Catalog of Products and Services of Japanese Companies Contributing to Decarbonization in Malaysia

January 2025

Japan External Trade Organization (JETRO)
Kuala Lumpur Office

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I. Introduction

Amid the growing global focus on addressing climate change, Malaysia has set the goal of achieving carbon neutrality by 2050. In 2023, the Malaysian government announced the National Energy Transition Roadmap (NETR), the pillar of its decarbonization strategy. The roadmap highlights key areas such as renewable energy and hydrogen, alongside robust initiatives like the launch of a two-billion-ringgit fund to accelerate the energy transition.

Meanwhile, the Japanese government is actively supporting decarbonization efforts in ASEAN countries. In March 2023, the Ministry of Economy, Trade, and Industry launched the Asian Zero Emission Community (AZEC) initiative to promote collaboration and progress in this region. Japan continues to lead these efforts, offering substantial support for decarbonization across the ASEAN region.

In Malaysia, 83.5% of Japanese companies are either actively working on decarbonization or have plans to do so, making it the highest percentage among major ASEAN countries. Even small and medium-sized enterprises (SMEs) are making significant strides in this direction. Decarbonization has become a vital consideration for Japanese businesses operating in Malaysia, with many already taking proactive steps to align with this trend.

This catalog showcases products and services from Japanese companies that contribute to decarbonization and emission reductions. As Malaysia takes on the role of ASEAN chair in 2025, it is poised to lead sustainable development efforts across the region, drawing greater attention to its decarbonization initiatives. We hope this catalog serves as a valuable resource to foster collaboration and partnerships between Japanese and Malaysian companies, supporting the achievement of Malaysia's ambitious climate goals.

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Ⅱ. Research Overview

■Research Method/Target

- Six Energy Transition Levers are specified by the Malaysian government in the National Energy Transition Roadmap (NETR): (1) Energy Efficiency, 2) Renewable Energy, 3) Hydrogen, 4) Bioenergy, 5) Green Mobility, 6) CCUS/CCS (Note) and 10 Flagship Catalyst Projects (Efficient Switch, Renewable Energy Zone, Energy Storage, Energy Secure, Green Hydrogen, Hydrogen for Power, Biomass Demand Creation, Future Mobility, Future Fuel, and CCS). Major Japanese companies in each sectors in Malaysia are selected.

- We researched based on a list of Japanese companies in Malaysia. The list was compiled using publicly- exposed information such as company websites, press releases, reports, exhibition information, and through interviews with the companies.

- Japanese companies located outside Malaysia are also included if they are engaged in decarbonization efforts in Malaysia.

- The definitions of company categories are as follows:

    - Unlisted Company: Unlisted company established for over 10 years.
    - Start-up Company: Company established within the past 10 years.
    - Listed Company: Company listed in Malaysia or Japan.

    ※The classification of companies in this document is based on parent company and holding company information.

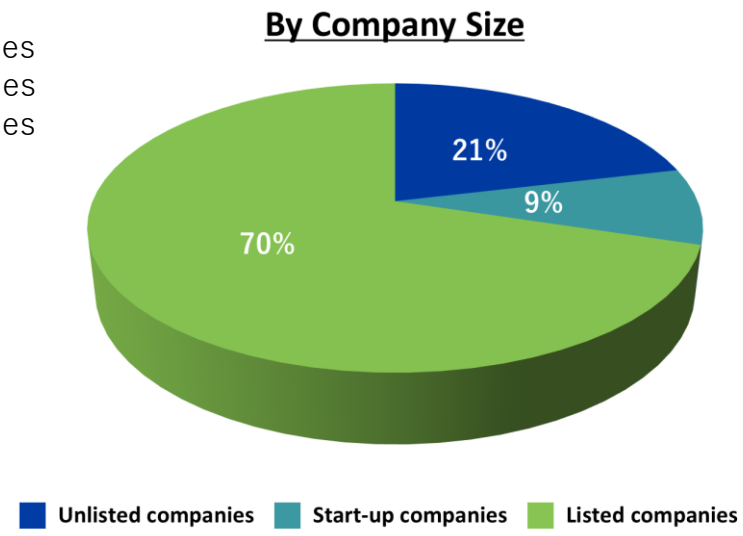
（Note） CCUS…Carbon Capture, Utilization, and Storage
CCS……Carbon Capture and Storage

