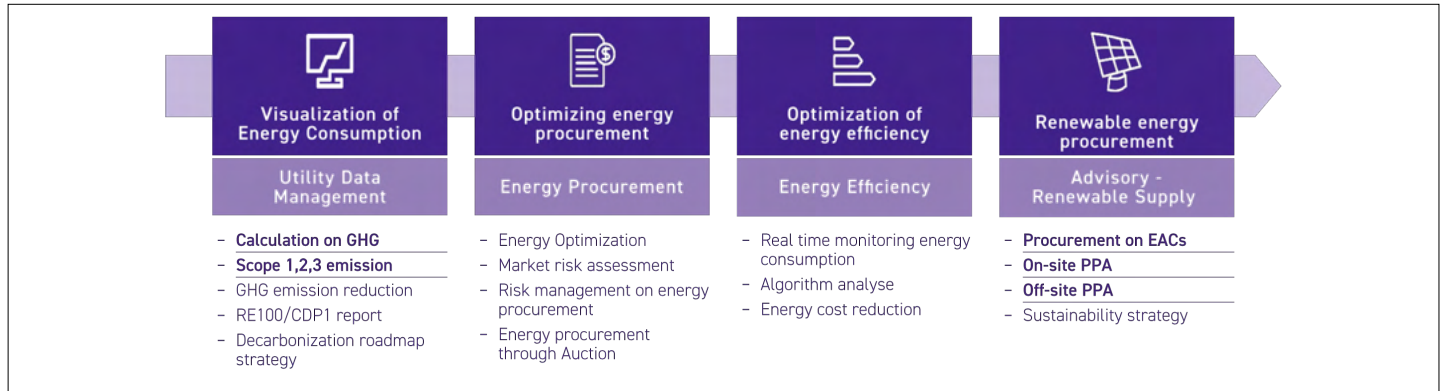
A nationwide logistics network which makes use of 15 years of past results to provide one stop for all recycling needs: we have the sorting know-how that maximizes the economic value of collected items, as well as a sales network, and take responsibility for the time-consuming processes of collection, sorting, and redistribution all together.

Additionally, the traceability system developed in-house automatically aggregates the data collected, calculates the reuse/recycle rate, and reports the reduction of CO₂.

Decarbonization Solution Advisory Services

Renewable Supply/ EACs/ Calculation on GHG emission etc.

Enel X Advisory Services Japan G.K.



Service and Technologies

We provide a wide range of support for the proposal and execution of solutions for decarbonized management, with the assistance of over 400 advisors across over 28 countries not only within Kingdom of Thailand.

- Support for procurement of renewable energy (Virtual) PPA Advisory.
- Support for calculation of Scope 1, 2, and 3 based on global standards.
- Support for roadmap development, including mid/long-term energy strategies.
- Global centralized procurement centre of environmental certificates etc.

Sustainability

We will provide the optimal solutions for the following four areas (1. Energy visualization and optimization, 2. Optimization of energy procurement methods, 3. Optimization of energy consumption, 4. Procurement of renewable energy) based on a thorough assessment of your company's sustainability and decarbonization goals through our consultation.

- We provide global support services as a CDP Gold Partner.
- Advisory services for complexifying international initiatives.



Experience

We have a proven track record of partnerships with more than half of the Fortune 100 companies.

Case 1: Optimization of Renewable Energy Procurement

Client: Global IT Company

Customer Needs: Procurement of Renewable Energy

Our Solution:

Assisted in procuring approximately 2,000 MW of renewable energy PPAs through a reverse auction.

Case 2: Management of Global Corporations' Energy Costs and Emissions

Client: Globally operating automotive parts suppliers

Customer Needs: Building a platform for optimizing energy efficiency at each location

Our Solution:

Supported the installation of equipment to procure renewable energy on-site, as well as the introduction of various systems such as energy management, to improve energy efficiency.

Case 3: Reduction of GHG emissions corresponding to Scope 3

Client: Global Real Estate and Logistics Company

Customer Needs: Reduction of GHG emissions, procurement of renewable energy and environmental value

Our Solution:

Introduction of renewable energy for the entire facility, including tenants, and procurement of EAC Achieving supplier engagement



Company Information

Company Name: Enel X Advisory Services Japan G.K.

Industry: Consulting

Address: Grant Tokyo South Tower, 11th Floor, 1-9-2 Marunouchi, Chiyoda-ku, Tokyo 100-6611, Japan

Website:

<https://www.enelx.com/jp/en/home>

Affiliated Company in Japan:

Enel X Japan K.K.

Contact: enelxad-jp.enelx@enel.com

Message

Enel X Advisory Services G.K. is a consulting firm specializing in decarbonization solutions in the Enel Group, the world's largest integrated energy company headquartered in Italy.

Our Japan office is responsible for the Asia-Pacific region, including Thailand.

We support our clients in developing energy procurement strategies, reducing costs, and improving energy procurement efficiency.

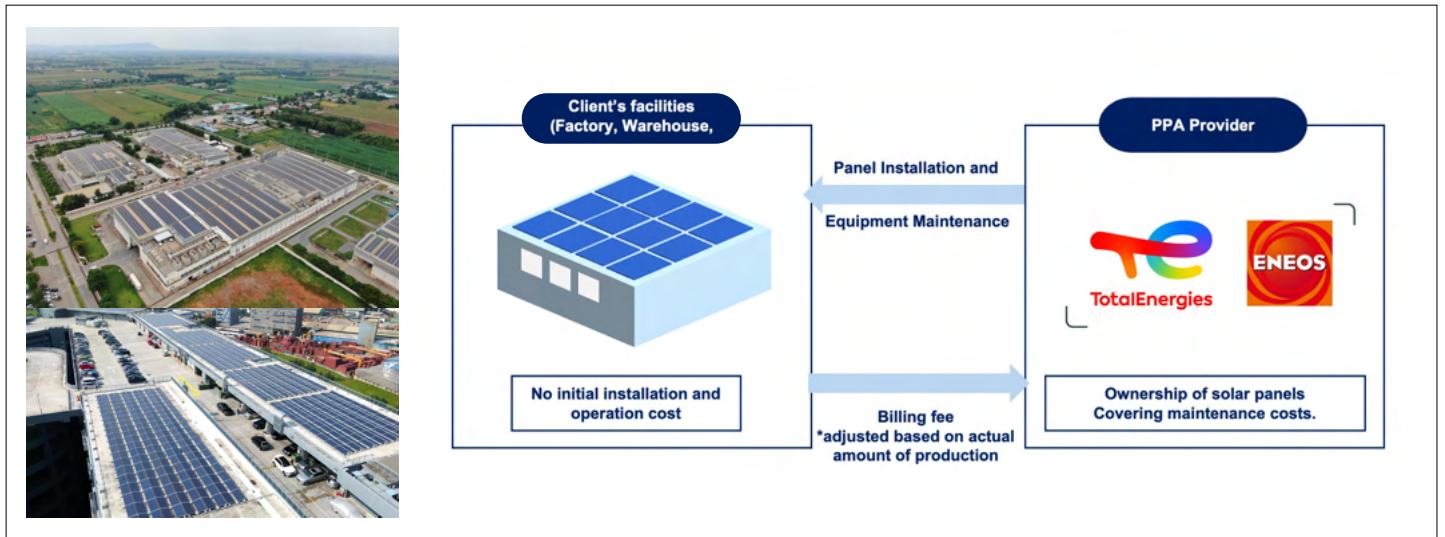
We use our knowledge of countries and markets around the world to provide the best possible energy solutions.

Please feel free to contact us if you have any questions.



Electricity cost reduction and low-carbon energy with Zero Initial Cost Onsite B2B Solar Distributed Generation

ENEOS Oil & Energy Asia Pte. Ltd.



Service and Technologies

Our company is developing onsite B2B solar distributed generation business across Asia (※), through JV with TotalEnergies, a global energy company.

※ Thailand, Japan, Vietnam, Indonesia, Philippines, Singapore, Malaysia, Cambodia, India

To realize reduction of customer's electricity costs and supply of low-carbon energy by installing rooftop power generation equipment on the premises and facilities (factories, warehouses) at zero initial cost for corporate customers.

Sustainability

Significant reductions in electricity costs can be expected during the term of the Power Purchase Agreement (PPA).

Customers can appeal that they are an environmentally friendly company that contributes to the SDGs by significantly reducing carbon dioxide emissions.

Experience

In a joint venture with ENEOS and TotalEnergies, we have more than 150MW of solar power generation capacity in 9 countries in Asia.

(Incl. in operation and under development)

<Solar Power Generation Business Project in Thailand>

Construction	Capacity 7,000 kWp
Utilities & Energy	Capacity 5,800 kWp
Food & Beverage	Capacity 2,500 kWp

and many others.



Company Information

Company Name:

ENEOS Oil & Energy Asia Pte. Ltd.

Industry: Mining (Metals, Non-Metals, Oil, Gas, Coal, etc.)

Address: 9 Temasek Boulevard, #23-01, Suntec Tower Two, Singapore 038989

Website: <https://eneos.asia/jx-nippon-oil-energy-asia/>

Affiliated Company in Japan:

Same as above.

Contact: masahiro.tomitsuka@eneos.sg

Message

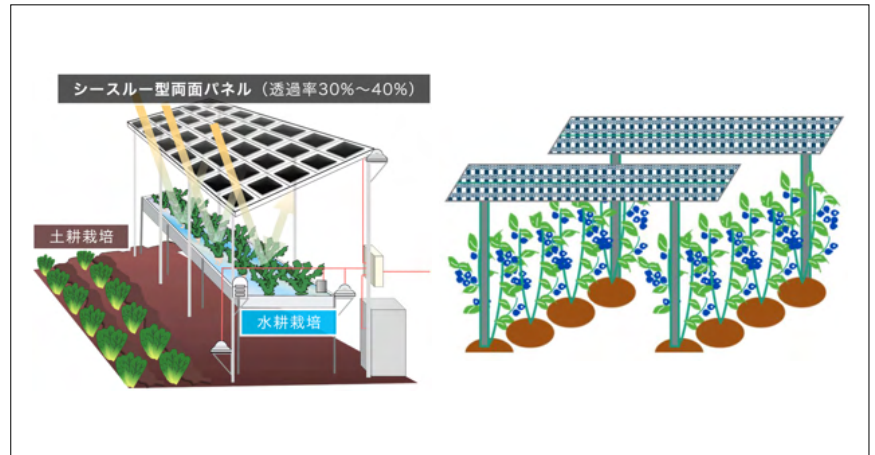
ENEOS, a Japanese leading energy company, has one of the largest renewable energy generation capacities in Japan. The Group's envisioned goals for 2040 are: becoming one of the most prominent and internationally competitive energy and materials company groups in Asia, creating value by transforming our current business structure, and contributing to the development of a low-carbon, recycling-oriented society with the pursuit of carbon-neutral status in its own CO₂ emissions.

Renewable energy and agriculture production from the same plot of land Solar Farm®

Farmland Co., Ltd.

Service and Technologies

The combination of agriculture and solar energy by Solar Farm® allows for an increase of land use efficiency unlocking its potential to provide both renewable energy and food self-sufficiency at the same time. Solar Farm® has got its patent in Japan, USA, China & Taiwan. In 2017 has obtained Polaris Medal. Our activity was taken up in Whitepaper issued by MOE in 2019 and registered in 「 Good Practice for adaptation against climate change 」 by METI in 2020/2021. t



Sustainability

Through the adoption of bi-facial, transparent solar panels Solar Farm® is able to maximize renewable energy production while allowing for appropriate amounts of light to reach crops below the solar array so that agriculture production can maintain near normal levels. Any loss in agriculture production can be made up through electricity sales or savings from solar.

Experience

In 2020, an MoU was concluded with the Chilean Ministry of Agriculture to implement a 20kW Solar Farm® pilot project. Its construction will be completed in Q1 of 2022 whereby studies will commence to identify the ways to best adapt the system for farmers of Chile. In Mongolia, 2017, through the support of the Joint Credit Mechanism subsidy from the Japanese government a 10.4 MWac (12.7 MWdc) solar system which incorporates Solar Farm® began its operations in Mongolia. In Japan, since 2015 Farmdo Group has constructed, maintained and managed over 50 Solar Farm® locations.



Company Information

Company Name: Farmland Co., Ltd.
Industry: Other manufacturing
Address: NF2 Building, 1-1-1 Tonyamachi, Maebashi, Gunma 371-0855
Website: <https://farmdo.com/en/farmland.html>
Affiliated Company in Japan: Same as above
Contact: w-remi@farmdo.com (Remi)

Message

We, Farmdo Group have obtained support from customers under our business policy "Support agriculture; Make efforts towards an increase in farmers' incomes". Since our society is being reformed dramatically day by day, we are pursuing new business models constantly. Farmland contributes to people and the global environment by creating and offering safer and enrich life environment. Solar Farm® creates a new ideal style of agriculture for young generations. With our group management system, we strengthen each function and go forward with "dream cycle". That is the way we contribute to society.

Insulation paint that significantly reduces electricity and maintenance cost

GAINA

Gaina Pro Co., Ltd.



Service and Technologies

GAINA is insulation paint derived from space rocket development technologies in Japan (special hollow insulation ceramic coating), and it enables reduction in various costs just by its application to the building. Unlike thermal barrier paint, it uses special ceramic for coating, making the effect long lasting even when the surface becomes dirty. It can be applied by anyone with ease, to all kinds of buildings, including warehouses, factories, schools, hospitals and hotels promising a magnificent result. Our company not only sell the material but also provide total service including the installation.



Sustainability

The special hollow insulation ceramic effect provides various cost reduction benefits with its application to the building.

- Reduction of energy costs (electricity usage)
 - Reduction of maintenance costs with the elongation of building lifespan
 - Lower risk of fire spread in case of fire (certified as non-combustible)
 - As a result of reducing energy and maintenance costs, it also reduces CO₂ emissions in turn.
- It is a highly safe water-based paint with no odor or any health impact on human body.

Experience

- The roof of Toyota and Nissan automotive factories, cold storage warehouse in Onagawa, Miyagi, and the national treasure exhibition room in Todai temple.
- Resort hotel in Palau, tanker deck of Mitsui O.S.K. Lines, Ltd., roof of trains in Spain, airport facilities in Saudi Arabia.
- Apparel warehouse. The inside temperature dropped 5 to 10°C just by applying the product as a normal paint.

In Dubai, UAE, we placed two international shipping containers, then we painted one with a normal paint and the other with this product. When the outside temperature was 50°C, the temperature inside of the container with normal paint exceeded 75°C, and was immeasurable, while the container with this product was 46°C.

Company Information

Company Name: Gaina Pro Co., Ltd.
Industry: Other services
Address: 834 Shimo-Hiratsuka, Tsukuba, Ibaraki 305-0813
Website: <https://www.gaina-pro.com/>
Affiliated Company in Japan: Nissin Sangyo Co., Ltd.
Contact: info@gaina-pro.com

Message

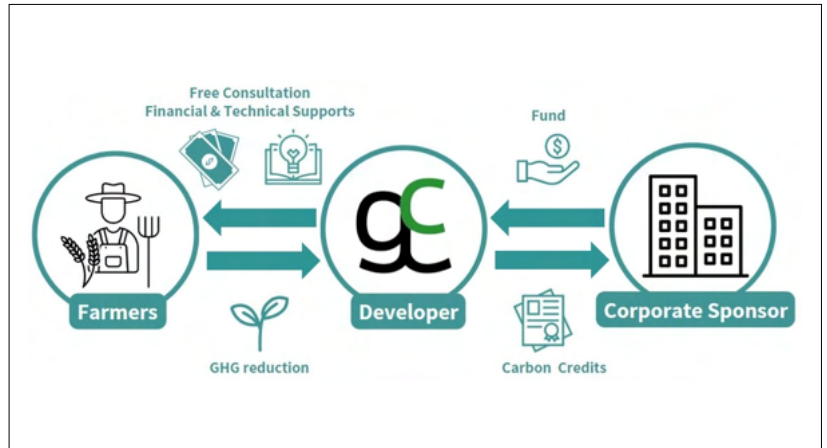
GAINA, is a cutting-edge product created with Japan's space development technology (JAXA). It was recognized by the United Nations as part of UNIDO in 2019, and is compatible with SDGs, which are the reasons why it's attracting attentions worldwide. Its installation is extremely easy. Insulation effect can be achieved by simply painting it, and not only can it help reduce energy cost and CO₂ emissions, but also reduces maintenance cost of buildings as its painted surface has over twice the durability of other paints. We are looking for partners who do not only sell our products, but also handle local implementation and sales activities.

An Agriculture-Based Carbon Credit Generation Business Mitigating Climate Change and Increasing Farmers' Income

Green Carbon Inc.

Service and Technologies

We offer a full range of services, from the generation to the sale of carbon credits. Carbon credits are generated through various greenhouse gas emissions reduction activities. They are treated as negative CO₂ emissions, and are purchased by companies, which are the main source of CO₂ emissions, to offset their own emissions. In particular, we focus on greenhouse gas emissions reduction activities in the agricultural sector, and have established carbon credit projects in collaboration with various farmers in many countries. In Thailand, we are developing projects in rice paddies as a first step due to the overwhelming size of rice paddies in the country.



Sustainability

Since carbon credits are generated from greenhouse gas emissions reduction activities, we believe that we can reduce greenhouse gas emissions and contribute to climate change mitigation as the scale of our projects and businesses expand. In addition, farmers participating in our projects will receive a return on the sale of carbon credits, which we believe will contribute to increasing the income of farmers as a whole.

We have developed an application called Agree to aid in the digital transformation of project operations and simplify their management, thereby reducing the burden on farmers and making our projects more accessible to all farmers.

Experience

We are conducting joint research with local universities in Vietnam and the Philippines on water management technology to control methane gas emissions due to anaerobic decomposition that occurs when paddy fields are flooded (watered).

- University of the Philipines
- Vietnam National University of Agriculture

We have compared the quality, yield, and methane gas emissions of rice plants via research, conventional farming methods, and AWD*. We verified that there is no significant negative impact on quality and yield and that AWD is effective in reducing methane gas emissions.

Based on the results of this research, we are now planning to initiate projects in collaboration with farmers in the Philippines and Vietnam, covering 1,000 ha and 6,000 ha, respectively, in early 2024.

In addition, we are planning to conduct joint research with a university on the reduction of methane gas emissions from cattle.

*AWD (Alternative Wet and Dry): A cultivation method in which paddy fields are intermittently flooded with water. It is said to reduce water consumption and methane gas emissions.



Company Information

Company Name: Green Carbon Inc.
Industry: Agriculture, Forestry and Fishery
Address:
 Tokyu Spline Aoyama Building 6F,
 3-1-3 Minami-Aoyama, Minato-ku,
 Tokyo 107-0062
Website: <http://green-carbon.co.jp/en/>
Affiliated Company in Japan:
 Same as above.
Contact: h.yokoyama@green-carbon.inc

Message

Here at Green Carbon Inc., our vision is to "save the Earth with the power of life". We aim to contribute to the reduction of greenhouse gas emissions and climate change mitigation by harnessing the power of nature to its maximum extent. In particular, we focus on generating carbon credits from the agricultural sector, which will contribute to increasing the income of farmers, who are facing a shortage of workers and successors. We are also working to further simplify our project operations and increase transparency.

Eradicate measurement mistakes and eliminate raw material scrap and waste

Multi-variety automatic measurement, manual measurement & trace management

Hakaru Plus (Thailand) Co., Ltd.

Service and Technologies

Automatic measurement technology that automates measurements of multi-variety, high precision, and wide range. This technology is especially suitable for measurement of auxiliary material and additives. For materials that are difficult for automation due to the cost and their specific qualities, we provide a management system for manual measurement and eradicate measurement mistakes that occur from human intervention. It carries out data tracing from material incoming, storage, picking, measurement, to material input, and enables the simplification of management tasks and centralization of data. With these technologies we will contribute to saving energy, increasing precision, reducing measurement mistakes, environmental improvements and so on.



Sustainability

By eradicating measurement mistake with automation and manual measurement management, they can reduce material waste that occur from scrapping and re-measurement, eventually contributing to carbon neutrality. The tracing management allows mistake-free material storage (shelf management, expiry date, FIFO, lot control) as well as mistake-free input of blending machine, which enables improvement and stabilization of product quality as well as simplifying the management tasks.

Experience

Delivery experience for industries that require multi-variety measurement such as ink, paint, rubber, resin, chemical, food, medicine, battery, glass, ceramic etc. Delivery regions include Japan, East and Southeast Asia, North America and EU. Subjects of measurement can be each industry's main raw material, auxiliary material and additives, regardless of whether it is in powder or liquid form. It can also be used for powder and high-viscosity liquid prone to bridging and jetting. They provide system design customized based on customer requirements.



Company Information

Company Name: Hakaru Plus (Thailand) Co., Ltd.

Industry: Other manufacturing
Address: 59/19 Moo 2, Tambon Rachathewa, Amupur Bangplee, Samutprakarn 10540 Thailand

Website: <http://www.hakaru.co.th/>

Affiliated Company in Japan: Hakaru Plus Corporation

Contact: yamauchi_y@hakaru.co.th (Yamauchi)

Message

Using the abundant experience gained over 100 years, we develop/provide numerous new systems and equipment ranging from software to hardware. We answer to customers' needs with the technology to "measure". We have introduced four businesses; measurement, ready-mixed concrete, weight measurement, and medical. In Thailand, we operate Japanese-quality weight measurement business by Thai production, which covers design, manufacturing, sales to on-site maintenance.

Energy saving/renewable energy and FA automation one-stop support Comprehensive improvement solution for manufacturing and factory equipment

Hamasho Corporation (Thailand) Ltd.