Ⅲ. Listed Company Overview (1)
By Company Size and Location

■Total Number of Listed Companies　　47 Companies

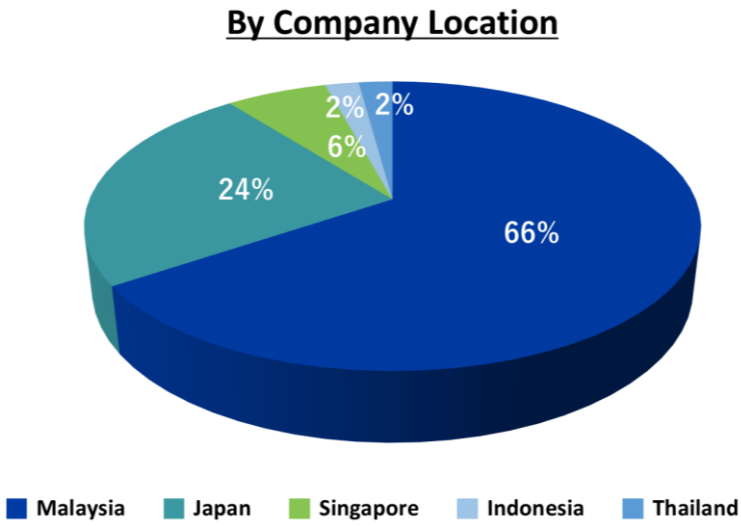
＜By Company Size＞

- Unlisted Company　10 Companies
- Start-up Company　4 Companies
- Listed Comapny　33 Companies



＜By Company Location＞

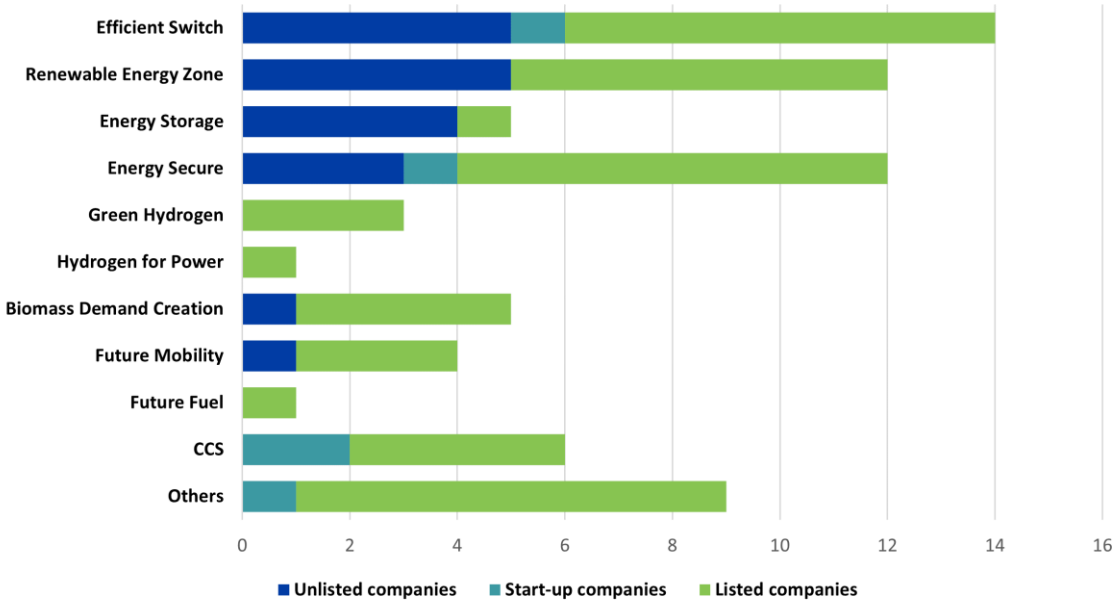
- Malaysia　31 Companies
- Japan　11 Companies
- Singapore　3 Companies
- Indonesia　1 Companies
- Thailand　1 Companies



III. Listed Company Overview (2) By Sectors

<By Sectors>
(6 Energy Transition Levers and 10 Flagship Catalyst projects as defined by NETR)

Energy Efficiency
Renewable Energy
Hydrogen
Bioenergy
Green Mobility
CCUS/CCS



(Note)
1. Companies with multiple businesses will be counted as multiple.
2. Cases that do not fall under the core business are counted as “Others”.

This catalog introduces the products and services of Japanese companies with icons along NETR sectors.