Service and Technologies

An engineering service specialized in energy-saving/renewable energy proposals targeted at crucial utilities for factory operation, such as electricity, gas, water and oxygen; installation of an advanced fire extinguishing system; and so on. Providing solutions for automation of manufacturing equipment and manpower reduction, they offer a one-stop service that provides implementation support for comprehensive improvement solutions for a wide variety of customers. Also, aside from HDD, automotives, food and chemical industry where they have recognized experience and know-hows, they are also committed to providing various solutions for the EV and battery industry.

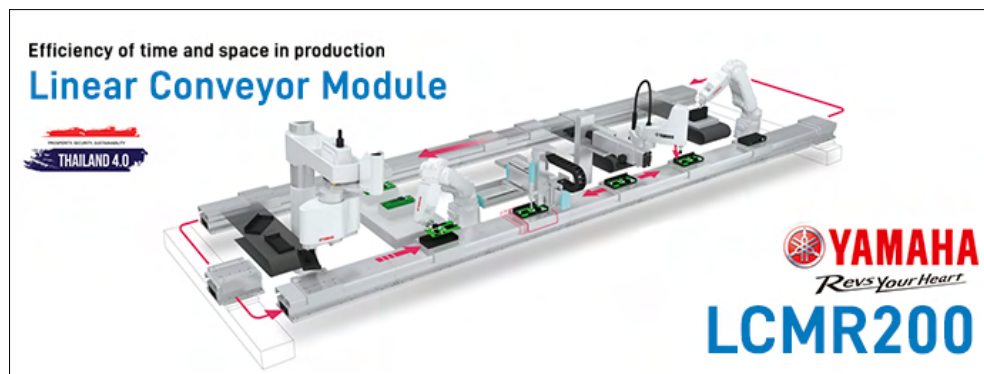


Sustainability

With the wide range of products, engineering function and one-stop service as the top3 strengths, they support the improvement and implementation of energy-saving/renewable energy and contribute to the expansion of SDGs activities and achievement of carbon neutrality. They also provide support for the implementation and progress of various robots and specialized machines in order to support the effort for automation of manufacturing processes and reduction of manpower in alignment with the policies of Thailand 4.0. They contribute to a wide array of fields and industries as a provider of comprehensive energy-saving environment and factory automation solutions.

Experience

[(Past implementation examples for Thailand-based Japanese companies)] As part of ESG investments and SDG activities, they have been engaged in the implementation of a solar power system and also developing a project dedicated to transitioning boiler system into LPG and making it more energy-saving as the next energy-saving activity. They provide a gradual solution proposal to realize the near-future zero-carbon achievement scheme raised by the customer's headquarters. Additionally, they have an in-factory eco park operation scheme targeted at promoting employees' health and contributing to Thailand's local environment, and plan to consistently carry out comprehensive projects.



Company Information

Company Name: Hamasho Corporation (Thailand) Ltd.
Industry: Trading
Address: 825 Phairojkijja Building 11th Floor, Debaratana Road, Bangna-Nua, Bangna, Bangkok 10260 Thailand
Website: <https://hamasho.co.th/>
Affiliated Company in Japan: Hamasho Corporation
Contact: kazuya.hashiba@hamasho.co.th (Hashiba)

Message

We are a Japanese trading company that entered its 26th year of expansion into Thailand. We have 3 core businesses; MRO consumable subsidiary material business; FA automation/manpower reduction/robotics business and; our department's energy-saving environmental business. Within the three years since the organization of business with focus on "renewable energy and environmental engineering business". We can also provide a one-stop service for FA business from SIER selection to machine selection, and evaluation to after implementation.

Providing sustainable plastic material Tapioca-based biomass plastic compound

Hitachi High-Tech (Thailand) Ltd.



Service and Technologies

We manufacture a biomass plastic compound by mixing thermoplastic polymers made from tapioca starch extracted from cassava with other polymers. By mixing with petroleum-derived general polymers, we maintain their characteristics, and at the same time aim to reduce use of fossil fuel and promote that of biomass instead. Biodegradable polymers such as polylactic acid are difficult to introduce due to their high material costs, but we can expect the cost of starch-derived thermoplastic polymers to lower because of their low cost of main raw materials and biodegradability.

Sustainability

This product focuses on the biomass resources that are abundantly present in Thailand and uses cassava (tapioca starch), which has the biggest production volume of all. The production volume of cassava in Thailand, at 29million tons (2020), is the 3rd biggest in the world. Over 70% is exported overseas, so there is little competition with the domestic food supply. In addition, Thailand is aiming to add more value to local bioresources and agricultural crops. The increasing awareness towards environmental issues will heighten the demand for biomass plastics, creating steady demand for cassava, contributing to stable income for farmers.

Experience

Currently under demonstration

Other technology

[Drone and AI technology] With cassava farmers, companies processing and/or selling starch, and companies manufacturing and /or selling starch-based products as the targets, we provide various analytic services that include identifying sick plants in a wide range under a short period of time, as well as improving the precision of predicting plant growth and harvest volume. Additionally, it can also be utilized for analyzing the status of different plants such as sugarcanes and corns.
 [Geographical information system] We provide a tool that allows display of photos and analytic results on a Google Maps-like map where various data can be referenced and centrally managed with ease. This technology is also used in various fields outside of agricultural land management, such as electricity, real estate, retailing and so on.



Company Information

Company Name: Hitachi High-Tech (Thailand) Ltd.
Industry: Trading
Address: 62 Thaniya Bldg. 7th Floor, Room 702, Silom Rd, Suriyawong, Bangkok 10500 Thailand
Website: www.hitachi-hightech.com
Affiliated Company in Japan: Hitachi Hi-tech Corporation
Contact: kazuya.kuriyama.js@hitachi-hightech.com (Kuriyama)

Message

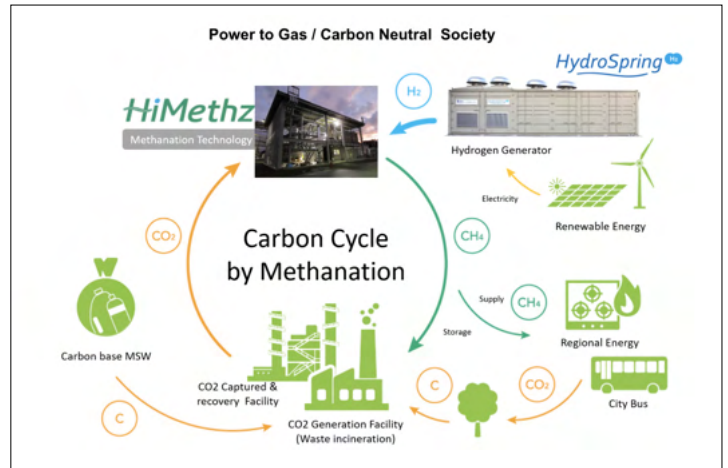
Hitach Hi-Tech is a company that possesses both maker and trading functionality. On one hand we manufacture hi-tech products such as the world-class semiconductor manufacturing equipment that uses measurement and analysis as core technology, medical-use inspection system, and electric microscope. On the other hand, we also specialize in trading cutting-edge materials. In Thailand, we have established our core on the trading functionality, and we aim to realize decarbonization and circular society through the provision of eco-friendly materials and solutions.

Fully automated production of green hydrogen using only renewable energy battery and water Water electrolysis system "HydroSpring"

HITZ (Thailand) Co., Ltd.

Service and Technologies

System capable of fully automated production of high purity hydrogen from renewable energy. Material used are only battery and water without any chemical, so the operation can be safely managed. The operation status can be checked with the remote monitoring system built in by default.



Sustainability

The green hydrogen produced by this product can be used to produce the heat source of boilers, to produce green ammonia by ammoniation, and to be re-converted into energy by utilizing fuel cell. Also, by combining with the company's methanation system "HiMethz", it can convert carbon dioxide emitted from factories into methane gas, to be reused as the heat source of factories. By re-capturing the carbon dioxide generated by these factories and appropriating for HiMethz, this can help to achieve the in-factory carbon recycling and contribute to the decarbonization effort.

Experience

HydroSpring is adopted in the "P2G system technology development and verification targeted for the construction of a CO₂-free hydrogen society" by the enterprise bureau of Yamanashi since 2016. The final target is to (1) develop and verify a system technology of 74.0% water electrolysis system efficiency in order to manufacture a 1.5 MW water electrolysis apparatus and achieve 80% in the said efficiency level in the future, and (2) construct a system adaptable to the changes in boundary conditions and establish a business model of Power to Gas system targeted at a CO₂-free hydrogen society through verification of its technology feasibility and economy feasibility in the real world field by operating a sustained system from the production to utilization of hydrogen. The enterprise bureau of Yamanashi has created a business model using solar power from Komekurayama power plant to produce, compress/storage and supply hydrogen to the neighboring households with power demand.

Other technology

Transforming waste into energy. Hitachi Zosen Waste to Energy system.

The system for this Waste to Energy plant was chosen without stoker-typed technology, granted from the former Von Roll company in Switzerland. We have achieved 1,063 references worldwide, particularly in Thailand we handed over Waste to Energy plant in Rayong in 2021, incinerating 300 tons of refuse derived fuel, the "RDF", daily to generate 9.9 MW, of which 8.0MW of electricity is to be sold. The amount of this supplying electricity is worth contributing to 5,000 households in Thailand.



Company Information

Company Name: HITZ (Thailand) Co., Ltd.

Industry: Other manufacturing
Address: 19th Floor, Room 1911, BB Building 54 Sukhumvit 21 (Asoke) Road, Klong Toey Nua, Wattana, Bangkok 10110

Website: <https://www.hitachizosen.co.jp/english/>

Affiliated Company in Japan:

Hitachi Zosen Corporation

Contact:

morita_ma@hitachizosen.co.jp (Morita)

Message

In 1881, the Osaka Iron Works was founded by E. H. Hunter, and by now passing 140 years. We, with our philosophy "we create value useful to society with technology and sincerity to contribute to a prosperous future", in the "Clean energy", "Clean water", and "Environmental conservation, and building resilient and prosperous community" business fields, will bring transformation as a solution partner of our customers.

Chemical-free water treatment system using electrolysis technology High-efficiency electrolysis wastewater treatment system "MICRO WATER SYSTEM"

Igaden Co., Ltd.



Service and Technologies

With its original electrolysis technology, the product achieved separation and decomposition of oil emulsified in water and recalcitrant wastewater without using chemical, which have been difficult to treat until now. Electrolysis apparatus has been implemented for use in silica removal from factory wastewater and cooling tower circulating water, purification of lakes and marshes, wastewater treatment in stock raising, and final wastewater treatment system of biomass facility. The apparatus will be useful in saving water, energy, and also space by integrating the equipment, contributing to the achievement of SDGs and carbon neutrality.

Sustainability

The purification of factory wastewater is directly linked to environmental conservation of rivers, lakes, marshes, and the ocean. We believe such heightened awareness will lead to global environment conservation. In addition, with the previous treatment method involving the use of chemical, there was an issue of increasing amount of sludge resulting from the large chemical input for separation process. However, as this electrolysis treatment technology is also capable of suppressing the amount of sludge produced in the process, reduction of manufacturing waste and waste treatment cost can be achieved.

Experience

In Kasumigaura, Ibaraki, where Igaden is located, eutrophication of water in the recent years resulting in deteriorating water quality has been an issue, and the company has been providing wastewater treatment equipment that caters to such specific needs. With the implementation of water quality improvement equipment for cooling towers, energy consumption of circulation pump can be reduced by 20%, and by replacing with the heat treatment equipment used for incinerating and vaporizing recalcitrant wastewater, it can also help steer away from fossil fuels. This technology is also applied in places other than factories, such as advanced removal of phosphorus in a university-affiliated ranch, decomposition of high-density nitrogen in a lab and so on.



Company Information

Company Name: Igaden Co., Ltd.
Industry: Other manufacturing
Address: 78-4 Shinoyama, Joso, Ibaraki 300-2721
Website:

<http://www.igaden.com/index-English.htm>

Affiliated Company in Japan:
Same as above

Contact:
Konishiyasu Trading (Thailand) Co., Ltd.
(Distributors in Thailand) moro@konishiyasu.com (Moroguchi)

Message

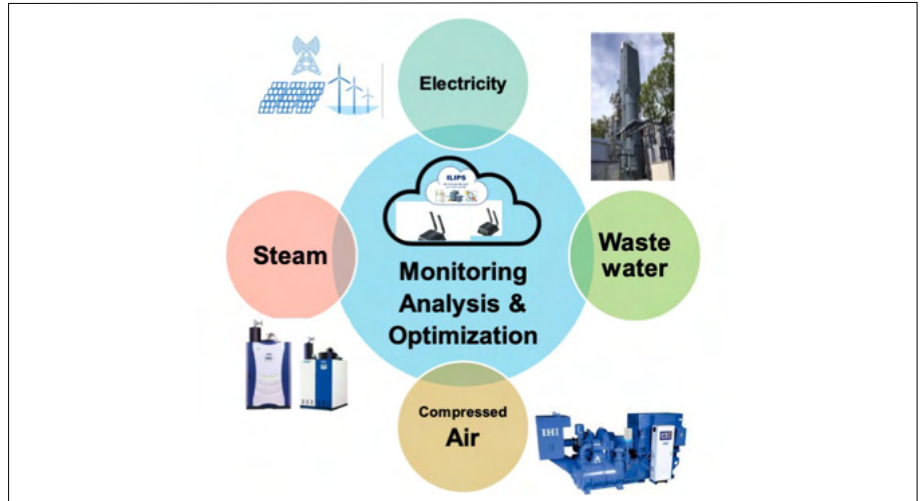
Our main products are wastewater treatment equipment for factory, water quality purification equipment for cooling tower, and electrolytic alkaline cleaning water generation equipment, with an abundant history of delivering the products overseas. In Thailand, our distributor Konishiyasu Co., Ltd. has staff with expertise to ensure a wide coverage of support including the neighbouring countries.

Supporting the CO₂ reduction goals in factory Energy-saving Solutions for factory

IHI ASIA PACIFIC (Thailand) Co., Ltd.

Service and Technologies

This technology provides various energy-saving solutions for factories, including techniques to enhance the efficiency of solar power generation (nano-coating for PV panels), improve the operation efficiency of multiple compressors and boilers (control system for multiple units), utilize waste heat and biogas, monitor electricity and facilities, analyze monitoring data, and conduct overall energy-saving diagnostics for the entire factory.



Sustainability

In the industrial sector, achieving CO₂ emission targets is typically realized through two methods: the adoption of renewable energy sources such as solar power, and energy-saving measures. However, the former is usually constrained by site area and cost. Therefore, a combination of these two methods needs to be promoted. In fact, it is said that the energy efficiency in industry is only about 50%, making the adoption of excellent energy-saving technologies highly promising for significant CO₂ reduction effects.

Experience

The nano-coating technology for PV panels has been demonstrated that adopting this coating technology can improve solar power generation efficiency by approximately 1-2%. Additionally, the achievements of other energy-saving technologies are as follows:

【Multiple Control System for Boilers】	About 12 cases
【Multiple Control System for Compressors】	About 101cases (outside Japan)
【Biogas-fired Boilers】	About 21 units
【Steam Turbine Auxiliary Compressors】	About 21 units
【Monitoring and Data Analysis】 (in Southeast Asia)	Boiler 11 units, Compressor 2 units, factory electricity 1 case
【Energy-saving Diagnostics for Factory】	About 17 cases (2 in Thailand)

Other technology

【Boiler】IHI's general-purpose boilers feature compact design and high efficiency to meet customer requirements. Our once-through boilers, available for oil and gas, serve a wide range of customers (evaporation capacity: 0.75 to 6.0 ton/h).

【Compressor】IHI has delivered over 10,000 turbo compressors to the market. With a diverse product lineup ranging from 125 KW to several tens of MW, we propose optimal solutions and continue to meet our customers' various needs.



Company Information

Company Name: IHI ASIA PACIFIC (Thailand) Co., Ltd.

Industry:

Other Manufacturing Industry

Address: No. 6 O-NES Tower 10th Floor, Soi Sukhumvit 6, Klongtoey, Bangkok 10110, Thailand

Website: <https://ihiapt.co.th>

Affiliated Company in Japan:

IHI Corporation

Contact: hagita5260@ihi-g.com

Message

As a comprehensive heavy industries group having 170 years history, IHI works to provide value in four main fields: Resources/Energy/Environment, Public Infrastructure, Industrial Systems/General Purpose Machinery, and Aviation/Space/Defense.

Liquid filter with zero industrial waste Element-less filter "FILSTAR"

Industria (Thailand) Co., Ltd.



Service and Technologies

Liquid filter designed to generate centrifugal force with the water flow when passing through the filter, allowing it to forgo the need for filter element for removing impurities. It has achieved a high filtration spec with its unique technology and also capable of eliminating running cost, maintenance, and industrial waste, as well as having a long lifespan. Separating solid from liquid usually requires filter element, but this emits carbon dioxide during production, purchase & transportation, and disposal after use. This product does not use filters, so it does not only help reduce the related cost but also contribute to achieving carbon neutrality.

Sustainability

Normal filter elements are made of synthetic resin such as polypropylene, polyester and nylon, so using a normal filter would mean a constant disposal of these plastic-based consumables. On the other hand, our product which doesn't use filter element can provide zero plastic usage solution in its liquid filtration processes. Also, as this filter does not require consumables like the filter element, it can help eliminate the disposal cost for consumables too.

Experience

This product has a history in successfully reducing the use of consumables (filter elements) from 5,000 pcs/year to zero by replacing normal filters in one production line of an aluminum part manufacturing factory. The content weight of synthetic resin per filter element is approximately 500 grams, which means the amount we reduced is equivalent to 2,500 kilograms worth of plastic and synthetic resin per year. Other than this, costs such as the industrial waste disposal and maintenance were reduced to almost zero, contributing to a total cost reduction of approximately 20 million JPY. It is a filter that is friendly to both the earth and companies, and could become a standard in the field.

industria
Industria(Thailand)Co.,Ltd.

Company Information

Company Name: Industria (Thailand) Co., Ltd.

Industry: Normal machine equipment
manufacturer Address: No.36/56 RK Biz Center Project, Motorway Road, Kwaeng Klongsongtonnun, Khet Ladkrabang, Bangkok 10520 Thailand

Website: <https://industria.co.jp/en/>

Affiliated Company in Japan:

Industria Co., Ltd.

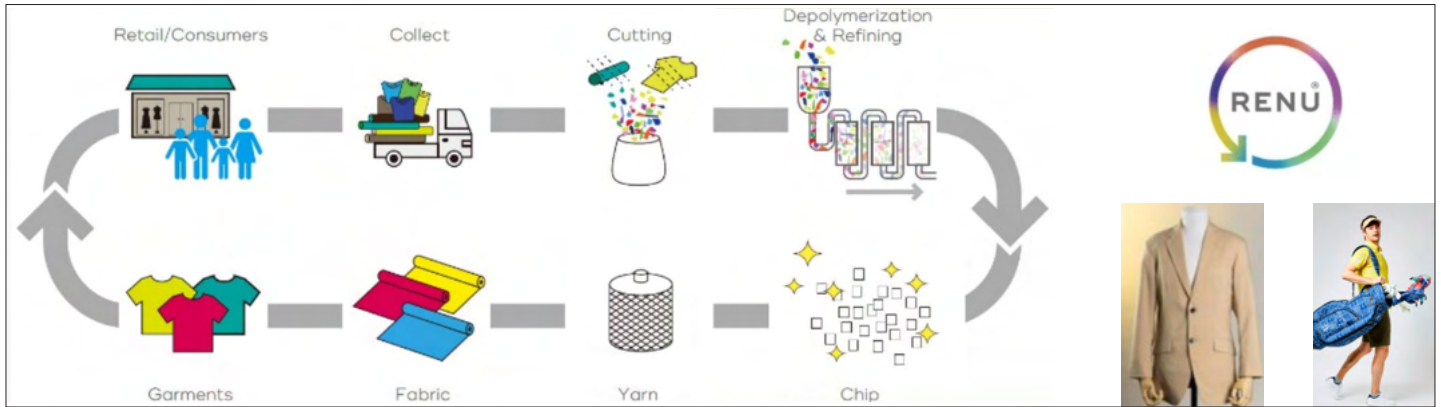
Contact: goto@industria.co.th (Goto)

Message

We are a maker of Industria brand products such founded in Saitama, Japan, in 1991. Our Thai local subsidiary was established in 2014, and the main customer base of our own product, FILSTAR, is the processing factories of Japanese automotive factories. Also, we compile a test report internally to verify the effect before implementation. We work hard every day to do good for the mankind, the earth, and companies.

Up Cycle project from clothing to clothing RENU

IPA (Thailand) Co., Ltd.



Service and Technologies

RENU materializes clothes-to-clothes circular economy and enables upcycling of all types of textile products by collecting unwanted clothes, cutting scraps and the likes. Textile industry is the second most polluting industry in the world, emitting an enormous amount of CO₂ in its value chain. Clothing disposal, in particular, has a severe problem as it creates 92 million tons of waste per year. 99.9% of textile products are disposed, so very little end up in recycling. Compared to the conventional PET bottle-derived recycled polyester, our product has a stable quality and rich in colors. (Currently we only operate collection of unwanted clothes in Japan and China, with an expansion plan to other countries soon.)

Sustainability

Compared to the conventional polyester, the emission of CO₂ and usage of water during the manufacturing process of yarns and fabrics can be reduced. 59% reduction of CO₂ and 11% reduction of water usage.

For example, if we use 40 tons of RENU raw material, the reduction results will be as follow:

- 200,000 pieces of clothing saved from disposal.
- CO₂ reduction amount equivalent to 2.7 round trips around the globe by car.
- Water usage reduction equivalent to 100,000 of 500ml bottle.

Also, the concept of RENU = fashion is gaining recognition, which has led to the increased adoption in the fashion industry.

Experience

- Corporate uniforms: Family Mart, Century21, Meitetsu Transportation, Murata Machinery, Nissan dealers, YKK VN and others.
- Apparel: United Arrows, SHIPS, BAYCREW'S, Dickies, H&M, ADASTRIA, World, GU, Descente and others.