- Efficient Switch
- Renewable Energy Zone
- Energy Storage
- Energy Secure
- Green Hydrogen
- Hydrogen for Power
- Biomass Demand Creation
- Future Mobility
- Future Fuel
- CCS
- Others

Ⅳ. Listed Companies

Products and Services	Sectors	Company Name	Size	Page
Energy Efficiency				
ZEB (Decarbonization) Energy DX Platform		iForcom Inc.	Unlisted	12
Sustainable raw material and fuel production and procurement support		Amita Holdings Co., Ltd.	Listed	13
Use of simulation technology to achieve carbon neutrality		Cybernet Systems Malaysia Sdn.Bhd.	Unlisted	14
CMP WAY: Comprehensive Energy Solutions for Operating Factories		CM Plus Corporation	Unlisted	15
Greenhouse Gas Emissions Calculation and Visualization Solution		Zeroboard Inc.	Start-up	16
「NATRUS+e WSensor」 Earth-friendly and people-friendly automatic door sensor		Nabtesco Corporation	Listed	17
Decarbonization and energy-efficient products in heat treatment equipment		PT CHUGAI RO INDONESIA	Listed	18
Support for Obtaining GBI (Green Building Certification)		Plus PM Consultant Sdn.Bhd.	Unlisted	19
Fuel Switching and High-Efficiency Equipment (Oil → Gas)		MIURA BOILER MALAYSIA Sdn.Bhd.	Listed	20
Energy-Saving Solutions		MITSUBISHI ELECTRIC SALES MALAYSIA Sdn.Bhd.	Listed	21
Industrial Energy-Saving, Decarbonisation Solutions by MHI		Mitsubishi Heavy Industries Ltd.	Listed	22
Next-Generation Power Saving Unit ECOMO Significant additional savings, even for companies that have already maximized energy efficiency (energy-saving related product)		Yuasa Mechatronics (M) Sdn.Bhd.	Listed	23
Our proprietary LED brand "RENTIA" and the new radiative cooling material "Space Cool"		Recomm Business Solutions (Malaysia) Sdn.Bhd.	Listed	24
Decarbonization and Enhancing Corporate Value for Clients		LOGISTEED Malaysia Sdn.Bhd.	Unlisted	25

Ⅳ. Listed Companies

Products and Services	Sectors	Company Name	Size	Page
Renewable Energy				
Eco-Conscious Smart Factory		Ajinomoto (Malaysia) Berhad	Unlisted	27
High-GWP Refrigerant Gas Recovery and Recycling Initiative		Iwatani Malaysia Sdn.Bhd.	Listed	28
Corporate Solar Power Self-Consumption Support Program		ENEOS Oil & Energy Asia Pte. Ltd.	Listed	29
Renewable Energy : Solar Power Project Support Program		KYOCERA Propel Network Sdn.Bhd.	Listed	30
Solar power supply service with no initial investment required		JFE Engineering (M) Sdn.Bhd.	Unlisted	31
Renewable Energy supply in Malaysia (Solar off-site PPA and environmental certificate procurement services)		Shizen Malaysia Sdn.Bhd.	Listed	32
Providing one-stop services to achieve environmental goals.		CHUDENKO Malaysia Sdn.Bhd.	Unlisted	33
Swirling Induction type TAKASAGO HVAC System SWIT® Takasago Clean Room Swirling Induction Type TCR-SWIT® Energy Saving Dehuminifier WINDS®Series		T.T.E. Engineering (M) Sdn.Bhd. Takasago Thermal Engineering Malaysia subsidiary	Listed	34
Smart energy technology demonstration study for green electricity distribution		Nippon Koei Co., Ltd.・Nippon Koei Energy Solutions Co., Ltd.	Listed	35
Insurance products supporting Malaysia's transition to a decarbonized society		MSIG INSURANCE (Malaysia) Bhd	Listed	36
Self-consumption type solar power generation/ storage battery system providing solutions		Looop Energy Malaysia Sdn.Bhd.	Listed	37
Hydrogen				
Coal-fired ammonia/ Biomass co-firing		IHI Corporation	Listed	39
Establishing a Clean Hydrogen Supply Chain		Sumitomo Corporation	Listed	40
Hydrogen Production Technology, Hydrogen and Ammonia Combustion Technology		Mitsubishi Heavy Industries Ltd.	Listed	41