Other technology



One Measure: By simply taking pictures with your smart phone from the front and side, measurement can be done instantly. The technology is currently utilized mainly in making order-made suits and shirts. Compared to the old method of manual measurement, a large reduction of trouble and time can be achieved. It also features a size recommendation function, allowing the consumer to know their optimal size without having to try the garments.



Company Information

Company Name: IPA (Thailand) Co., Ltd.
Industry: Trading
Address: 287 Liberty Square Building, 10th Floor, Silom Road, Silom, Bangkok 10500
Website: <https://www.ipahkg.com.hk/>
Affiliated Company in Japan: ITOCHU Corporation
Contact: morita-j@ipathailand.co.th

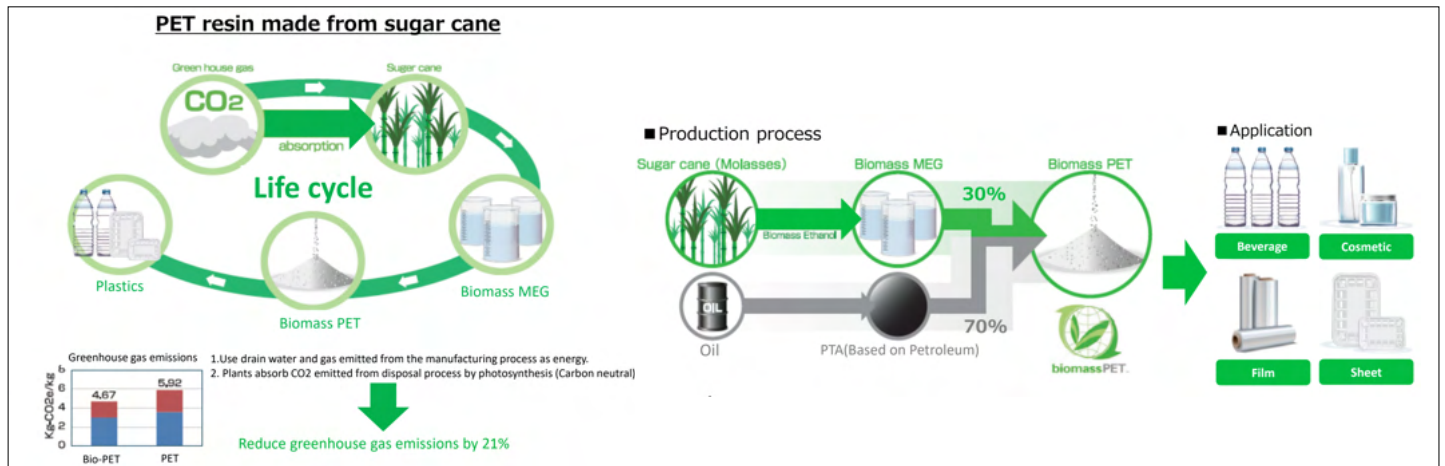
Message

An operating company under Itochu group. With the centrally located Thailand as the starting point, we operate a wide range of fashion businesses. In Thailand, we have signed a strategic partnership with CP group. The following are our main business areas:

- Manufacturing: material development in Thailand with focus on sustainable raw material. Production of fabric and clothing in various Asian countries. Possible to have a collaborative partnership with top designers in Japan too.
- Brand: licensing, distribution and collaboration of more than 100 brands handled by Itochu.
- FashionTech: introduction and implementation support for fashion x IT technologies like One Measure.

Upcycling the by-products of sugar manufacturing Plant-based PET resin

Iwatani Corporation (Thailand) Ltd.



Service and Technologies

The product uses biomass PET whose main material is biomass mono-ethylene glycol derived from molasses produced as a by-product when white sugar is extracted from sugar cane. With this method, 30% of the PET resin composition can be made with plant-derived material, which makes it compatible with existing equipment without changing the outline equipment or conditions. It can also be provided in the form of films and sheets.

Sustainability

Iwatani has been conducting surveys based on LCA (Life Cycle Assessment) which quantitatively evaluates impact on the ecological system and environment from development stage. In 2011, they conducted a joint research and survey with Dai Nippon Printing Co., Ltd. and Tokyo City University. In the research, they compared the process from production to product disposal of biomass MEG and biomass PET to that of petrochemical PET and confirmed that the former can reduce around 28% of the entire greenhouse gas emissions (equivalent to 0.67 kg per 1 kg of product).

Experience

The company started handling biomass PET resin since 2010, and the sales amount in 2021 was 23,000 tons. For beverage PET bottles, they have sales history to multiple major Japanese beverage makers, while also being adopted for containers of cosmetics and hair care products. Moving forward, they will not only sell domestically in Japan, but also introduce a wide range of product lineups to the Southeast Asian market as part of their business expansion plan.

Other technology

Support the achievement of carbon neutrality with energy conversion technology

Iwatani is a clean energy promotion corporation. They have been contributing to the Reduction of CO₂ emissions by supplying LPG, LNG and refrigerant gas which are low in greenhouse gas. They also provide energy such as environment-conscious refrigerant gas, biomass fuel, ammonia and hydrogen and have abundance of experience as a company handling various kinds of energy. They provide clean energy suggestions based on client's request and circumstances.

Iwatani

Company Information

Company Name:

Iwatani Corporation (Thailand) Ltd.

Industry:

Trading
Address: 323 United Center Building,
29th Floor, Room No.2903, Silom
Road, Silom, Bangrak, Bangkok 10500
Thailand

Website:

<http://www.iwatani.co.jp/eng/index.html>

Affiliated Company in Japan:

Iwatani Corporation

Contact:

Biomass PET resin
tsukamoto@iwatani.co.jp (Tsukamoto) Gas
yuki-oiwa@iwatani.co.th (Oiwa) Biofuel
kento-honda@iwatani.co.jp (Honda)

Message

We are a leading company in the carbon neutral businesses symbolized by companies providing hydrogen, energy conversion (LPG & LNG), biomass fuel, Bio-PET and EV battery material.



Next generation innovative photovoltaic system integrated with building's exterior walls and windows T-Green® Multi Solar (Abbreviated material name: T-GMS)

Kaneka (Thailand) Co., Ltd.

Service and Technologies

“T-Green® Multi Solar” generates electricity through photovoltaic laminates integrated into the wall and window surfaces of buildings. This has been developed by bringing together Taisei Corporation’s expertise in planning and constructing photovoltaic system that integrate into building materials with the photovoltaic laminates of Kaneka Corporation. This exterior system provides for the same level of durability as general exterior materials, outstanding workability due to the photovoltaic laminates being integrated into the exterior materials, and continuous power generation for over 30 years.



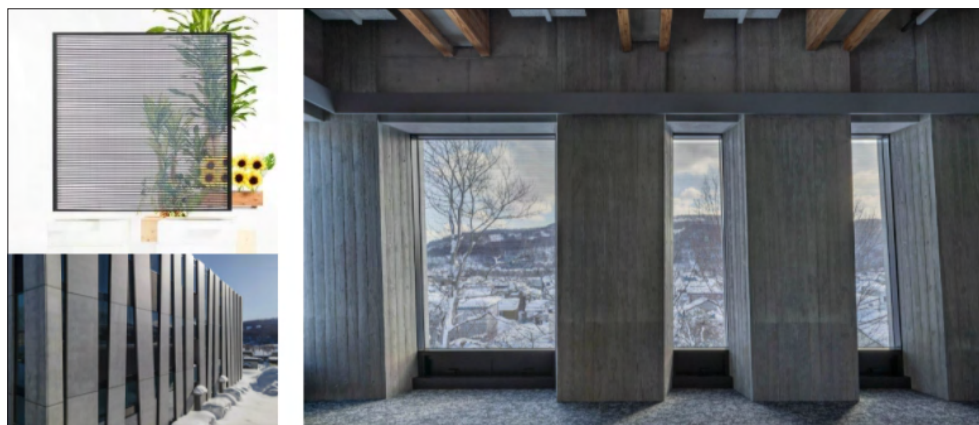
*This is a co-developed product of Taisei Corporation and Kaneka Corporation.

Sustainability

Society is calling for more widespread use of renewable energy in order to achieve carbon neutrality. There is an increase in companies taking measures against the long-term power outages that have been caused due to natural disasters, demand for securing independent sources of power is growing, including from the point of BCPs (Business Continuity Plans) and LCP (Life Continuity Performance). This is a photovoltaic system that can be installed to office buildings, mid-sized and high-rise buildings, to which installation of photovoltaic system has been difficult. Thus “T-Green® Multi Solar” will contribute to adoption of renewable energy and independent power source of buildings.

Experience

Since 2021, the product has been adopted to skylight and aperture area of public and commercial buildings as building material. The product is highly regarded for its designability and it has been awarded of the Good Design Awards 2021 (sponsored by the Japan Institute of Design Promotion) . Kaneka Corporation and Taisei Corporation aim to make further major contributions to the realization of ZEBs (Zero Energy Buildings) to mid-sized and high-rise buildings which limited space is available for installation of Photovoltaic systems in areas such as its roofs.



T-Green Multi Solar (See-through type)
Example: Complex facility "CAN@YELL" in Furubira (Completion scheduled for February 2022)
* "T-Green®" is a registered trademark of Taisei Corporation.



The Dreamology Company
Make your dreams come true

Company Information

Company Name:
Kaneka (Thailand) Co., Ltd.
Industry: Other manufacturing
Address: 388 Exchange Tower, 21st Floor Unit 2101-1 Sukhumvit Rd, Klongtoey sub-district Klongtoey district, Bangkok 10110 Thailand
Website: <https://www.kaneka.co.jp/en/>
Affiliated Company in Japan:
Kaneka Corporation
Contact: takeshi.morimatsu@kaneka.co.jp (Morimatsu)

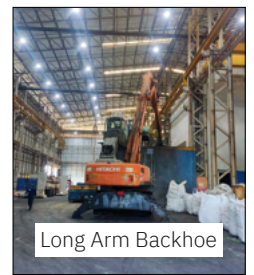
Message

Since its foundation in 1949, Kanekahas overcome and grown through the transitions in time and environment with the creative harmony between people and technology. Kaneka is a company dedicated to making the world "healthy" by standing by all lives on the earth, making food wholesome, cheering people and animals, energizing businesses and brightening societies. We, Kaneka, will continue to expand the possibilities of "science" and make the societies' and people's wishes come true by providing various solutions.

Contributing to the realization of a sustainable circular economic society

High standard recycling factory

KI-ECOTECH Co., Ltd.



Service and Technologies

We have guillotine machine for cutting metal, shredder machine for pulverizing metal, mini steel cutting machine, motor dismantling machine, briquette machine, resin pulverizing machine. We are able to conduct processing and separation of any material including metal, non-metal, resin. We are engaged in not only collection and recycling of metal and resin scraps, but also in the reuse of surface polishing powder of steel products called sludge, which is processed into landfill at additional cost. We try to reuse it through weight utilization and repurposing as replacement of cement and steel material. We can supply resin molding material that is pulverized and re-pelletized as a recycled material.

Sustainability

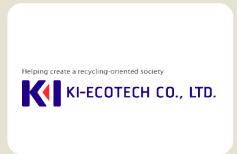
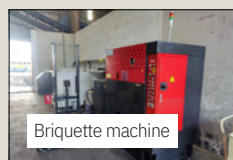
Along with metal and resin, the effective use of recycled material reduces CO₂ emission. Recycled materials are materials that have been productized with a certain amount of CO₂ emission. Therefore, the use of such recycled materials as renewed resource can bring bigger advantages in terms of environment and cost. Nowadays, many companies are paying attention to an effective utilization of recycled materials. Recycled material can be reborn as renewed resources through the processing and separation processes using our in-house equipment.

Experience

We are currently working on taking steel sludge generated at a major bearing manufacturing factory in Thailand and using it as a replacement to magnetite to mix with water and cement to reuse as the weight used in forklifts. Relative density and mixing conditions have been tested. Further tests for mass production are being conducted.

Other technology

We also process briquettes of stainless-steel chips and steel sludge generated at a major bearing manufacturing plant in Thailand and sell it to manufactures.



Company Information

Company Name: KI-ECOTECH Co., Ltd.
Industry: Recycling industry
Address: 700/231 Moo 1, Amata City Chonburi Industrial Estate, T.Bankao, A.Panthong Chonburi 20160
Website: <https://www.keiaisha.co.jp/>
Affiliated Company in Japan: Keiaisha Co., Ltd.
Contact: na-yoshioka@keiaisha.co.jp

Message

We, as a good business partner trusted by customers, recognize the importance of highly specialized waste management. We collect waste generated by factories and consumers, and process them based on the standard required by the customers. In the current industry where each manufacturing factories expand their production volume, generation of such waste cannot be avoided, and could contribute to environmental issues. We are deeply aware of such issues, and conduct an appropriate collection of waste in order to prevent the waste from causing environmental issues.



Solutions for Decarbonization Installation of Solar Power System (Corporate PPA, Self-Investment)

Marubeni Green Power Asset (Thailand) Co., Ltd.



Service and Technologies

Marubeni Green Power install the solar power system on available spaces within customers' premises, such as factory roofs and vacant land through Power Purchase Agreement (PPA) scheme or Self-Investment scheme. With PPA scheme, customer does NOT need to invest in the system (we own), and all maintenance during installation and contract periods is taken care of by us. Customer can use clean energy without initial expenses or hassle and enjoy cost reduction. We also offer a wide range of decarbonization solutions, including options like energy storage systems and environmental certificates. Based on Marubeni Group's technical expertise in power plant construction in Thailand over the past 70 years and global power generation projects, we propose high-quality solutions at competitive prices.

Sustainability

Amidst the global trend of heightened decarbonization awareness, Marubeni Green Power contributes to the procurement of renewable energy, focusing on the installation of solar power system for customers. Our in-house engineers, who have been involved in the construction of multiple power plants in Thailand, conduct optimal capacity design, provide maintenance service after installation. We can support sustainability efforts that customers can rely on with Japanese quality assurance, all while meeting their specific needs.

Experience

[PPA Achievement 1]

For a Japanese metal processing manufacturer located in Pathum Thani, a 0.9 MWp solar power system has been installed in September 2023. Solar panels were installed on both factory roof and parking lot roof.

[PPA Achievement 2]

For a non-Japanese metal parts manufacturer located in Nakhon Ratchasima, a 1.0 MWp solar power system has been installed in October 2023.

[Self-Investment Achievement]

For Donki Mall, a Japanese shopping mall located on Sukhumvit Road in central Bangkok, a 0.3 MWp solar power system has been installed in August 2023. Due to its central location in Bangkok, installation work was primarily conducted at night.

Company Information

Company Name: Marubeni Green Power Asset (Thailand) Co., Ltd.

Industry: Renewable Energy

Address: 548 One City Centre Building, 33rd Floor, Unit No.3304-3306 Ploenchit Road, Lumpini, Pathumwan, Bangkok 10330, Thailand

Website: <https://www.marubeni-mgp.com/>

Affiliated Company in Japan:

Marubeni Corporation

Contact: sales@jpn.marubeni-mgp.com

Message

Marubeni Green Power is a subsidiary of Marubeni Corporation. Within Marubeni Group's power division, we own, operate, and manage approximately 37 GW of power plants worldwide. In Thailand, we have constructed and delivered around 10 GW of power plants to the Electricity Generating Authority of Thailand (EGAT). Leveraging this expertise and experience, we can provide services in construction management and maintenance to ensure our customers feel at ease. Furthermore, we offer similar services to private companies in multiple countries, including Vietnam and Mexico, not limited to Thailand. As a whole within Marubeni Group, we are committed to supporting our customers in resolving their concerns.

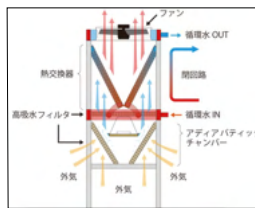
Next generation air-cooled closed type dry cooler ecobrid

MATSUI (ASIA) Co., Ltd.



Service and Technologies

Dry cooler "ecobrid" is the next generation air-cooled closed type cooling tower. Attributable to a closed system, there is no risk of water quality trouble that stems from concentration of impurities. The heat exchanger has a complete air-cooled design that does not require direct contact with water, eliminating the need for cleaning or exchange. All the cutting-edge technologies are deployed in this product, delivering various advantages such as a solution for manufacturing troubles due to water quality, energy saving, CO₂ reduction and so on in one product.



Sustainability



"ecobrid" is a sustainable proposal that can help Matsui's goal of "factor4". Specifically, it will realize saving water usage of cooling tower (by 90%), saving energy (by 30%), reducing CO₂ emissions, lessening an environmental burden through non-chemical maintenance, and improving cycle time and product volume with improved cooling water. Depending on the adoption method, a reduction of equipment failure from cooling water usage can be expected too.

Experience



[Reference data from Thailand] Effect shown in the left picture can be expected when a normal open-type cooling tower is replaced with ecobrid. We can provide service for both renewal of the existing cooling system in the plant and new installation at a new plant.



Company Information

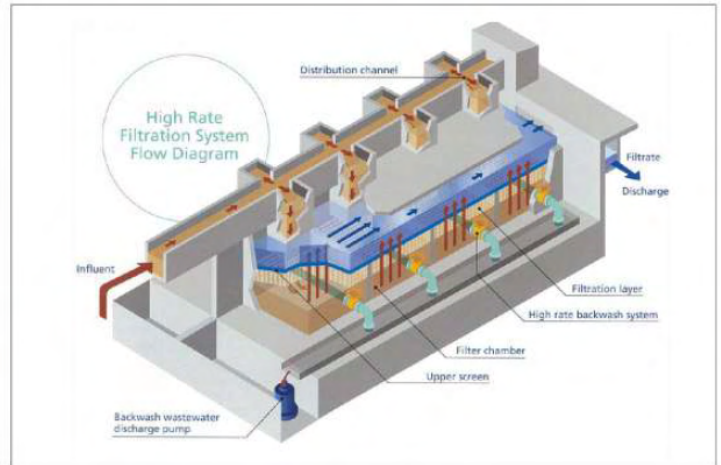
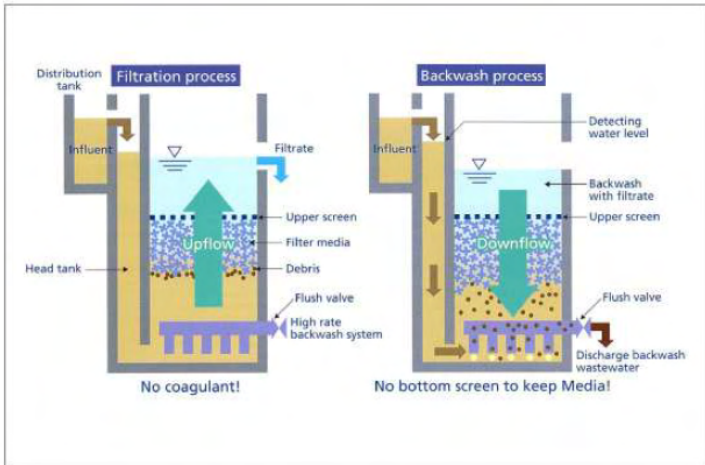
Company Name: MATSUI (ASIA) Co., Ltd.
Industry: Precision machinery and equipment manufacturing
Address: 300 Moo 4 Soi 5 C Bangpoo Industrial Estate, Sukhumvit Road, Tambol Praksa, Amphur Muang, Samutprakarn
Website: <https://matsui.net/>
Affiliated Company in Japan: MATSUI MFG. Co., Ltd.
Contact: ainoue@matsui.net

Message

Matsui Asia is engaged in manufacturing various machines and equipment that accompany plastic molding machines. MATSUI MFG. Co., Ltd. in Japan has a history of 110 years, and was one of the first to enter Thai market, with 36 years of experience. We have our manufacturing base in Bangpoo industrial estate, from where our products are delivered across Thailand and the neighbouring ASEAN countries. Apart from sales of machinery equipment, we have also supported customers' problem solving and energy-saving initiatives by providing solutions. We would like to use this opportunity to have more customers know about us, and allow us to support their improvement activities. Matsui aims for the realization of "factor4" - doubling the richness of molding process, and halving the use of resources.

Achieving non-coagulation and small-footprint rainwater treatment High Rate Filtration system

METAWATER Co., Ltd.



Service and Technologies

The High Rate Filtration system is a system capable of filtering (removing) suspended solids such as grease balls and PVC fibers at the filtration speed of approximately 1,000 m/day by installing it in primary sedimentation tanks or relay pump stations.

Sustainability

In many countries and regions, it has been concerned that the climate change is causing increased rainfall and localized heavy rainfall (stormwater) resulting in critical disasters such as flooding. It is also predicted that the frequency of such stormwater downpour will increase even more due to the continuation of greenhouse gas emission. Under such dire situation, there is a need for promotion of pre-emptive measures against overflow of combined sewer system (CSS), and this system can contribute to address such vital issue. The main features of this system are; (1) reduction of construction cost by utilizing the existing tank; (2) no need for coagulant; (3) no need for pre-treatment equipment, which brings about the result of no need for works such as transporting residues during and after operation. Point 1 helps reduce the concrete volume and point 2 helps minimize the volume of waste generated, hence, contributing to the reduction of CO₂ emission.

Experience

This system has the installation reference of over 40 locations, mainly in the cities of Japan. Also, under the Japanese government's ODA loan assistance projects, it was adopted for "Yen Xa Sewerage System Project" in Vietnam, and the project is currently in progress. In the coming future, METAWATER will further focus on expanding its sale to Southeast Asian countries and across the globe. • Certified under MLIT's SPIRIT 21 Technology Assessment as a technology for CSS improvement. • Received METI Minister's Award (The 34th Outstanding Environmental Equipment Award Project organized by the Japan Society of Industrial Machinery Manufacturers)



Company Information

Company Name: METAWATER Co., Ltd.
Industry: Water Industry (Engineering, M&E works, PPP investment, etc.)
Address: JR Kanda Manseibashi Building, 1-25 Kanda Sudacho, Chiyoda-ku, Tokyo 101-004
Website: <https://www.metawater.co.jp/eng/Af-filiated Companies Overseas> : Same as above
Contact: info-meta@metawater.co.jp

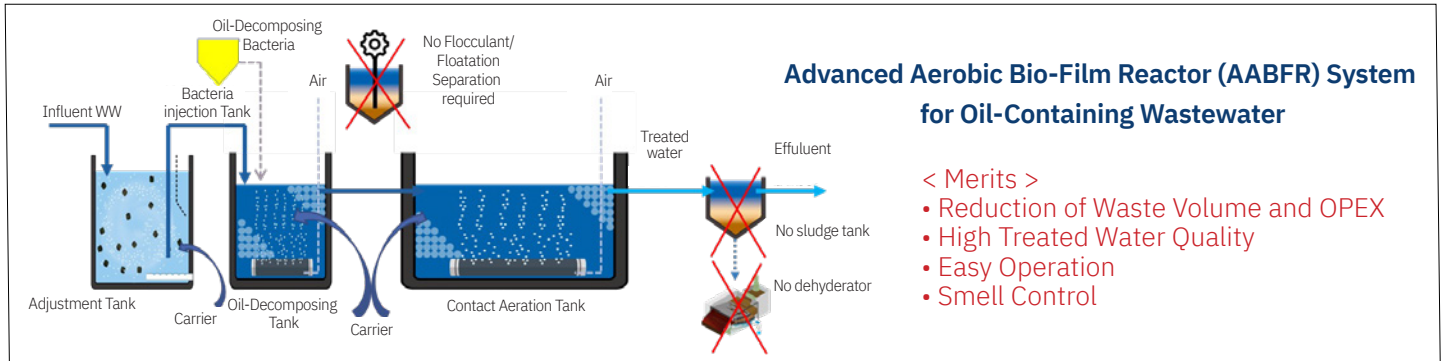
Message

We are one of the largest engineering company in Japan in the water and environment sector. Currently, we have our own unique technologies in ceramic membrane filtration system, ozonizer, sludge incineration system, and Pre-Treated Trickling Filter method and so on. We are based in Vietnam, Cambodia, Singapore, the Netherlands, Switzerland, Germany, and the US. We promote CSR activities such as water and environmental resource conservation and disaster recovery assistance, pursuing contribution to the sustainable society.

Large-scale cost reduction by reducing sludge volume

Sludge volume reduction technology that achieves near-zero excess sludge in oil-bearing water treatment

Mitsubishi Chemical Aqua Solutions Co., Ltd.



Service and Technologies

A system that combines Oil-Decomposing and High-Load Contact Aeration method to treat wastewater with high oil and grease content from such as food processing factories. With the existing methods such as dissolved air floatation method and conventional activated sludge processing method, there are numbers of issues including the consumption of large amount of chemical additives, complex operation management, unstable treatment, and a large-scale sludge generation. However, this AABFR system uses fat splitting bacteria to achieve a stable treatment with little to no excess sludge generated. In this way, a major reduction in operation cost (manpower cost) and sludge treatment cost is possible.

Sustainability

Oil-Decomposing and High-Load Contact Aeration method, especially when introduced in places such as food processing factories, can achieve near-zero excess sludge generation in treating wastewater with high oil and grease content. Therefore, it can contribute to the reduction of greenhouse gas previously emitted from sludge incinerations and the like (contribution to achieving carbon neutrality). We also have a track record of successfully reducing the sludge generation by 1/15 with this method as compared to the existing methods, enabling a major cost reduction. Furthermore, this technology does not require constant presence of operators and will resolve manpower shortage problems of factories.

Experience

This technology has been successfully applied to over 100 cases. Most of them are for confectionery factories, frozen food factories, dairy product factories, seafood factories. The system can cover wide range of wastewater treatment volumes, from approximately 50 to 1,600m³ /day. In Thailand, a high oil and grease content wastewater treatment system with a 500 m³ /day capacity has already been implemented for a frozen food factory (Raw water quality: BOD 700mg/L, SS 400mg/L, n-Hex 400mg/L Treated water quality: below criteria for all parameters and released to the sewage system). In another case of 300 m³ /day plant, sludge generation (processing cost) was reduced by 1/15, and manpower cost for operation by 1/10 (the cost reduction of more than 17 million JPY per year) compared to the conventional activated sludge processing method.

Other technology

Solid technical capability ensures stable provision of safe drinking water. The system uses water from sources such as underground water, surface water and treats the water mainly with membrane filtration technology to supply drinking water to hospitals, factories, condominiums and shopping complexes etc. The system is custom-designed according to customer's requirements such as raw water quality and amount of water to be treated (water demand). A remote monitoring system installed in the system enables stable operation and optimum maintenance by monitoring the system operational status and water quality in real-time from both Thailand and Japan.



Company Information

Company Name: Mitsubishi Chemical Aqua Solutions Co., Ltd.
Industry: Construction industry (construction, civil engineering, equipment etc.)
Address: 1-2-2 Nihonbashi Honshicho Chuo-ku Tokyo, 103-0021
Website: <https://www.mcas.co.jp/>
Affiliated Company in Japan: Same as above
Contact: MCJP-MBX-MCAS_OBD_INFO@mchcgr.com

Message

We use membrane filtration technology and other treatment components developed by Mitsubishi Chemical to deliver high value-added solutions to the needs of customers across different fields, ranging from the supply of drinking water to waste water treatment. Utilizing the technologies and experience gained domestically in Japan, we are also working on business expansion outside of Japan, including developing countries.

Technology that supports energy transition CO₂ capture/storage technology, hydrogen /ammonia-based power generation system

Mitsubishi Heavy Industries (Thailand) Ltd.

Service and Technologies

For sustainable future, we need “to reduce, not to emit and to collect and re-use” CO₂ exhausted when we generate energy. We provide a wide range of products and services with its technologies which supports decarbonization in societies = energy transition, such as energy saving, electrification and CCUS (carbon capture, utilization, and storage) solutions. By combining cutting-edge technologies and with its optimal solutions such as replacement of coal-fired power generation with gas-fired GTCC, hydrogen combustion gas turbines GTCC/engines, biomass/ammonia combustion coal-fired power, and CCUS, Mitsubishi Heavy Industries will move the world forward to achieve "decarbonization of existing infrastructure", "building a hydrogen solutions ecosystem" and "building a CO₂ solutions eco system".

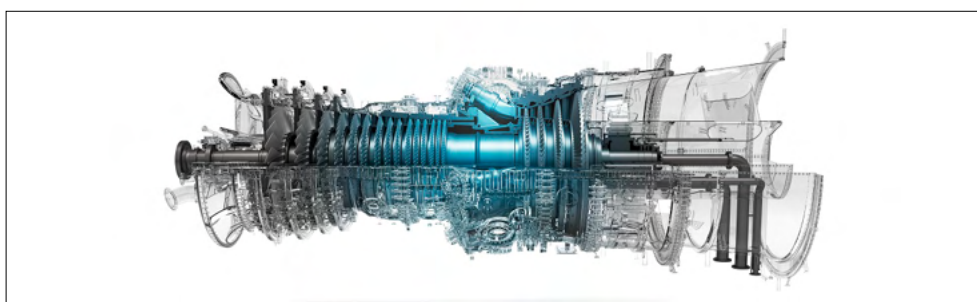


Sustainability

- Decarbonization of existing infrastructure: With verification and commercialization of carbon-free power generation with hydrogen/ammonia, decarbonize thermal power generation by 2025. Will also contribute to decarbonization with safe and reliable nuclear power generation.
- Building a hydrogen solutions ecosystem: With engagement in building ecosystem covering from hydrogen production, transportation, storage and to usage, establish a decarbonization technology by around 2025.
- Building a CO₂ solutions ecosystem: With engagement in building ecosystem covering from capture, transportation, storage to conversion, increase applications of its carbon capture technologies to diverse emission sources and scales.

Experience

The company has the largest market share worldwide in CO₂ capture from flue gas and is a leading company with achievements such as delivering the world's largest CO₂ capture plant in the US. For hydrogen utilization, Mitsubishi Heavy Industries received an order in March 2020 from Intermountain Power Agency for 840,000KW-class hydrogen-fired GTCC power generation project as part of the GTCC power generation project to utilize renewable energy derived hydrogen in Utah, US. This project was about delivering the GTCC power generation equipment with two M501JAC gas turbines which uses the hydrogen-fired large gas turbine technology implemented by Mitsubishi Heavy Industries. It aims for reaching 30% hydrogen mixed combustion by 2025, and 100% hydrogen combustion by 2045.



Company Information

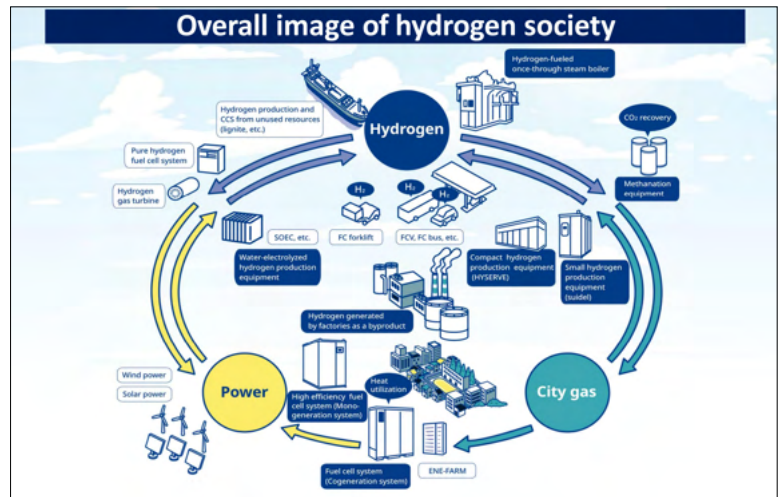
Company Name: Mitsubishi Heavy Industries (Thailand) Ltd.
Industry: Other manufacturing
Address: 173/31, 173/34 Asia Centre Building, 25th Floor, South Sathorn Road, Thungmahamek, Sathorn, Bangkok 10120, Thailand
Website: www.mhit.co.th
Parent Company in Japan: Mitsubishi Heavy Industries, Ltd.
Contact:
ryo.takubo.pv@mhi.com (Takubo)
amorn.anathanandorn.th@mhi.com (Amorn)

Message

We, Mitsubishi Heavy Industries, are currently working towards "development of growth areas" as one of the targets set in the 3-year mid-term business plan for 2021 to 2023. One example of the "growth areas" is energy transition, which involves promotion of utilization of hydrogen and ammonia, and decarbonization technologies such as CCUS.

CO₂ emission-free hydrogen boiler High efficiency hydrogen-fueled flow-through boiler

Miura Industries (Thailand) Co., Ltd.



Service and Technologies

With its high boiler efficiency, Once-through boilers are widely used for heat source - the company developed a hydrogen-fired version of the boiler, and in January 2017, they became the first in Japan to commercialize the product capable of using 100%* hydrogen fuel (*Based on the company’s own research). For the equipment used in hydrogen line, explosion-proof structures are used to prevent explosion from leaked gas. For the solenoid valves, hydrogen explosion-proof structures (d3aG4 or equivalent or higher) are selected for use. Also, as hydrogen burns at a high rate, a corrugated plate backfire arrester with high flame-extinguishing performance is adopted as standard.

Sustainability

The CO₂ emission volume of steam boilers widely used for industrial heat source is said to account for around 6% of the total emission in Japan (direct emissions around 1,138 million in 2018). CO₂ emission per 1 ton of steam (0.7MPa, 20 °C water supply) is approximately 355kg-CO₂ for coal fuel, 243kg-CO₂ for heavy fuel oil, and 161kg-CO₂ for natural gas. On the other hand, for this product (hydrogen boiler), since the combustion only generate water, the CO₂ emission volume during combustion is practically zero, making it an option towards achieving carbon neutrality.

Experience

At the moment, due to issues such as hydrogen price and supply chain, implementations have only been done in factories that generate byproduct hydrogen during production. However, since the first model was installed in Okayama Chemical Co., Ltd., the boiler has been installed in more than 10 factories with byproduct hydrogen throughout Japan. The boiler was awarded “New Energy Fund Chairman’s Award” by the New Energy Award in 2020, “Japan Machinery Federation Chairman’s Award” for excellent energy saving machine system and certified as Ministry of the Environment’s L2-Tech product. Also received the first ever certification for steam boiler (SI-2000AS-H2A, NO_x = below 50pp(Conversion at O₂=0%) by the low NO_x equipment certification scheme.

The Best Partner of
Energy, Water and Environment

MIURA

Company Information

Company Name: Miura Industries (Thailand) Co., Ltd.

Industry: Normal machine equipment manufacturer

Address: 84/2 moo 9, Bangwua, Bangpakong, Chachoengsao 24130 Thailand

Website: <https://www.miuraz.co.jp/en/>

Affiliated Company in Japan: Miura Co., Ltd.

Contact: miura-thai@miuraz.com

Message

In Japan, once-through boilers account for 77% of all boilers in terms of the evaporation volume. Miura Industries is a leading company in the Once-through boiler market with approximately 60% market share. MIURA INDUSTRIES (THAILAND) is the Thai local subsidiary company. In Thailand, we are similarly offering online maintenance, engaged in chemical manufacturing and water analysis, with maintenance sites in Chachoengsao, Bangkok, Rayong, Ayutthaya, Surat Thani. Currently there are over 1,200 of our boilers running in Thailand.

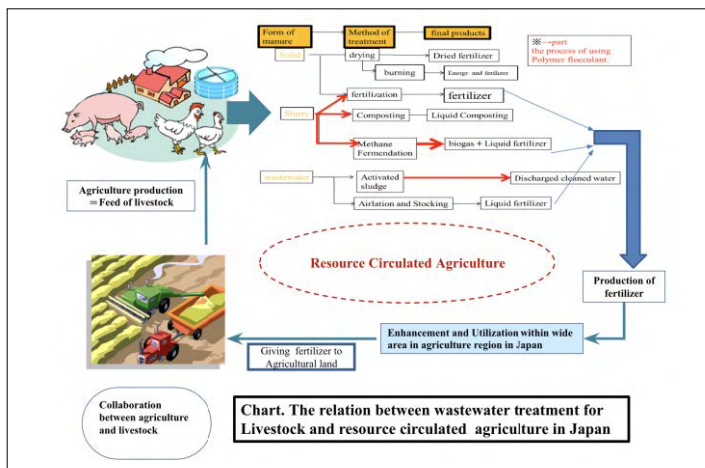
Polymeric flocculant that promotes a circular society ARON FLOC C series, E series

MT AquaPolymer, Inc.

The dewatering machine condition used Polymer flocculant of MTAP
~wastewater of food plant in ASEAN country~



This dewatering machine was used polymer flocculant of MTAquaPolymer. The load of dewatering process increased three times as the case of using domestic polymer flocculant.



Service and Technologies

Agents used as flocculants and dewatering agents for wastewater from a wide range of industries, including sewage, paper mills, chemical plants, and wastewater from the livestock industry. Polymer flocculant is an agent that flocculates, concentrates, and dehydrates wastewater for solid-liquid separation. By selecting a grade that matches the properties of the wastewater and adding the optimum amount, the volume of sludge can be efficiently reduced. The dewatered cake can also be adjusted to a low moisture content. We select and provide not only single grades but also blended grades of polymer flocculants suitable for the properties of organic sludge.

Sustainability

In Japan, livestock wastewater is dewatered by adding MT AquaPolymer's appropriate polymer flocculant. The dewatered cake can be aerobically fermented into compost, contributing to the promotion of a circular society. In the treatment of wastewater from livestock production and when discharged wastewater is allowed to settle naturally by staying in ponds as it is, evaporation of water and GHGs contained in the wastewater, such as carbon dioxide and methane gas from anaerobic conditions are released. On the other hand, the use of a polymer flocculant in livestock wastewater treatment, the use of an optimal polymer flocculant reduces the time spent in wastewater storage by solid-liquid separation, and the GHG released during the treatment is reduced.

Experience

Sales record in Southeast Asia and China (via local distributors). By removing suspended solids as a solid during wastewater treatment, the load on the water environment can be reduced. In addition, the moisture content of dewatered cake can be lowered, it can be dried efficiently and used as auxiliary fuel for boilers as a raw material for cement or as a fertilizer. In the case of the use of polymer flocculant in livestock wastewater treatment, the dehydration cake after solid-liquid separation can be converted into compost by fermentation as fertilizer for agricultural land. Crops grown on farmland can be used as livestock feed, thereby realizing a circular livestock production model. Similar utilization potential exists for the products that organic wastewater can produce.



Company Information

Company Name:
MT AquaPolymer, Inc.
Industry: Chemical, medicine, petrochemistry and coal product manufacturing
Address: Ueno Building 3F, 2-6-2 Kajicho, Chiyoda, Tokyo 101-0044
Website: <http://mtaqua.co.jp/eng/>
Affiliated Company in Japan:
Same as above
Contact:
ken.takeda@mtaqua.co.jp (Takeda)

Message

MT AquaPolymer, Inc. is a joint venture by Toagosei Co., Ltd. and Mitsui Chemical Inc. By integrating the polymer manufacturing technologies -mainly polymer flocculants as wastewater treatment chemicals, and technical services for wastewater treatment that have been developed by each company, we provide high-quality products and optimal solutions, aiming to improve the water environment in a sustainable manner.



Key device for a sustainable society Lithium-ion Capacitor

Musashi Asia Co., Ltd. (Musashi Energy Solutions Co., Ltd.)



Service and Technologies

Lithium-ion Capacitor (LIC) has a hybrid structure - it uses an activated carbonelectrode like an electric double layer capacitor as a positive electrode, and a carbon electrode like lithium-ion batteries as a negative electrode. By introducing pre-doping technology to this structure, it achieves a high level of performance that combines the advantages of both. It has a higher energy density (enabling high current discharge) compared to EDLCs, and higher output characteristics than lithium-ion batteries. It also features characteristics such as high safety, charge/discharge tolerance, excellent self-discharge characteristics, and wide operating temperature range.

Sustainability

Our LIC can improve energy usage efficiency by means such as utilizing regenerative-power and saving energy on overall system by peak assist. Through our provision of energy solutions for the various needs of customers, we will contribute to the realization of a sustainable society.

Experience

LIC is capable of high current charge/discharge. While maintaining a high safety, it has a high tolerance for repeated charge/discharge with little self-discharge and wide operating temperature range.

[Application examples]

- Voltage Sag Compensator (downsized from conventional EDLCs).
- Auxiliary power supply for fuel cells (longer service life of fuel cell stacks by suppression of load fluctuation, and improved product value through output assist).
- Power source for transport machines like AGV (reduction of charging time loss and improved operation rate through rapid charging).
- Auxiliary power supply for automobiles, etc. (power supply even at low temperature, compatible with dual power sources for automated driving).
- Catenary-free Tram (rapid charging allows charging while stopping at stations, and improves maintenance ability by eliminating overhead wires).



Musashi Energy Solutions Co., Ltd.

Company Information

Company Name:

Musashi Asia Co., Ltd.
(Musashi Energy Solutions Co., Ltd.)

Industry: Manufacturing

Address: 8565 Oizumicho Nishiide,
Hokuto, Yamanashi 409-1501, Japan

Website:

<https://www.musashi-es.co.jp/>

Affiliated Company in Japan:

Musashi Seimitsu Industry Co., Ltd.

Contact: sales_mes@musashi.co.jp

Message

Lithium-ion Capacitor has a long service life, maintenance-free and highly safe. With these characteristics, they have been adopted in places such as power failure guarantee device and energy regeneration system for track transportation. As the technology development advances for further increased capacity, aside from creating a new market, it is also expected to be one of the key devices in creating the electric society. Musashi Energy Solutions will accelerate the expansion of energy solution business that contributes to the creation of a sustainable society.

Eco-friendly plastic in incineration green nano (Functional masterbatch)

Nagase (Thailand) Co., Ltd.






PP (Bottle): CO2 emission was reduced by 38% with green nano.

	n	1	2	3	4	5	6	7	Avg. (n=5)
Common Bottle	Time (min)	38	35	46	50	40	41	36	2,506
	CO ₂ (%)	2,435	2,534	2,569	2,565	2,430	2,722	2,293	
Green Nano Bottle	Time (min)	32	27	27	29	27	22	29	1,560
	CO ₂ (%)	1,537	1,598	1,643	1,470	1,552	1,350	1,689	

*These data does not guarantee that the same efficiency is obtained every time. The efficiency can be bigger or smaller according to the composition ratio and the material composition.

Service and Technologies

By adding a small amount of green nano (functional masterbatch) to common plastic, CO₂ emission in incineration can be significantly reduced, while maintaining the plastic's properties. Functional masterbatch contains carbonization accelerators, resulting in lower CO₂ emission. By adding an appropriate amount of "green nano" to plastic molding compounds, the accelerators are moderately dispersed through the molding plastic. This triggers an effective chemical reaction, achieving an eco-friendly plastic that has sufficient CO₂ reduction effect with little additives.

Sustainability

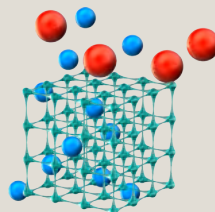
As carbonization accelerators function as the catalyst for dehydrogenation, it promotes the carbonization reaction when flammable gas is generated in incineration. In incineration, more carbides are generated than usual. As carbon is trapped in the residue (ashes), the CO₂ emission is reduced. "green nano" (functional masterbatch) has been attracting attention as a new solution to incinerate plastic waste properly with lower environmental loading, contributing global warming and marine microplastic pollution.

Experience

Product examples Hangers, hooks, mugs, spoons, forks, plastic bottles, tanks, spray bottles shopping bags, film-derived products like garbage bags, packing materials, plastic umbrellas, nonwoven fabric products like masks and eco bags, etc.

Other technology

Metal Organic Framework (MOF) MOFs are porous materials composed of metals and organic compounds that form regular three-dimensional structures and are controlled at the nano-level. They are able to remove and separate impurity molecules and store molecules, and some have functions as ion transport and conductors, as well as magnetic and electrical properties. They are expected to bring a significant impact not only to energy and environmental solution industries, but also a wide range of industries.



Company Information

Company Name:
Nagase (Thailand) Co., Ltd.
Industry: Trading
Address: Np. 952, Ramaland Bldg., 14th Floor, Rama IV Rd., Kwaeng Suriyawongse, Khet Bangrak, Bangkok, 10500 Thailand
Website:
<https://www.nagase.co.th/>
Affiliated Company in Japan:
NAGASE & Co., Ltd.
Contact:
yoshiro.numata@nagase.co.jp (Numata)

Message

Nagase is a specialized trading company in trading chemical products, with a history of more than 180 years. With over 100 subsidiary companies in and outside of Japan, we also actively engage in R&D, manufacturing and processing, etc. Founded in 2014, Aitoz Machinery manufactures and sells green nano. green nano is the first technology in Japan that significantly reduces CO₂ emission during incineration.



ENERGY EFFICIENCY

Creating an eco-friendly comfortable space LONG FAN Series

NISSHINTOA IWAO INC.



Service and Technologies

All our air transport fan products are made in Japan, capable of removing stagnant air indoor and making the air-conditioning of the space more comfortable. They also minimize condensation and forming of mold.

The product characteristics are;

- (1) By utilizing cross-flow fan to generate 8m wide pharyngeal flow, it is effective in ventilating a wide space.
- (2) As the internal friction of airflow is little, there is little energy loss, enabling longer reach.
- (3) It generates less noise compared to other fans like propeller fans.

Sustainability

Compared to ventilation with the conventional air-conditioning, long fans can ventilate more effectively, leading to reduction of energy usage. As long fans can ventilate without the need for an air duct, it can replace the conventional big-sized fans, leading also to a considerable reduction of energy consumption.

Experience

[Japan] over 3,000 implementations domestically

Most companies implement this product not only as a solution against condensation resulting in the forming of molds, but also to optimize energy usage by ventilating the indoor air and maintaining temperature. Increasing numbers of companies are utilizing the product in agricultural industry, in places like greenhouses and plant factories too. Major places of installation: basement parking lots, logistic warehouses, logistic centers, multi-level storage warehouse, markets, factories, basement pathways, cleaning factories, stores.

[Overseas]

- Vietnam: 200 fans installed in a Japanese electric component factory.
- Hong Kong: 700 fans installed in places such as basement parking lots.



Company Information

Company Name: NISSHINTOA IWAO INC.
Industry: Trading
Address: 2-30-8 Nihonbashi Ningyocho, Chuo-ku, Tokyo 103-0013 (Nisshinbo Annex)
Website: <http://www.nisshintoiwao.co.jp/>
Affiliated Company in Japan: Same as above.
Contact: nti-shinjo@nisshinbo.co.jp

Message

NISSHINTOA IWAO is a mid-sized trading company established in October 2016, at the merger between Iwao Co., Ltd., founded in 1901, and Nisshin Toa Co., Ltd., which has a root in Toa Jitsugyo Co., Ltd. founded in 1940. It is a wholly owned subsidiary of Nisshinbo Holdings, Inc. The products we handle are wide range, including foods (wheat flour, oils and fats, processed marine products, processed meat products, etc.), textiles (general textiles, sports apparel, kids wear, etc.), industrial materials (housing-related products, various machinery equipment and parts, long fans, etc.), and so on. Outside of Japan, we have a locally registered subsidiary in Shanghai, and have been working on business expansion to SEA region as our new business. We are committed to overseas expansion - we have opened an office in Thailand, and also have experience setting up a business in Laos.



Smart city concept with IoT lighting equipment as its core Next generation LED street lights with high extensibility

NMB-Minebea Thai Ltd.

Service and Technologies

Energy-saving road lamps with high energy efficiency as compared to normal road lamps and standard LED road lamps. The high uniformity of light ensures the road is evenly lit. It can also be centrally managed and is highly scalable. By combining various sensors with the unique network structured by the road lamps, functions related to the city life can be centrally monitored. The energy consumption of road lamps is high due to the fact that they often stay on throughout the night for safety reasons. By implementing this product, reduction of energy use can be expected.



Sustainability

Smart road lamps are capable of a wide range of light adjustment depending on factors. At times like midnight when the traffic is low, brightness can be reduced while still ensuring safety. With these adjustments, it can reduce maximum 80% of energy waste and contribute to the reduction of CO₂ emissions. It can also help with disaster prevention and reduction by connecting with an environmental sensor which can simultaneously measure eight items including temperature and humidity, or a water gauge. Lighting equipment will not only help light the streets but also play a role in saving energy, improvement of city life convenience and safety.

Experience

In Thailand, 167 lamps have been installed as part of the joint research on AI City with Thammasat University. In Cambodia, with the support of Japan's Ministry of the Environment, they installed 5,672 lamps as part of the JCM project, and demonstrated its energy saving effect by 60-70%. They are expected to reduce 559 tons of CO₂ per year. In the case of environmental sensor, they conducted an experimental study of "operation related to improving the accuracy of solar radiation forecasts by utilizing smart lighting data" in collaboration with the Japan Weather Association, and are verifying the accuracy improvement effect on solar power generation forecasting.



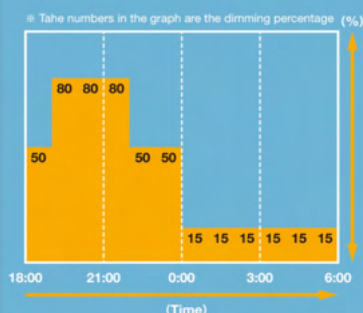
Company Information

Company Name: NMB-Minebea Thai Ltd.
Industry: Electrical and electronic
Address: 19th Floor, Wave Place Building 55 Wireless Road, Lumpinee Pathumwan, Bangkok 10330 Thailand
Website: <https://www.minebeamitsumi.com/english/>
Affiliated Company in Japan: MinebeaMitsumi, Inc.
Contact: ykobayashi@minebea.co.th
Tel : +66(0)2253-4897 EXT. 210
H/P : +66(0)6-1415-3560 (Kobayashi)

Message

MinebeaMitsumi group produce a wide range of electronic components from ball bearings to precision machining parts. Currently, we have 93 bases in 22 countries across the world, and Thailand has the highest production volume of all. With our high technical capabilities and high quality, we also develop environmentally conscious products.

Example of Dimming Schedule by Hour



First plant-based leather in Asia Pineapple leather

PEEL Lab K.K.



Service and Technologies

Leathers at PEEL Lab are made by upcycling plants (pineapple leaves, coconuts and bamboos). Pineapple leather consists of 40% pineapple leaves, 30% resin, and 30% r-PET. This leather is affordable, light-weighted, and has high water resistance and durability. It is an eco-friendly material/technology that can be used for the interior of automobiles, furniture, fashion items, etc.

Sustainability

There are numerous issues in the leather industry - more than 50million animals per year are sacrificed for manufacturing leather products, and 80% of the manufactured leather are being disposed of. Also, 83billion gallons of water is used to process leather products each year, and most of it are used without being processed. On the contrary, PEEL Lab products and technologies are highly eco-friendly and contribute to minimizing food loss and prevention of animal abuse. Additionally, in the manufacturing of the conventional leather, 107kg of CO₂ is emitted per 1m² of leather. However, PEEL Lab's vegan leather can reduce the emission to 4kg. This amount is lower than the CO₂ emitted by the simple act of eating a hamburger.

Experience

120m pineapple leather previously sold in Japan and Thailand. Apart from this, we are also developing other products such as "PinaSeru", table mats (Folio Brand), tissue box (Folio Brand), shoes (Locusshoe), chairs (Modernform) and so on. The plant-based leather of PEEL Lab has over numerous members and supporters, and has been certified by the most prominent animal welfare organization (PeTA). It was awarded. the second place at Japan's Creative Business Cup, and at the French Business Award 2022 held by the French Chamber of Commerce in Japan, it received the "Sustainable Development Award", garnering attention from organizations not only in Japan but also overseas. Additionally, we have joined SDGs Challenge, a support program for SDGs-related startups jointly organized by United Nations Office for Project Services (UNOPS) and the city of Kobe, and have been working on the development of a new material.



Company Information

Company Name: PEEL Lab K.K.
Industry: Textile, apparel, leather/fur, decorative item manufacturing
Address: 2F Daiichi Sumiken Nagahoribashi Ekimae Building, 2-3-6, Minami-semba, Chuo-ku, Osaka, 542-0081
Website: <https://www.peel-lab.com/>
Affiliated Company in Japan: Same as above.
Contact: info@peel-lab.com

Message

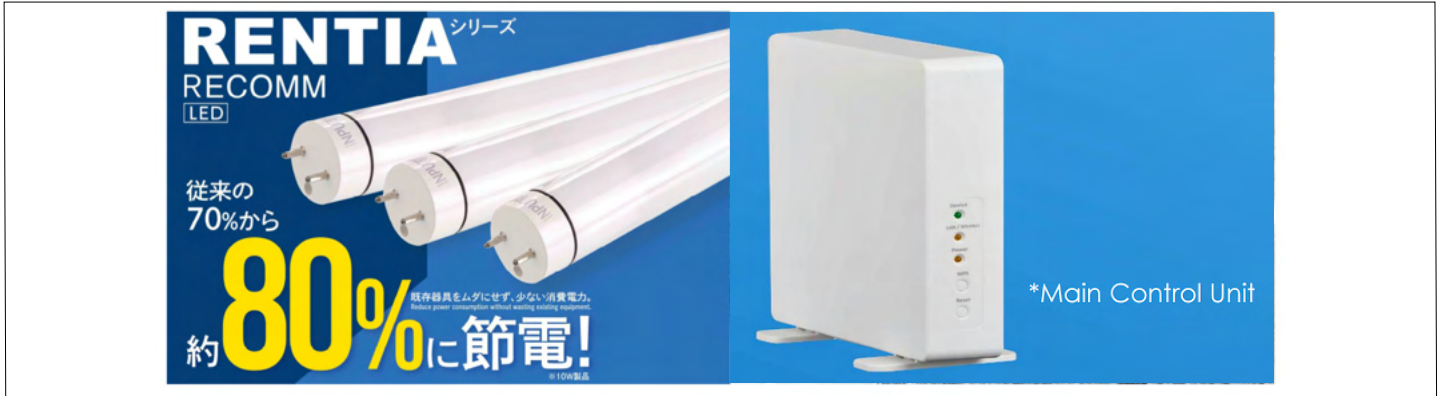
PEEL Lab is the first business platform for plant-based leather in Asia. Founded in February 2022, we are base in Osaka. Our main business is upcycling fruit peel to manufacture plant-based leather that is inexpensive, light-weighted, and has high waterproof and durability. This vegan leather can be used in the interior of automobiles, furniture, and fashion items. Our business model is mainly B2B, having manufacturing companies of various products as our customers. Also our products are eco-friendly, as they contribute to restraining global warming, food loss, and prevention of animal abuse.



Next-generation LED lighting RENTIA

Demand control system specializing in air conditioning Ai-Glies

RECOMM BUSINESS SOLUTIONS (THAILAND) CO., LTD.



Service and Technologies

RENTIA is a new generation of LED lighting that is brighter, more energy-efficient, and more eco-friendly than conventional lighting, which has been popular until now. The straight tube type has a light distribution angle of 300°, and the high-bay type has a light distribution angle of 90° to 120°, illuminating a wider area. It also has high luminous efficiency, achieving an illuminance of 200 lumen/W.

Ai-Glies Demand control system specializing in air conditioning and centralized management by “CLOUD”.

- ◇ Main Features : Automatic control by outdoor air conditioner and save electric charge.
- ◇ Able to save electric charge use thinning operation (24 hours / 365 days) By blowing air for 10 to 30% of the air conditioning operating time depending on climate.
- ◇ Peak cut of demand value.
- ◇ Reduce construction cost by solar panel and wireless.
- ◇ Centralized management by “CLOUD” : Able to change control setting by remote.

Sustainability

[RENTIA]

Reduce power consumption by simply replacing existing lighting with high-efficiency lighting. Since the same equipment (frame) can be used continuously, there is no need to waste existing equipment. In addition, the high-bay type has a switch that adjusts the output in three stages, allowing you to increase the illuminance by increasing the output when the illuminance decreases over time. This also reduces the time and cost of replacing the lighting itself. They reduce fossil fuels used for thermal power generation and at the same time reduces CO₂ emissions, contributing to the preservation of the earth’s environment.

[Ai-Glies]

Demand control system specializing in air conditioning make “Estimated Reduction Effect” (Confirm reduction of electric charge and CO₂ amount)

Experience

About 1,100 companies in Thailand, mainly manufacturing companies operating factories in Thailand, have installed our LED lighting and other energy-saving products. Additionally, about 3,200 companies in areas including China, India, and the ASEAN region have installed our similar lighting products.



Company Information

Company Name: RECOMM BUSINESS SOLUTIONS (THAILAND) CO., LTD.

Industry: Retail / Wholesale

Address:

12F MS&AD Insurance Group Shinjuku Bldg., 3-5-3, Yoyogi, Shibuya-ku, Tokyo, 151-0053 Japan

Website: <https://www.recomm.co.jp/>

Affiliated Company in Japan:

RECOMM Co., Ltd.

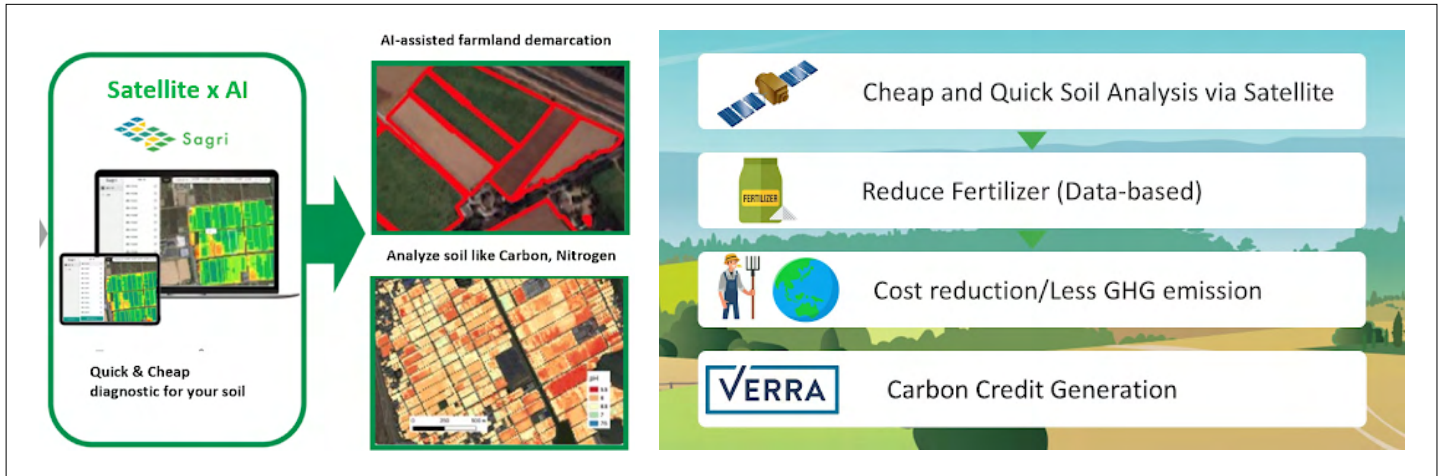
Contact: na.shimizu@recomm.co.jp

Message

Wherever the lights are turned on, such as in offices and factories, there is a possibility that the cost of electricity can be lowered by using our products. This also leads to CO₂ reduction at the same time, making it an effective step for companies that aim to reduce CO₂ as an environmental measure. Please let us know if you are considering installing or switching to our products.

Soil analysis, fertilization optimization, and decarbonization of farmland using satellite data Generation and sale of agriculture-derived carbon credits

Sagri Co., Ltd.



Service and Technologies

- Using satellite data analysis and the power of AI, we will perform soil analysis on farmland and optimize fertilization. By reducing the excessive use of chemical fertilizers, we will reduce greenhouse gas emissions and generate and sell carbon credits that provide additional income to farmers.
- Our business model is to partner with agricultural companies, food companies, and agri-tech companies that have a network of farmers to implement the carbon credit generation business and distribute the profits from the carbon credit generation (no initial cost).
- *Companies interested in purchasing carbon credits are also welcome to contact us.

Sustainability

- The reduction of chemical fertilizers reduces nitrogen monoxide, a major contributor to greenhouse gases, and the use of organic fertilizers and biochar increases carbon storage, thereby reducing our impact on climate change.
- The profits from the sale of the carbon credits generated are returned to the farmers, so there is sustainability in terms of creating additional income and improving the livelihood of the farmers.

Experience

- In Japan, there are public works projects with central government ministries and local governments as clients, as well as farming and carbon credit projects. For overseas, we engaged mainly in farming and carbon credit projects.
- In India and Thailand, we have reduced chemical fertilizers for rice cultivation, and have already completed the application for carbon credit projects. In Thailand, we plan to collaborate with Kasetsart University and start a demonstration project with the CP Group.
- In the past, we have participated in many overseas projects related to the Japanese government, such as JICA/JETRO/Ministry of Agriculture, Forestry and Fisheries/Ministry of Economy, Trade and Industry projects.



Company Information

Company Name: Sagri Co., Ltd.
Industry: Agriculture, Forestry and Fishery
Address: 725-1 Joraku, Hikami-cho, Tamba City, Hyogo, Japan
Website: <https://sagri.tokyo/en/>
Affiliated Company in Japan: Same as above.
Contact: sakamoto-kazuki@sagri.co.jp

Message

We are an impact startup founded in 2018 at Gifu University. In 2023, we were certified as J-startup Impact by the Ministry of Economy, Trade and Industry. With subsidiaries in Singapore and India, we are expanding our business not only in Asia but also in Africa and Central/South America, and we have strengths in overseas expansion. We will participate as a speaker at COP28 in Dubai in December with a nomination by the Japanese government.



Solution for reducing electricity expenses and CO₂ emissions Installation of solar power generation system

Sharp Solar Solution Asia Co., Ltd.



Service and Technologies

We are strengthening solar power generation system for proposing solutions to meet the increasing demand in environmental contributions by generating the electricity needed for corporate activities through self-consumption of renewable energy, as the efforts towards SDGs promotion and achieving carbon neutrality are gaining attention among corporate customers. Currently, we are responding to strong demand from Japanese companies and local leading companies in the ASEAN region. Furthermore, we continue to promote the construction of Large-scale solar power plants across the world. In Thailand, there are some cases where investment payback within 3 years is achieved by applying BOI tax incentives (EPC).

Sustainability

We aim to provide clean energy generated by solar power generation system installed on factory rooftop and available spaces, reducing CO₂ emissions by suppressing the use of fossil fuel-derived electricity and contributing to environmental management. Ultimately, our goal is to encourage the environmental burden reduction. Additionally, we are working towards improving the technology of energy management that generates, stores and intelligently utilizes clean energy with Battery energy storage system to achieve a sustainable society and environment for the future.

Experience

Sharp Solar Solution Asia has been carrying out the solar business in Thailand since 2011 and has achieved more than 100 projects (Total capacity is more than 300MWdc). In addition, we have numerous tracks of installation in the ASEAN region other than Thailand (Total capacity is more than 700MWdc), which has elevated our vigorous presence in the global market. As part of our efforts, we not only offer the EPC scheme mentioned above but also provide "Zero Initial Investment (PPA)" solar power services. We are actively meeting the demand and promoting the adoption of solar power generation system for many companies. In our affiliated companies in Japan, we have more than 60 years of experience in development of solar PV module and sales record (Total capacity is more than 1,400 MWdc). With the entire group working together, we have established the organization structure to promote broadly the usage of renewable energy.

Other technology

[Solar power generation system with Battery energy storage system]

You can store the excess electricity generated during the day in a battery and use it during nighttime production activities or during demand-peak on daytime. This allows for the efficient and maximum utilization of renewable energy.



Company Information

Company Name: Sharp Solar Solution Asia Co., Ltd.

Industry:

- Construction, Construction Industry (Construction, Civil Engineering, Equipment, etc.)
- Other Manufacturing Industry
- Electricity / Gas / Water Industry

Address: 952 Ramaland Building, 15th FL, Rama 4 Road, Suriyawong, Bangkok 10500

Website: <https://sssa.co.th/>

Affiliated Company in Japan:

Sharp Corporation

Contact:

sato.h@sssa.sharp-world.com (JP)
info@sssa.sharp-world.com (TH, EN, JP)

Message

We aim to actively contribute to the implementation of a decarbonized society by promoting the adoption of solar power generation system, with a focus on the following three strengths:

1. A comprehensive service system that includes the manufacture of PV modules, procurement, design, construction, and maintenance of solar power systems, with support available in Japanese, English, and Thai.
2. A proven track record of utilizing Japanese government subsidies (JCM) and supporting applications to Thai government agencies for related projects.
3. Customized monitoring systems tailored to meet specific needs.



ENERGY EFFICIENCY

Generating clean energy Steam turbine

Shin Nippon Machinery Co., Ltd.

Generating Power
for Human Life, SNM

Service and Technologies

Steam turbine that can be installed as power equipment for driving generators in distributed power generation plants (small to medium scale) fueled by biomass fuels or waste which maintains the extraction pressure even when the extraction flow rate fluctuates and can control up to 90% of the extraction flow ratio. For more than 70 years since its establishment, the company has been working on cost saving, high quality, high precision, high added value, and immediate response. In Thailand, the company provides highly efficient, trouble-free, and safe operation with sufficient after-sales service by its local office.



Sustainability

By using this high efficiency turbine for biomass power generation and waste incineration power generation that uses urban waste as its fuels, the company will contribute to the decarbonized society in terms of promoting use of renewable energy. Also, waste incineration power generation can contribute to solving environmental hygiene issues arising from urban waste landfills that are hard to manage, as well as the issue of methane gas emissions from waste, which has an even stronger greenhouse effect than carbon dioxide.

Experience

The company had been carrying out installation of steam turbine in Thailand's sugar manufacturing companies since before biomass power generation became popular 50 years ago, and their products have been contributing as the main machine for power generation equipment that uses bagasse as its fuels. Until now, their supply of steam turbines has expanded to 80 countries with total of 2,100 machines across the world. This steam turbine is used in places such as the steam supply machine for air conditioning in Suvarnabhumi Airport, and as a power supply for the major industrial areas in Thailand.



Company Information

Company Name: Shin Nippon Machinery Co., Ltd.
Industry: Normal machine equipment manufacturing
Address: ThinkPark Tower, 1-1, Osaki 2-Chome, Shinagawa-Ku, Tokyo, Japan 141-6025
Website: <http://www.snm.co.jp/>
Affiliated Company in Japan: Same as above
Contact: (+81) 03-6737-2634

Message

Waste incineration power generation will not only help to solve social issues of environmental hygiene with its contribution to achieving carbon neutrality by biomass power generation, but will also help in reducing methane gas emission, which has higher greenhouse effect than CO₂. By installing our steam turbine as the drive of such power generation system, we will ensure a highly efficient, trouble-free operation and contribute to the energy supply that is appropriate for a decarbonized society.



Clean energy implementation that can be started right away Solar energy corporate PPA

Shizen International Inc., Representative Office in Bangkok



Service and Technologies

Solar energy PPA (Power Purchase Agreement) for the manufacturing industry. As customers do not need to bear the installation cost of solar energy system themselves, they can purchase clean energy for a long term (15 to 20years) without initial cost or operating cost. The service also provides comprehensive solutions to renewable energy including the implementation of storage batteries.



Sustainability

In the emerging trend where it is unavoidable for many companies to implement renewable energy, the means of procurement is highly limited. Solar energy corporate PPA is an effective method to implement clean energy in such situation as it doesn't require an initial investment.

Experience

[Example 1] Implemented a 5MW solar panel for Ampas group - a major automotive parts manufacturer in Thailand. The installation was completed in late July of 2020. Solar power system was installed on the roof of seven factories in Bangpu industrial estate (including the joint venture of Ampas and Murakami Corporation, Japan's biggest manufacturer of automotive rear-view mirrors)

[Example 2] On 29th October, 2020, they signed a corporate PPA with Aisin Thai Automobile Casting (ATAC), Thai local subsidiary of Aisin group (Toyota group). A 1MW solar power system to be installed on the roof of ATAC's factory in Kabinburi Industrial Zone, Prachinburi. Installation completed on 26th April, 2021. PPA for an additional 2.7MW for expansion was signed in November 2021.



Company Information

Company Name: Shizen International Inc., Representative Office in Bangkok
Industry: Electricity, gas and water service
Address: T-One building, 15 floor, room 15-116, No.8, Sukhumvit soi 40, Sukhumvit rd., Prakanong, Klongtoei, Bangkok 10110 Thailand
Website: <https://www.shizeninternational.com>
Affiliated Company in Japan: Shizen Energy Inc.
Contact: si-thailand@shizenenergy.net

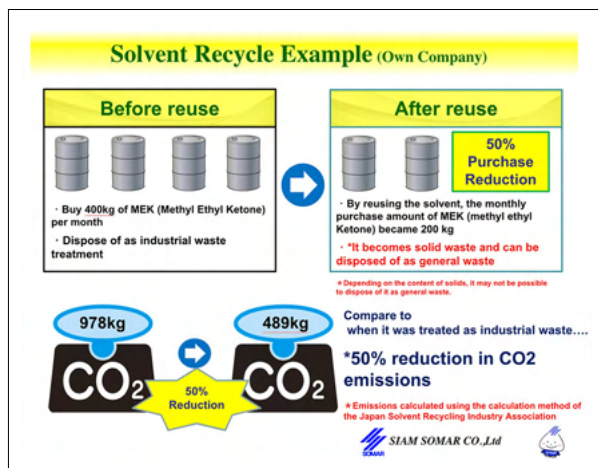
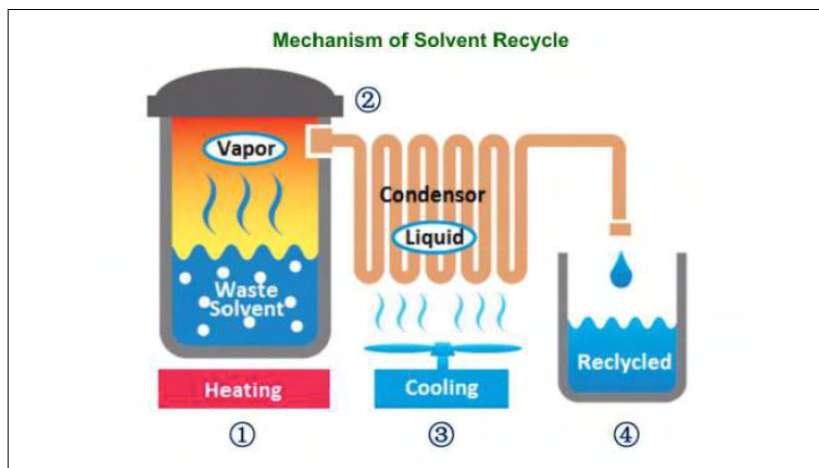
Message

We are a company that is working towards promoting the lifestyle with safe and sustainable energy by building natural power plants across the world. In Japan, we have developed approximately 1GW worth of renewable energy power plants. Our overseas businesses began in 2016, and currently we have solar power and wind power businesses in Malaysia, Thailand, Vietnam, Indonesia, the Philippines, and Brazil. Shizen Energy Group aims to engage in 10GW worth of power generation businesses across the world by 2030.

Recycling waste organic solvents used in cleaning

Distillation and regeneration of used organic solvent

Siam Somar Co., Ltd.



Service and Technologies

A solvent recycling business that collects used organic solvents, remove impurities from them and regenerate them. Waste solvents such as hydrocarbon solvents, alcohol solvents, ketone solvents, ester solvents, and brominated solvents are vaporized and liquefied by cooling fans to regenerate the solvents. This service will collect waste solvents from customers and return the regenerated solvents.

Sustainability

While used organic solvents will emit carbon dioxide when going through heat treatment for disposal, by recycling them with this service, not only can we reduce waste but also contribute to the reduction of CO₂ emissions. Also, distilling and regenerating used solvents and cleaning agents in factories and offices will allow recycled use of the solvents and cleaning agents. This way, cost of purchasing new liquids and industrial waste disposal costs can be significantly reduced, thereby saving resources and reducing the environmental burden.

Experience

In the case of a company that used to purchase 400 kg of MEK (methyl ethyl ketone) per month and disposed waste solvents as industrial waste before switching to the regenerated solvents, their new purchase volume of MEK reduced to 200 kg per month after adopting this service. Also, by using the regenerated solvents, CO₂ emissions were reduced by 50% as compared to what it would have been if the solvents were treated as industrial waste (calculated with the calculation method by Japan Solvent Recycling Industry Association). In the case of Siam Somar themselves, the waste generated from solvent recycling was able to be disposed as normal waste, so they managed to reduce disposal cost. *Depending on the solid contents, there are cases where it cannot be disposed as normal waste.



Company Information

Company Name: Siam Somar Co., Ltd.
Industry: Trading
Address: 399 Interchange Bldg 26th Fl Unit2 Sukumvit Rd., Klongtoey-Nua, Wattana, Bangkok 10110 Thailand
Website: <http://www.somar.co.jp/english/index.html>
Affiliated Company in Japan: SOMAR Corporation
Contact: info@siamsomar.co.th

Message

Siam Somar Co., Ltd. manufactures and sells epoxy adhesives, surface protection agents and encapsulants, and sells shading films, high-performance films, protective films, solvent regeneration equipment, and food additives. We have an abundance of experience in the automotive, electronic, and food industry, and have been growing as a company with both trading and manufacturing functions. <Reduction of environmental burden with 3R promotion> Our factory has acquired ISO14001, and we are manufacturing environmentally friendly products to play our part in the preservation of the environment.

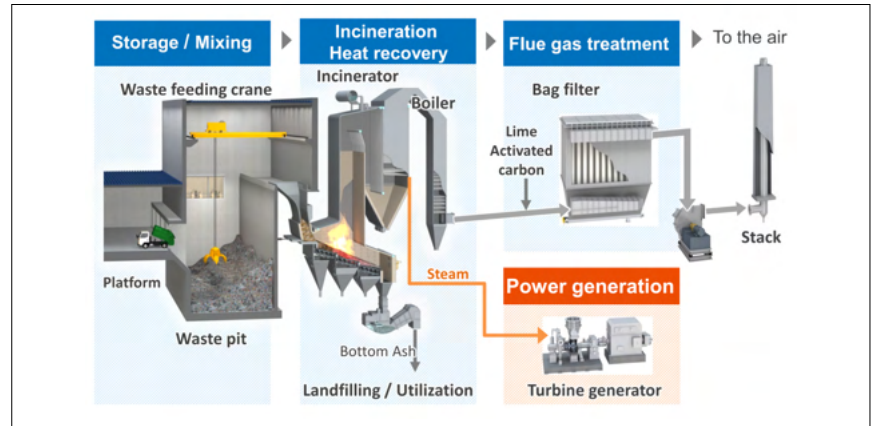
From biomass and waste to utilization of steam, electricity, and CO₂

Biomass / Waste to Energy plant

Siam Takuma Co., Ltd.

Service and Technologies

Various scales (around 2MW to over 50MW) of Biomass Power plant / Waste to Energy plant supplied with our own technologies of combustion and boiler is our major business. Based on our extensive experience and knowhows, we select and design the optimum combustion method and boiler. Also, by reducing auxiliary power and unburned portion, we supply plants that can operate stably with high efficiency (excellent energy saving performance).



Sustainability

By efficiently utilizing biomass fuels, agricultural residues, and wastes, we contribute to prevent air pollution and greenhouse gas emission from activities such as open field burning, and at the same time create energy sources such as steam and electricity. By promoting resource utilization and renewable energy, we will contribute to reduce CO₂ emissions and realize a decarbonized society.

Experience

The biomass power plant and combustion gas purification system installed in Okayama, Japan which were completed and started operation in March 2019, are located next to a greenhouse for vegetable cultivation. This plant uses lumber from nearby regions and imported woods such as palm kernel shells (PKS), and is successfully operating a sustainable operation as a biomass trigeneration plant that supplies three types of energy necessary for operation of the facility - electricity, heat for heating and cooling use, and carbon dioxide for promoting vegetable growth. In this project, we helped achievement of the customer's innovative concept of biomass tri-generation through joint efforts such as experimental study.



Company Information

Company Name: Siam Takuma Co., Ltd.
Industry: Other manufacturing
Address: 77/53 Sinn Sathorn Tower 15th Fl, Krungthongburi Rd., Klongtong Sai, Klongsarn, Bangkok, 10600 Thailand
Website: <https://www.takuma.co.jp/english/>
Affiliated Company in Japan: TAKUMA Co., Ltd.
Contact: info@siamtakuma.com

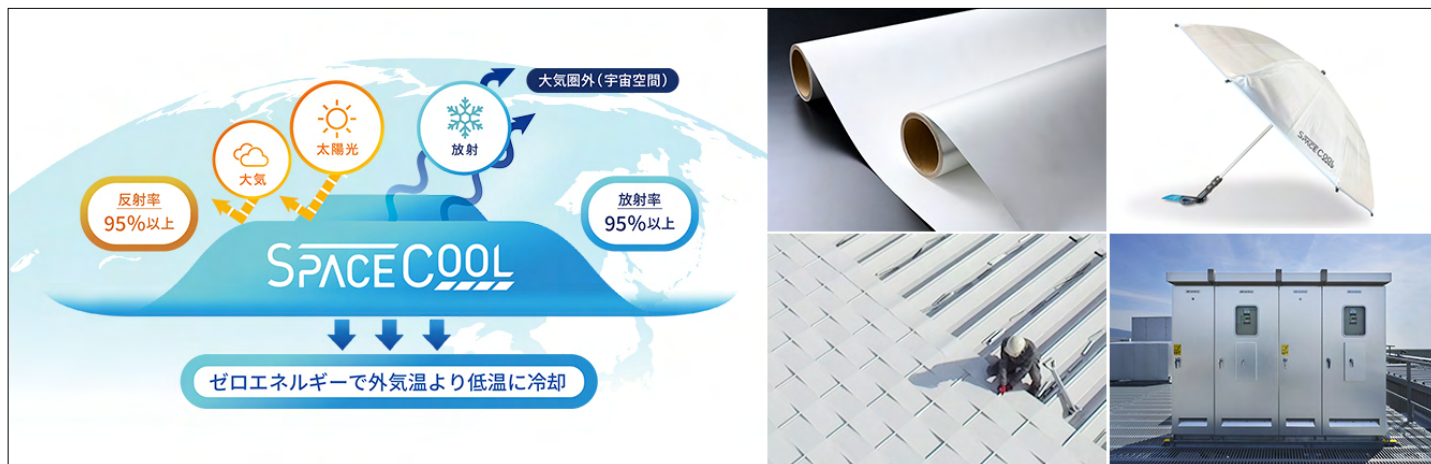
Message

Takuma is a company providing waste treatment, water treatment, and energy plant businesses - which is exactly why we take "environment" and "energy" very seriously. Since 2021, we have been incorporating ESG into our activities and aiming to maintain our role of being an indispensable presence in society over the long term sustainably. We have a long-time accumulated experience in the waste treatment and biomass power generation industry with our own combustion and boiler technology. In Thailand, we can provide services such as plant delivery, commissioning, and aftersales support.



Zero Energy Radiative Cooling Material SPACECOOL®

SPACECOOL INC.



Service and Technologies

In addition to blocking heat from sunlight and the atmosphere to reduce heat absorption, SPACECOOL® is a radiative cooling material that also discards heat by radiating it out into space, achieving a cooler temperature than the outside air with zero energy consumption. Various products are being developed to enhance comfort and safety, and to alleviate the effects of global warming by achieving a cooling effect with no energy consumption.

Sustainability

In today's world, there is a vicious cycle in which a great deal of energy is used for cooling due to global warming and industrial development, leading to an increase in greenhouse gas emissions, and further contributing to global warming. By using SPACECOOL® at the buildings, we can cool the spaces in which people work and live without consuming energy, thus dealing with thermal challenges in a very simple and efficient way.

Experience

Since the official product launch in 2022, it has been tested and fully adopted by many customers in Japan and around the world and has contributed to solving thermal issues in various outdoor applications.

Solving Thermal Issues for Outdoor Electrical Equipment

After we installed SPACECOOL® on an outdoor distribution board at a large-scale shopping center (Mitsui Shopping Park LaLaport Kadoma), it significantly reduced the heat from sunlight that affects electrical equipment which helped prevent equipment failure and degradation. SPACECOOL® is increasingly being introduced for outdoor equipment all around the world.

Buildings

By installing SPACECOOL® on the roofs of factories and warehouses (concrete roofs, metal roofs), We have a track record of decreasing heat entering into the room by more than 40°C, and it reduces the transfer of heat into buildings. It has also been demonstrated to reduce the use of electrical power for air conditioning.

Heatstroke Countermeasures

Heatstroke mitigation products such as sunshades, parasols, and tents are being developed in response to the increasingly intense heat waves each year. Demand is increasing for products used for leisure and outdoor activities.

Company Information

Company Name: SPACECOOL INC.
Industry: Other manufacturing industry
Address: ARCH Toranomon Hills
 Incubation Center Floor 4, Toranomon Hills
 Business Tower, 1-17-1 Toranomon,
 Minato-ku, Tokyo, 105-6404 Japan
Website: <https://spacecool.jp/en/>
Affiliated Company in Japan:
 Same as above.
Contact: yuto.kijima@spacecool.jp

Message

Materials-based startup from Osaka Gas. Since its establishment in 2021, the company has launched a diverse product lineup for various construction needs, such as film, canvas, membrane materials, and magnetic sheets in Japan, Thailand, Saudi Arabia, etc. The use of our product is expanding both in Japan and overseas, including in the Gas Pavilion at Expo 2025 in Osaka, Kansai. In addition to being selected as an exhibitor two years in a row at the Japan Pavilion of COP27 and COP28, our product has also won the Environmental Startup Award, the Minister of Land, Infrastructure, Transport and Tourism EcoPro Award, and was selected for the PwC Middle East Net Zero Future50.



Total solution provider for environment and recycling sphere 3Rs solutions for industrial waste, water treatment, energy saving

Sun-up Corporation (Thailand) Limited



Service and Technologies

We provide comprehensive solutions to reduce waste, cost and CO₂ at manufacturing process through proposing 3Rs solutions for industrial waste, water treatment and energy saving. Our subsidiary, Rock Engineering Co., Ltd. is the maker of distillation plant, which can treat highly-contaminated wasted water such as wasted coolant water, wasted heavy metal water, wasted paint water, etc. Our other subsidiary, Sun-up Recycling Co., Ltd. provides recycling wasted organic solvent service. We supply high-purity recycled organic solvent through conducting quality-assurance analysis for every single shipment.

Sustainability

- 1.Highly-contaminated wasted water: Reduce waste and waste treatment cost through recycling wasted water. Recovery rate would be 80-90%, and recycled water can be used at manufacturing process.
- 2.Recycling wasted organic solvent: Reduce waste, waste treatment cost and purchasing virgin organic solvent cost through recycling wasted organic solvent. Recovery rate would be 80-90%, and recycled organic solvent can be used at manufacturing process.
- 3.Energy saving for air-conditioner and chiller: Reduce electric consumption and CO₂ around 20% through adopting IoT cyclic control and inverter.

Experience

than 30 customers in Thailand and more than 10 customers oversea market. These customers have difficulties on disposing highly contaminated wasted water such as high BOD, high COD, high TDS, high grease & oil wasted water.

2.Recycling wasted organic solvent: We've conducted recycling wasted organic solvent service for more than 40 customers in Thailand. These customers have washing process, cutting process, degreasing process, plating process, painting process, etc.

3.Energy saving for air-conditioner and chiller: We've installed our systems for more than 30 customers and 500 units of air-conditioners and chillers in Thailand. These customers have assembly room, QA/QC room, server room, where are required for air-conditioning. We also provide ESCO service, which enable customers enjoy cost merit without any investments.



Company Information

Company Name:Sun-up Corporation (Thailand) Limited

Industry: Environmental/recycling business

Address:79/2 Moo4, T.Thepparat, A.Ban Pho, Chachoengsao, 24140, Thailand

Website: <https://www.sunup.jp/>

Affiliated Company in Japan:

Sun-up Corporation

Contact: a-sugiyama@sunup.jp

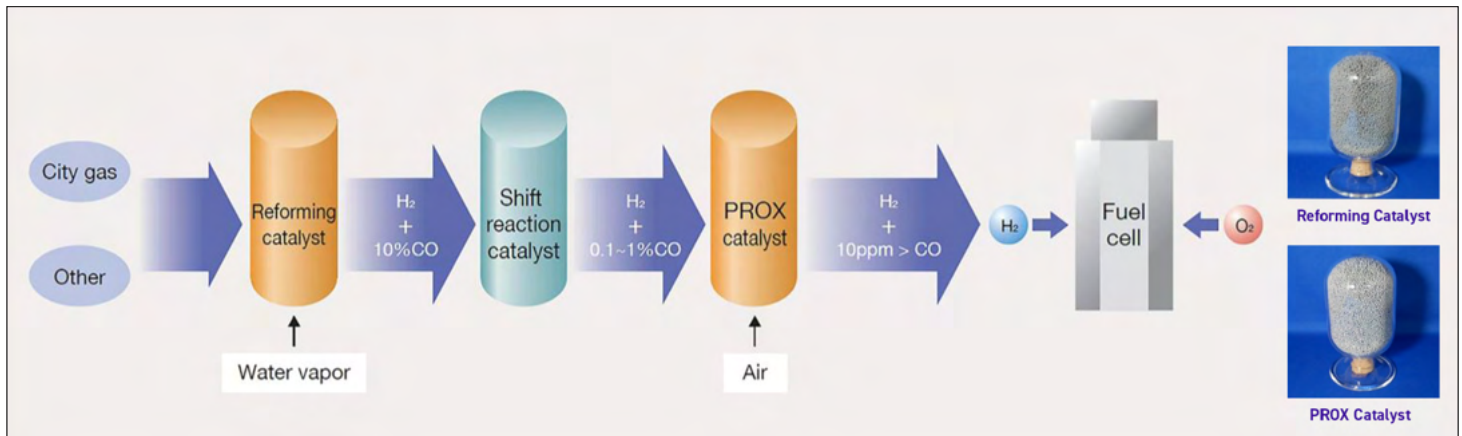
Message

We've engaged in environmental and recycling business since 1997, so that SDGs, ESG, carbon neutral are not new words for us. We're surely able to provide 3Rs solutions for industrial waste, water treatment and energy saving. We can provide various solutions except for 3 solutions which are mentioned in this brochure. It's highly appreciated if you could ask us when you have any issues regarding our solutions. Moreover, we're interested in various environmental and recycling equipment, which have cutting-edge technologies.

Precious metal catalyst that will contribute to the decarbonized society

Reforming catalyst, PROX catalyst and Oxidation catalyst

Tanaka Kikinzoku International (Thailand) Co., Ltd.



Service and Technologies

Tanaka provides reforming catalyst, a catalyst that generates hydrogen from hydrocarbon such as natural gas, and PROX catalyst, which has the ability to selectively oxidize and remove carbon monoxide that occurs during hydrogen generation. PROX catalyst is a catalyst that selectively oxidizes and removes carbon monoxide down to below 10ppm from the hydrogen and carbon monoxide that occur from the reforming action. Tanaka Kikinzoku is capable of providing low-cost catalyst that shows high activity for a wide range of temperatures from low to high heat, with low precious metal loadings.

Sustainability

This product is a catalyst that generates hydrogen from city gas and biomass-derived methane gas and utilize it for purposes such as fuel cell. It is expected that, besides automotive, electrification of consumable energies will also advance as one of the technologies to achieve carbon neutrality. In this trend, it is also predicted that the fuel cell as part of the electrification technology will be utilized in renewable energy-derived pure hydrogen, biogas, or natural gas reformed hydrogen. Also, methanation catalyst and carbon dioxide reforming catalyst, which apply this technology, will contribute to reduction of carbon dioxide.

Experience

- Adopted by “ENE-FARM”, fuel cell system for practical home use in Japan
- Introduction of demonstration equipment for catalysts (reforming and oxidation catalysts, etc.) developed for carbon dioxide reduction and utilization.



Company Information

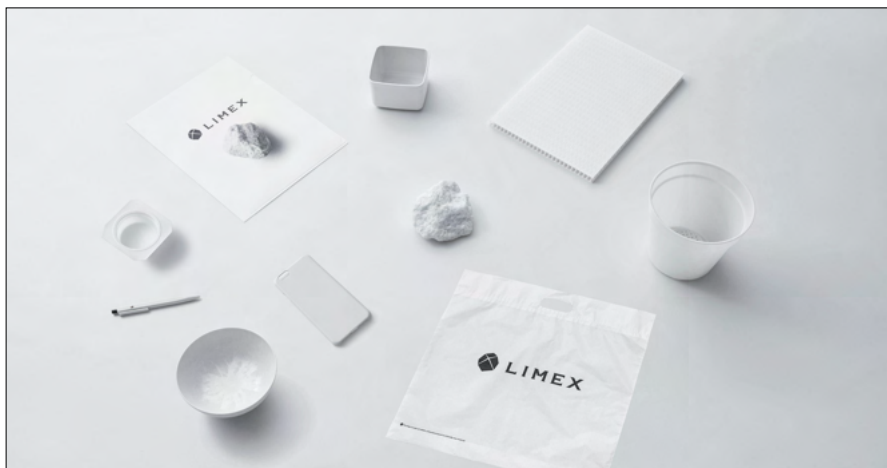
Company Name: Tanaka Kikinzoku International (Thailand) Co., Ltd.
Industry: Trading
Address: 952 Ramaland Building, Zone F, 14th Floor, Rama4 Road., Suriyawongse, Bangrak, Bangkok 10500 Thailand
Website: <https://www.tanaka.co.jp/english/>
Affiliated Company in Japan: TANAKA Kikinzoku Kogyo K.K.
Contact: wanichaya-p@ml.tanaka.co.jp (Wanichaya)

Message

Tanaka Kikinzoku Group is working as precious metal professionals. We provide services in the three fields of “Industrial use”, “Asset use”, and “Jewelry use”. There are a wide variety of industrial-use application, with industrial precious metal products we are developing ranging from everyday automotive, mobile and other devices, to cutting-edge energy, medical and aerospace. We take charge of every operation involved in precious metals, from bullion procurement, to processing and manufacturing, sales, and recycling. Through this extensive service we will help solve our customers’ issues with the optimal combination.

New replacement material for plastic and paper made with limestone as its main material Environment-conscious material LIMEX

TBM Co., Ltd.



Service and Technologies

LIMEX is an inorganic filler-dispersion composite material containing more than 50% inorganic materials such as calcium carbonate. LIMEX Pellet can be processed into items such as packing material, containers, and daily products with existing molding machines, and LIMEX Sheet can be printed and bound with existing printers and binding machines. Since the main material is limestone, it can contribute to the preservation of resources with high risk of depletion such as petroleum, water, and forest resources. They can also be recycled as they can regenerate without separating inorganic materials with thermoplastic resin.

Sustainability

Limestone, the main material of LIMEX, is a material that exists in abundance on the earth. As compared to petroleum-based plastic, for limestone, the CO₂ emissions at the raw material procurement stage can be reduced to approximately 1/50, and at the time of incineration by 58%. Also, LIMEX Sheet can reduce the amount of water needed for manufacturing by around 97% as compared to normal papers. Since it does not use any wood pulp, it can also help preserve natural resources with risk of depletion. *All given figures are calculations for reference, and not guaranteed figures.

Experience

LIMEX has been adopted by over 10,000 companies and municipalities and is patented in more than 40 countries across the globe. Apart from being introduced at international conferences such as COP and G20, it is also registered on UNIDO's Sustainable Technology Promotion Platform "STePP". The technology is being used for various purposes including shopping bags in retail stores, clear files and calendars in offices, menus and take-away containers in restaurants, plastic models, stationeries, hotel amenities and so on.



Company Information

Company Name: TBM Co., Ltd.
Industry: Chemical, medicine, petrochemistry and coal product manufacturing
Address: Toho Hibiya building 15F, 1-2-2, Yurakucho, Chiyoda, Tokyo 100-0006
Website: <https://tb-m.com/en/limex/>
Affiliated Company in Japan: Same as above
Contact: d-sato@tb-m.com(Sato)

Message

TBM's mission is to "build a bridge for the future we want" and "realize of "sustainability revolution". Our businesses in Japan and abroad include development, manufacturing and sales of environmentally-conscious materials, such as "LIMEX", a new material with limestone and "CirculeX", that contains more than 50% recycled materials. In collaboration with municipalities and private enterprises, we are also promoting recycling that collects and regenerates used LIMEX and scrap plastics. In 2021, we ranked 4th with business value at 133.6 billion JPY in the "NEXT Unicorn Survey" by The Nihon Keizai Shimbun, and were introduced as a unicorn company.

Evaluating the potential and risk of a land through satellite data and AI

Land evaluation engine - TENCHIJIN COMPASS

Tenchijin, Inc.



Service and Technologies

The independently developed “Tenchijin COMPASS” is an information platform that utilizes space big data. It analyzes an enormous amount of data accumulated based on each business purpose, and is capable of guiding to valuable information by combining with different sets of data. Tenchijin COMPASS helps customer’s decision making process by analyzing various data of a specific land, visualizing whether the land is suitable for customer’s business and whether there is any risk. Specifically, the service is used to understand carbon emissions, to search for a suitable area for renewable energy, to manage real estate and infrastructures, as well as to search for a suitable area for cultivation in the agricultural sector.

Sustainability

Tenchijin COMPASS supports efforts on carbon neutrality in agriculture and forestry. It helps with the acquisition of carbon credits by understanding the situation on carbon emissions and storage through satellite data, and monitors whether or not a sustainable agriculture/forestry is being practiced. We can also promote carbon storage and maintenance of soil environment by utilizing satellite data to recommend crops and subsidiary crops appropriate to the land.

Experience

- Zespri International
Assisted Zespri, world’s biggest kiwi brand, in searching for a suitable location for kiwi cultivation upon the brand’s expansion to Japan.
- Space big data rice project
A project that stimulates creation of new rice brands across regions and realizes a higher return agriculture through the use of space big data and cultivation of high quality rice. Jointly carried out by a major agricultural wholesaler Shinmei Holdings and an agricultural IoT solution Enowa. We search for a location suitable for a specific rice variety using space big data, and produce high quality rice by managing water with satellite data and IoT. For this year, it is being conducted with an expanded cultivation area.
- Bx - sustainable fruit farming
Jointly conducted with a British company, Bx, which runs a carbon credit transaction platform for fruit farming. We developed a solution that helps farmers acquire more carbon credits and maintain the environment of land by using satellite data to propose subsidiary crops (crops to be cultivated between each fruit tree) that are appropriate for each orchard and have high carbon storage.



Company Information

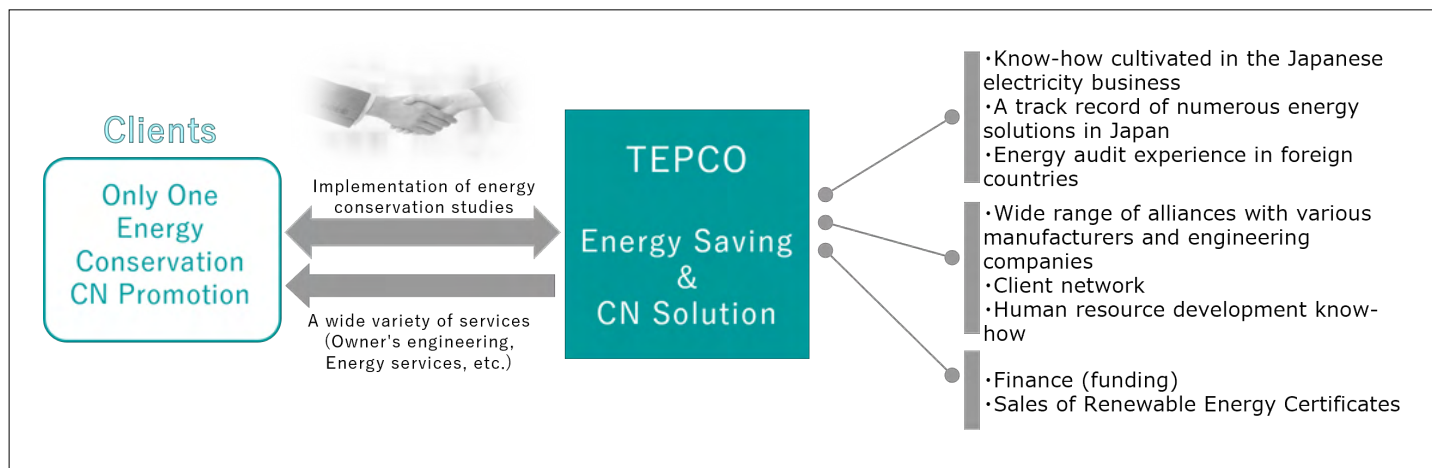
Company Name: Tenchijin, Inc.
Industry: Information processing services and computer software business
Address: Sumitomo Realty & Development Onarimon Tower 9F, 1-1-1 Shibakoen, Minato-ku, Tokyo 105-0011
Website: <https://tenchijin.co.jp/?hl=en>
Affiliated Company in Japan: Same as above
Contact: urabe@tenchijin.co.jp

Message

Tenchijin, Inc. is a startup company that utilizes space big data to shine a light on the value of land that is yet to be discovered. We conduct business solution development with high-precision/high-resolution earth observation satellite data and our independently developed land evaluation engine. Certified as JAXA STARTUP, startup company conducting business by utilizing intellectual property and knowledge of JAXA, it was founded by JAXA employee(s) and developer(s) with knowledge in the agricultural IoT field.

Achieving Only One CN promotion with four methods Energy saving & CN solution service

TEPCO Energy Partner International (Thailand) Co., Ltd.



Service and Technologies

- (1) Energy saving solution services
 - Operation improvement proposals based on energy conservation diagnosis and equipment operation data analysis
 - Survey on energy loss (compressed air and steam)
- (2) Support for introducing energy-saving equipment
 - Providing one-stop services from installation to operation and maintenance of highly efficient systems
 - Outline design of energy saving systems (air conditioning, heat sources, etc.)
- (3) Renewable energy electricity certificate (I-REC) sales
 - Providing renewable energy electricity certificates (I-REC certificates) in Thailand and abroad
- (4) Solar PPA proposals

Sustainability

Based on the Paris Agreement adopted at COP21 in 2015, decarbonization movements are gaining momentum internationally. We have entered an era in which various stakeholders, including investors, customers, employees, and business partners, are focusing on and evaluating a company's stance on ESG. Also, signs of rising energy prices on a global scale are becoming apparent, and the value of energy conservation initiatives is being rapidly reconsidered. We believe that energy conservation and CN are important indicators in corporate management, and are issues that should be fundamentally tackled. The Tokyo Electric Power Company Group is regrouping in Thailand the knowledge and all the contacts it has cultivated in Japan's electric power and energy-related businesses, and supporting the Only One energy conservation and CN promotion plan for customers outside Japan as well.

Experience

In Japan, the Tokyo Electric Power Company Group has been developing services that provide a wide variety of energy conservation and renewable energy values to industrial factories. In 2019, we expanded into Thailand with the aim of providing services similar to those in Japan. Since then, we have provided many customers with services such as the installation of solar power generation systems on their premises, consultation services on energy conservation, and renewable energy power certificates.

Company Information

Company Name: TEPCO Energy Partner International (Thailand) Co., Ltd.

Industry:

Other non-manufacturing industry

Address: 399 Interchange 21 Building, 24th Fl. unit 2404, Sukhumvit Road, Klongtoey-Nua, Wattana, Bangkok

Website: <https://www.tepco.co.jp/en/hd/index-e.html>

Affiliated Company in Japan:

Tokyo Electric Power Company Holdings, Incorporated

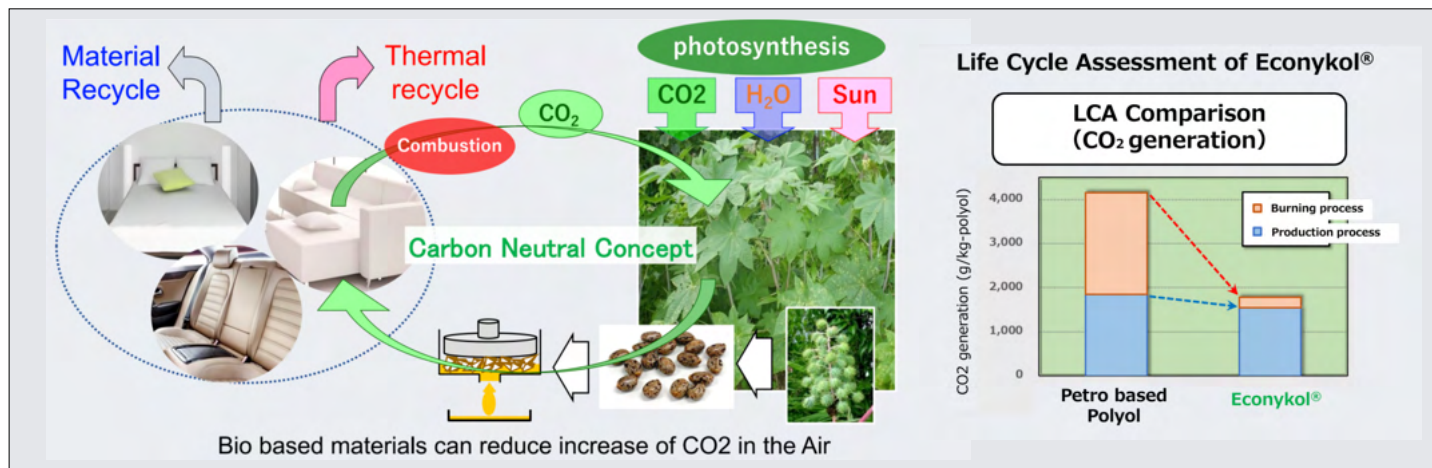
Contact: ueno.yoshi@tepco.co.th

Message

As an energy business, we work closely with our customers based on the expertise we have cultivated through our experience in promoting energy conservation and support their CN and energy conservation activities. Also, through our energy business in Japan, we have a wide variety of contact points with our customers, and our strength is our ability to understand customer needs and develop services tailored to each customer's business.

Plant-based biomass plastic raw material Bio-polyol “ECONYKOL®”

Thai Mitsui Specialty Chemicals Co., Ltd.



Service and Technologies

Through the research and development on plant material utilization, Mitsui Chemicals has succeeded in creating plant-based polyol that can be used in actual applications. While the existing urethane material uses 100% petroleum polyol, bio-urethane replaces it with plant-based polyol (“ECONYKOL®”). As Thai Mitsui Specialty Chemicals (TMSC) possesses technologies to adjust characteristics such as density, hardness, and elasticity, they can provide products that match customers’ demands as a total system. They answer to customers’ needs for pursuing both environmental effort with sustainable product development and market expansion.

Sustainability

Based on life cycle assessment, this product can reduce CO₂ emission by half as compared to petroleum-based polyol (based on Carbon Neutral Concept). Therefore, this will contribute to concerns about increase of carbon dioxide in the atmosphere. The company and Mitsui Chemicals group are also considering a circular model, where they will tear into fine pieces bio-urethanes used in products such as beds and use prepolymer (adhesive) that contains plant components to congeal the fine pieces to be recycled as rebonded foam. The rebonded foam can then be reused as part of a new bed.

Experience

Apart from its adoption in the cushion of office chairs and cosmetic powder puffs, the technology was also the first to be used in the cushion of car seats, which requires a high durability. With the increasing importance of reducing environmental burden, adoption of the technology in various products can be expected. Non-edible plant material is selected as the source for this bio-urethane, so it does not hinder any effort in resolving food issues. In 2013, they built a polyol manufacturing factory in India, the country of origin of the material, and ensure a stable quality and supply capability.



Company Information

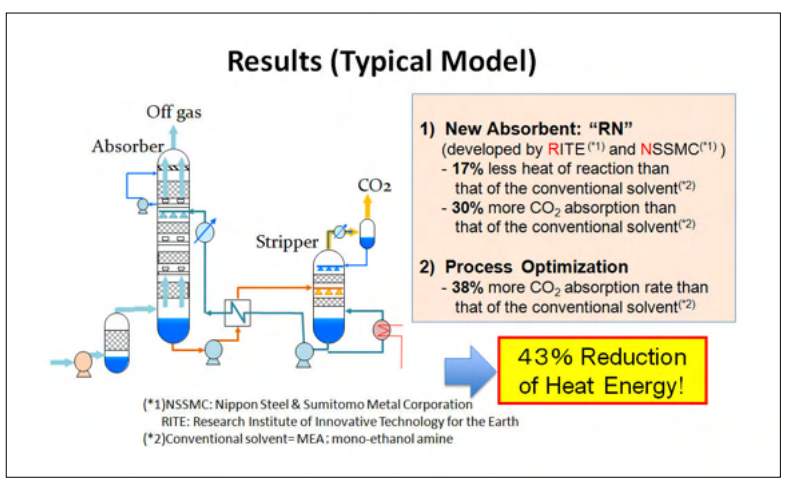
Company Name: Thai Mitsui Specialty Chemicals Co., Ltd.
Industry: Chemical
Address: 12th Fl., Sathorn Thani Bldg. 2, 92/28-29, North Sathorn Rd., Silom, Bangrak, Bangkok 10500 Thailand
Website: <https://jp.mitsuicheicals.com/en/>
Affiliated Company in Japan: Mitsui Chemicals, Inc.
Contact: usaka@tmisc.co.th (Usaka)

Message

Mitsui Chemicals, established in 1955, is a diversified chemical manufacturer with businesses in basic chemicals, mobility, healthcare, food & packaging, and new generation businesses. We have about 100 affiliated companies in Japan and abroad. In Thailand, we established a company (TMSC) about 30 years ago, they are developing their business in the industrial resin-related and urethane-related fields, focusing on functional products. We also have its own R&D department to develop products. In the coming future, the company will focus on products to contribute to the realization of a sustainable society.

CO₂ Capture and high purity Regeneration Energy-saving CO₂ capture equipment (ESCAP[®])

Thai Nippon Steel Engineering & Construction Corporation Ltd.



Service and Technologies

Energy-saving carbon dioxide capture system that uses chemical absorption method, capable of manufacturing 99.9% or higher purity carbon dioxide from impure feedstock gas, for purposes including food and carbonic drink, all while reducing heat consumption by more than 40% compared to the existing technologies. The captured CO₂ can also be utilized as chemical feed stock, EOR (Enhanced Oil Recovery) and CCS (Carbon Capture and Storage).

Sustainability

Our technology can reduce CO₂ emissions from such as power plants, cement plants and steelworks, and able to regenerate carbon dioxide at a low temperature (below 100°C) and with heat consumption. It can contribute greatly to concepts such as carbon credits and carbon offsetting.

Experience

Based on the energy-saving carbon dioxide recovery technology developed by COURSE50 (development of environment-friendly process technology), which is a research commissioned by the National Research and Development Corporation New Energy and Industrial Technology Development Organization (NEDO). For commercial achievements, we completed construction of a 120 Ton- CO₂/day plant in Hokkaido prefecture in 2014 and a 143 Ton- CO₂/day plant in Ehime prefecture in 2018.

Other technology

Bioethanol from cellulosic inedible raw material

2nd Generation ethanol manufacturing technology using biomass as its material, which would not conflict with food material such as cellulose and food waste. It has a high yield of over 250 liter per dry ton of biomass raw material. In Thailand, it can be a supporting technology for the BCG economic initiatives that the government has, by mixing the ethanol made with cellulose produced as agricultural residue. An experimental plant has already been built in the Philippines.



Company Information

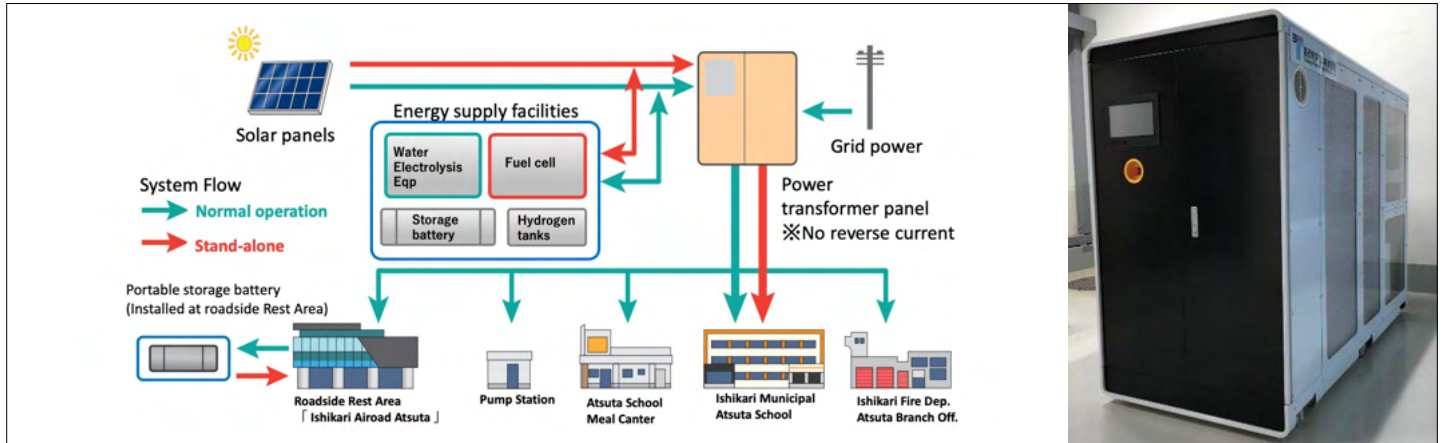
Company Name: Thai Nippon Steel Engineering & Construction Corporation Ltd.
Industry: Construction industry (construction, civil engineering, equipment etc.)
Address: 909 Ample Tower 5th Fl., Debaratna Road, Bangna-Nua, Bangkok 10260 Thailand
Website: <https://www.eng.nippon-steel.com/english/>
Affiliated Company in Japan: Nippon Steel Engineering Co., Ltd.
Contact: swatanabe@thainippon.co.th (Watanabe)
 anuphanp@thainippon.co.th (Anuphan)
 chanon-k@thainippon.co.th (Chanon)

Message

We are plant engineering and EPC company in oil and gas and petrochemical industry, with 35 years of history in Thailand. To achieve a carbon neutral society, we will introduce the unique technologies of Nippon Steel such as CO₂ capture technology (ESCAP) and bioethanol manufacturing technology for decarbonization society.

The Utilization of the 「Hydro Creator®」 Water Electrolysis Device Ishikari City Atsuta District Microgrid

Thai Takasago Co., Ltd.



Service and Technologies

This microgrid system creates, stores, and connects green hydrogen. The system consists of solar panels as renewable energy, water electrolysis equipment, hydrogen tanks, storage batteries, and fuel cells. It is a system that enables power supply, not only for normal use but also during disasters.

Sustainability

Using electricity from renewable energy makes it possible to produce green hydrogen without emitting CO₂, thus contributing to carbon neutrality. The produced green hydrogen can be used on production lines and, by storing it, can also be used to supply electricity in the event of a disaster, making it compatible with BCP measures.

Experience

We installed a microgrid system using our "Hydro Creator" water electrolysis device in the Ishikari-Atsuta area (Hokkaido), which faces issues maintaining a stable supply of energy, such as long-term power outages during large-scale disasters. This project provides energy services through SPC and is operated solely through the receipt of electricity charges from Ishikari City.



Company Information

Company Name: Thai Takasago Co., Ltd.
Industry: Construction Industry, Air Conditioning / Satellite / Electricity, Special Air Conditioning
Address: Bangna Tower C 16th floor, 40/14 Moo 12, Bangna-Trad Rd., Bangkaew, Bangplee, Samutprakarn 10540
Website: <https://www.thaitakasago.co.th/>
Affiliated Company in Japan: Takasago Thermal Engineering Co., Ltd.
Contact: shu_kobayashi@tte-net.com

Message

We are a Thai subsidiary of Takasago Thermal Engineering, which has been in the business of manufacturing air conditioning equipment in Japan for 100 years. In Thailand, we are an integrated construction company. We deal with many projects when it comes to air conditioning, going beyond general air conditioning to include special-purpose air conditioning, such as for clean rooms and dry rooms, based on customer needs. In the future, we will also focus on using hydrogen as part of our efforts to become carbon neutral. Our company sells the "Hydro Creator®" water electrolysis devices, which make it possible to create, store and use hydrogen. It can also be used to create green hydrogen by using sunlight or other renewable energy.



Sustainable agriculture using microorganism cultivation technology high-performance biochar "Soratan"

TOWING Co., Ltd.



Service and Technologies

We are developing and commercializing high-performance biochar "Soratan" to achieve sustainable circular agriculture. The features of Soratan include the utilization of unused biomass (such as rice husks, livestock manure, and wood chips), reduction of chemical fertilizers and accelerate organic conversion, and reduction of greenhouse gas emissions, which are necessary for realizing circular agriculture. Soratan is produced by adding a unique screening of soil microorganisms into biochar and cultivating microorganisms using organic fertilizers. By creating an environment where multiple microorganisms can coexist, the decomposition efficiency of organic fertilizers can be increased by over eight times compared to conventional methods in just one month, thereby improving crop yield and quality.

Sustainability

Soratan is mixture of soil microorganisms, biochar, and organic fertilizers. Biochar is produced by carbonizing biomass (such as rice husks, livestock manure, and wood chips) which is agricultural residues that were conventionally discarded or incinerated in the region. Furthermore, the characteristics of biochar enable the fixation of carbon into the soil through application, contributing to the reduction of greenhouse gas emissions. Moreover, the activity of microorganisms within Soratan improves the decomposition efficiency of organic fertilizers, ensuring a yield that is 1.2 to 1.7 times higher compared to chemical fertilizers. As a result, it becomes possible to reduce chemical fertilizers and transit to organic fertilizers, thus preventing global issue, soil degradation, caused by the continuous use of chemical fertilizers. These functions of Soratan contribute to achieving sustainable agriculture.

Experience

Soratan has already been introduced in 30 prefectures in Japan, and its effectiveness in various regions, soils, and crops has been confirmed. The use of Soratan has led to increased vegetable yields and a reduction in chemical fertilizers, resulting in economic benefits for farmers. Furthermore, incorporating Soratan into agricultural operations does not impose a significant burden on farmers, leading to a good product-market fit and widespread adoption. Regarding carbon credits, projects based on the methodology of "application of biochar to agricultural land" have been approved under the J-Credit system, in accordance with the Green Food System Act. This marks the first case of J-Credit approval for a biochar project by an entity certified as an establishment operator under the Green Food System Act. Internationally, similar considerations for business viability are being pursued in various regions, mirroring the domestic efforts.

<Supports and Awards>

- Selected by J-startup CENTRAL
- Designated as an establishment operator under the Green Food System Act by the Ministry of Agriculture, Forestry and Fisheries
- NEDO Research and Development Project (STS, SBIR)
- Ministry of Agriculture, Forestry and Fisheries Stardust Program, among others



Company Information

Company Name: TOWING Co., Ltd.
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Affiliated Company in Japan: Same as above.
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Message

TOWING Co., Ltd. is a green and agri-tech venture company established in 2020 with the mission of "realizing sustainable circular agriculture on both Earth and in space." It is a spinout from Nagoya University and focuses on developing and commercializing high-functioning biochar "Soratan" to achieve greenhouse gas emission reduction, reduce chemical fertilizers, and facilitate organic conversion in soil improvement materials.



Challenging the world with new technologies

Connecting the circle of ecology with rice husks for warmth

Grind Mill · Rice husk solid fuel production equipment

Tromso Co., Ltd.

Service and Technologies

- Equipment (hereinafter referred to as a Grind Mill) that uses electricity or tractor engine power to grind rice husks and compression mold them to produce solid fuel that can replace firewood and charcoal.
- Rice husk contains a lot of silica, which normally causes mechanical parts to wear out quickly, but we extend the lifespan of parts that come into contact with rice husk by applying a special surface hardening treatment to the parts. Furthermore, by supplying the raw material rice husks to the grind mill, it is possible to produce solid fuel without the need for auxiliary materials such as adhesives (binder). Because Grind Mill has a simple structure, it rarely breaks down and can be operated even by operators without specialized knowledge or skills.



Sustainability

- Effective use of discarded rice husks and creation of added value. Production of rice husk briquettes (momigalite) with excellent combustion power.
- Grinding and solidifying can be done continuously in one unit, it's movable to the place where rice husks are located, installed, and operated. By removing the nozzle and heater, ground rice husks can be manufactured for use as natural organic materials.
- Because rice husk solid fuel uses only rice husk, which is biomass, as a raw material, it is a "carbon-neutral" fuel that does not emit new greenhouse gases when burned. Although CO₂ is emitted from the electricity used for power or tractor fuel, complete carbon neutrality can be achieved if renewable energy and biofuels become widespread in the future.

Experience

- 2013 - JICA SME project, Tanzania "Investigation of the introduction of solid fuel manufacturing equipment using rice husks"
- 2014 - JICA SME project, Tanzania "Promotion and demonstration project of solid fuel manufacturing equipment using rice husks"
- 2022 - JICA Project feasibility study (SME support type adopted), Madagascar - Project feasibility study related to rice husk briquette machine using power from tractors

Other technology

General biochar-related services for agricultural use

In the agricultural field, biochar is used as a soil improvement material and has proven effects such as improving soil water retention, adjusting pH, improving nitrogen utilization efficiency, and reducing soil pollution. Highly effective in dry areas and soils with low pH. Furthermore, according to the 2019 revised IPCC guidelines, biochar is defined as "a solid substance produced by heating biomass at a temperature of over 350°C under an oxygen concentration controlled to a level that does not burn." We aim to become a business that manufactures and sales of biochar production equipment, agricultural business and carbon credit creation support services related to the application of biochar to farmland and can provide analysis services related to contracted GHG emissions analysis, etc. from next year. We are continuing to conduct demonstration experiments on biochar farmland application under various conditions.



Company Information

Company Name: Tromso Co., Ltd.
Industry: Manufacture and Sale of Rice Husks Solid Fuel Production Equipment
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Message

- Tromso was established as a spin-out from a manufacturer of heat exchangers for ships in Innoshima (Onomichi, Hiroshima Prefecture), where the shipbuilding industry is thriving.
- Our management philosophy is to develop "rice husk solutions" developed from the technology to solidify rice husks inherited from our founder, add value to agricultural residues such as rice husks, and run "businesses that solve environmental and social issues" that contribute to the effective use of resources and the improvement of agricultural productivity.
- The scope of our business has expanded significantly, focusing on rice husk utilization technologies, such as the development and manufacture of highly functional rice husk-activated carbon, the development and sale of water purifiers using rice husk-activated carbon, and the development of "biochar production machines" using various agricultural residues as raw materials.



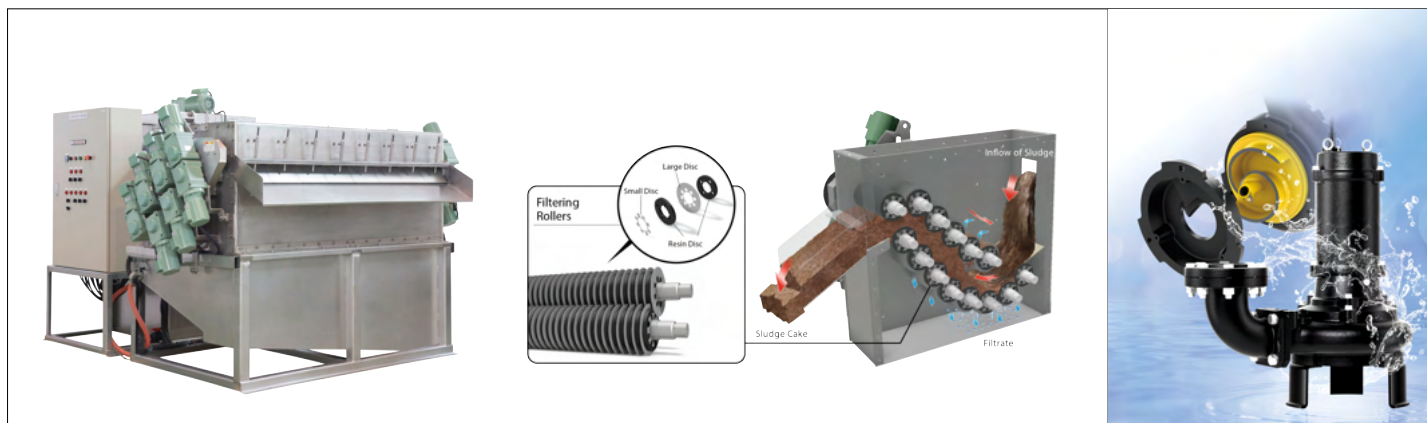
ENERGY EFFICIENCY



WATER TREATMENT

Sludge dehydrator that can significantly reduce the amount of sludge generated in water treatment JD Series

TSURUMI PUMP (THAILAND) Co., Ltd.



Service and Technologies

Dehydrator that turns sludge generated from the wastewater treatment facility in plants and sewage water treatment facility into dewatered sludge cake (volume reduction to 1/15). With the multiple disc dehydrator mechanism, a dehydration method originated in Japan (patented), it eliminates possibility of performance degradation caused by clogging, and can handle a wide range of sludge properties. Inside the main body of the dehydrator, multiple “filter rollers”, consisting of resin disks, small stainless steel disks, and large stainless-steel disks, are arranged on the upper and lower shafts. Compared to other methods, this system not only drastically reduces power consumption, cleaning water, and dewatered cake disposal costs, but also reduces the overall water treatment load as the SS value contained in the filtrate is low.

Sustainability

The sludge generated from factory wastewater treatment and sewage water treatment contains various solid substances such as organic/inorganic substances, fatty substances, fibrous materials. With the conventional dehydrator, it would cause clogging and eventually lead to lower performance. However, this product solves these problems and achieves reduction in dewatered cake treatment costs. As this new innovative dehydrator reduces CO₂ emissions and manpower for maintenance and management as well as saving energy and cleaning water, it is safe to say that it excels in the SDGs/BDG aspect too. The technology to dehydrate excess sludge is garnering attention from different fields as it will contribute to improving the global environment.

Experience

The technology has been adopted in Japan, China, EU, South Korea and Taiwan at numerous industrial wastewater treatment facilities and sewage water treatment facilities, such as food factories, petroleum and chemical factories, automotive-related plants, pig farms, paper factories and so on.

Other technology

“Non-clog type of submersible cutter pump CZ”

Conventional submersible pumps for sewage is designed to attain passage performance by providing a large clearance (passage diameter), however at the cost of pump efficiency. The new cutter pump is equipped with a smash mechanism (patented) developed based on a new concept in the pump section, which secures passage performance and provides high pump efficiency, effectively overcoming a pre-existing problem for submersible pumps for sewage.



Company Information

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TSURUMI PUMP (THAILAND) Co., Ltd.
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Message

We manufacture and sell environmental devices and accessories such as sludge dehydrators and submerged aerator - main products being the submersible pumps used in water treatment facilities and sewage treatment factories, as well as water treatment facilities in condominiums and shopping complexes. We provide products developed with our own technology to the US, EU, Asia and other parts of the world, supporting various sites. The product has also been adopted by large-scale public projects too. For this occasion, we would like to present our sludge dehydrator that is capable of significantly reducing sludge volume in water treatment processes.

Small-sized biogas system that can fit into a container Small-sized methane power plant

Vioce Co., Ltd.



Service and Technologies

A compact and simple biogas system that has every equipment stored in a 20-foot ocean freight container. It is an on-site system that can easily carry out waste treatment at the site where waste is being generated. Also, with its unique dual-pipe heating system, it is compact yet highly functional.

Sustainability

This small-sized methane gas power plant carries out methane fermentation of waste and reuse it as energy in biogas form. This enables reduction of greenhouse gas emissions and use of renewable energy. In addition, the digested liquid that remains after energy use can be returned to farmland as liquid fertilizer, thus contributing to the construction of a circular society.

Experience

This product has abundance of experience in Japan including sales to NTT group and Toyota group. In the example at a cut vegetable factory, before the implementation of this product, when commodifying the cut vegetables, it would produce residues that weighed around 2 tons per day, and the disposal of these vegetable residues would cost 28,000 JPY each day. After implementing this product, the organic waste that had been disposed by incineration is now being reused as biogas energy through methane fermentation. The products enables an environmentally-conscious waste treatment that helps reduce waste, minimize greenhouse gas emissions, and supply renewable energy. For its cost effectiveness, investment recovery is expected to be in 7 to 8 years.



Company Information

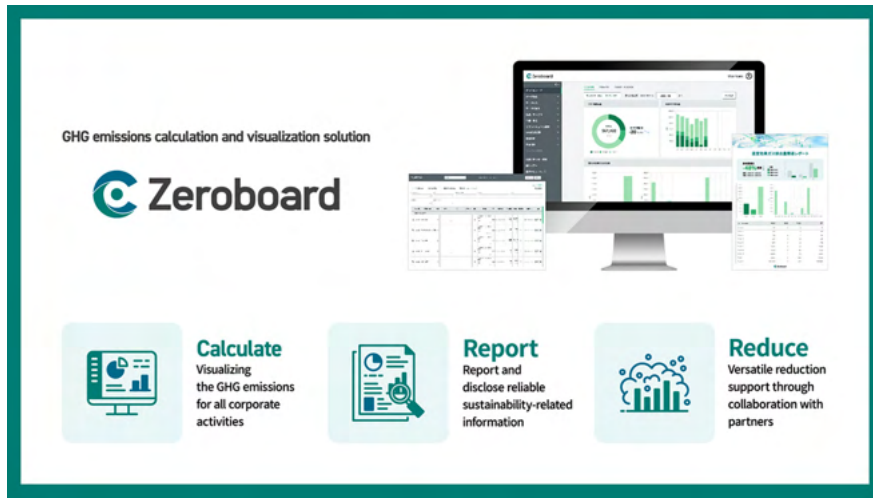
Company Name: Vioce Co., Ltd.
Industry: Other manufacturing
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Message

We, Vioce Co., Ltd. is a company that engages in waste treatment as its main business. With a large-scale water treatment facility in operation, we collect, transport, and treat various types of waste from across Japan. We are an environmentally friendly company that promotes the "loop of resource circulation", whereby we give back to the farmland by recycling any organic resources that remain after the treatment, into fertilizer.

Visualizing GHG Emissions from Products and Overall Business Operations A Solution for Calculating and Visualizing Greenhouse Gas Emissions

Zeroboard Inc.



Service and Technologies

"Zeroboard" is a software that allows companies to calculate, visualize, and reduce their supply chain GHG emissions simply by Settings activity data or setting up data linkage. Without relying on expensive consulting or package products, it is widely used from small and medium enterprises to group Company management of major companies. The AI chatbot 'Dr. Zero,' powered by ChatGPT API will provide the answer calculation questions. Dr.Zero has learned from more than 50 types of domestic and international specialized materials such as those from the Ministry of the Environment and the WBCSD, and is able to respond in accordance with current systems and interpretations.

Sustainability

Calculating and visualizing GHG emissions, a contributor to global warming, not only enhances corporate value but also facilitates effective cost reduction. Zeroboard is a service that calculates GHG emissions based on international standards and manages initiatives aimed at reduction efforts. Additionally, it offers customizable outputs, such as compliance reports for environmental laws and regulations in Japan and Thailand and data exports for comprehensive reports.

Experience

More than 2,600 small to medium-sized listed companies, which are required to disclose their Scope 1-3 emissions, are utilizing this platform.



Company Information

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Contact: shintaro.suzuki@zeroboard.jp

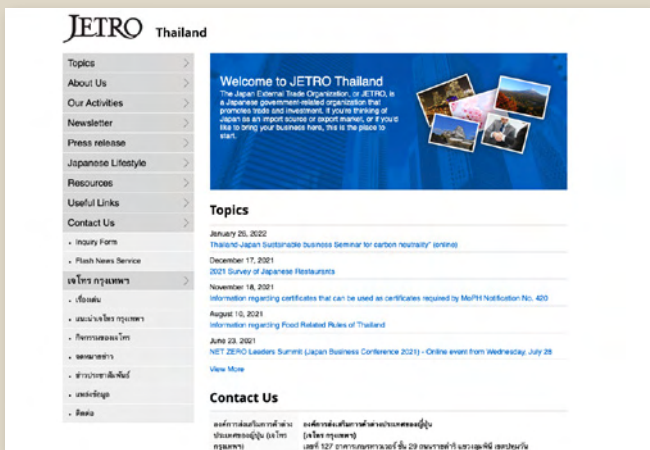
Message

Due to the global megatrend aiming for net zero, many industries, especially the manufacturing industry, are being forced to transform their industrial structures.

As a GHG data platformer, we support the decarbonization efforts of companies across the entire supply chain, and we have a mission to turn these efforts into business opportunities together with many partner companies. We will continue to earnestly take on the challenge of resolving the common human issue of climate change.

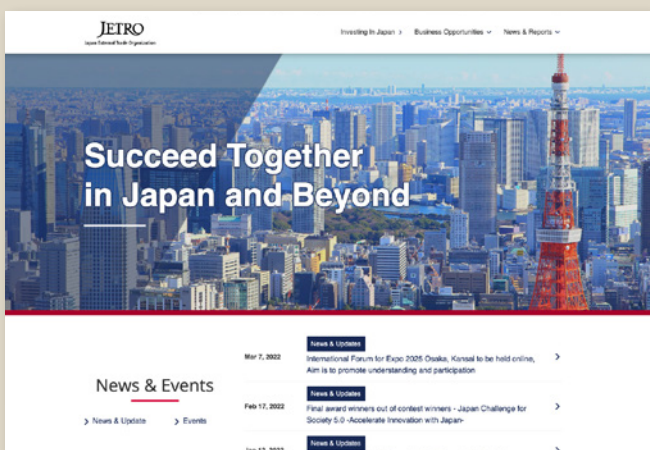


JETRO Service Guide



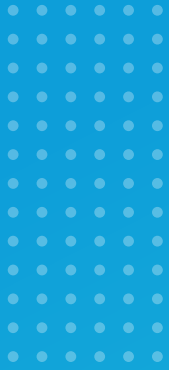
JETRO Thailand Website (English / Thai)

<https://www.jetro.go.jp/thailand/>



JETRO Headquarters Website (English)

<https://www.jetro.go.jp/en/>



Sustainable Business for Carbon Neutrality

For a virtuous cycle of environment and growth Vol.3

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