IV. Listed Companies

Products and Services	Sectors	Company Name	Size	Page
Bioenergy				
Biomass-Based e-Methane Production Business		Osaka Gas Co., Ltd.	Listed	43
MATSURI		Chitose Laboratory Corp	Unlisted	44
HANWA (MALAYSIA) Sdn.Bhd.		HANWA (MALAYSIA) Sdn.Bhd.	Listed	45
Malaysia/Biomass-Based SAF Production Project		Marubeni Corporation	Listed	46
Green Mobility				
Car Air Conditioning System Solutions for Automotive Decarbonization		SANDEN AIR CONDITIONING(M) Sdn.Bhd.	Unlisted	48
educing CO_2 Emissions in Air Transportation Through the Use of Sustainable Aviation Fuel (SAF)		All Nippon Airways Co., Ltd.	Listed	49
A MaaS demonstration project integrating terminal transportation and public transportation in Kuala Lumpur		Nippon Koei Co., Ltd.	Listed	50
Windscreen Repair Recommendation for Automotive Windshield Repair		BERJAYA SOMPO INSURANCE Berhad	Listed	51
CCUS/CCS				
CO2 Capture and Methanation		IHI Corporation	Listed	53
suene – Cloud Service for CO2 Emissions Visualization, Reduction, and Reporting		Asuene APAC Pte. Ltd.	Start-up	54
LNG Transportation and CCS Value Chain Development for Low-Carbon and Decarbonization Goals		Kawasaki Kisen Kaisha, Ltd.	Listed	55
Mitigating climate change and increasing farmers' income "Agricultural carbon credit creation project"		GREEN CARBON Co., Ltd.	Start-up	56
Southern Offshore Peninsular Malaysia CCS		Mitsui & Co., Ltd.	Listed	57
Initiatives for CCUS/CCS Value Chain by MHI		Mitsubishi Heavy Industries, Ltd.	Listed	58

Ⅳ. Listed Companies

Products and Services	Sectors	Company Name	Size	Page
Others				
MUFG - Net Zero World “MUFG N0W”		MUFG Bank (Malaysia) Berhad	Listed	6 0
Decarbonization of Farmland and Generation of Carbon Credits Utilizing Satellites and AI		Sagri Co., Ltd.	Start-up	6 1
Decarbonization through Proper Management of Designated Industrial Waste		J&T Naza Alam Murni Sdn.Bhd.	Listed	6 2
Green Steel Utilizing the Mass Balance Approach		JFE Steel Corporation	Listed	6 3
Daikin Malaysia's Decarbonization Initiatives		Daikin Malaysia Sdn.Bhd.	Listed	6 4
Sustainable Finance Initiatives for Fulfilled Growth		Sumitomo Mitsui Banking Corporation Malaysia Berhad	Listed	6 5
Reducing Greenhouse Gases in Packaging Materials (Others)		Dynapac GF (Malaysia) Sdn.Bhd.	Listed	6 6
Mizuho Bank Malaysia's Commitment to Decarbonization		Mizuho Bank (Malaysia) Berhad	Listed	6 7
Business Development and Implementation Support in the GX (Green Transformation) and Decarbonization Sectors		Mitsubishi Research Institute, Inc.	Listed	6 8

Ⅴ. Company Details

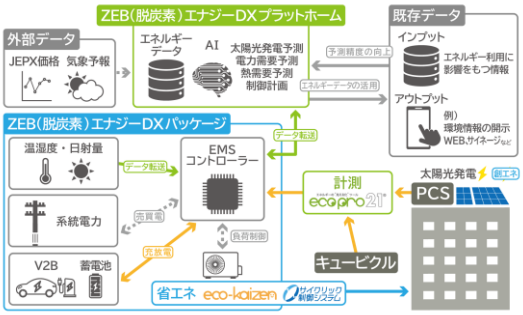
1. Energy Efficiency

- iForcom Inc.
- Amita Holdings Co., Ltd.
- Cybernet Systems Malaysia Sdn.Bhd.
- CM Plus Corporation
- Zeroboard Inc.
- Nabtesco Corporation
- PT CHUGAI RO INDONESIA
- Plus PM Consultant Sdn.Bhd.
- MIURA BOILER MALAYSIA Sdn.Bhd.
- MITSUBISHI ELECTRIC SALES MALAYSIA Sdn.Bhd.
- Mitsubishi Heavy Industries, Ltd.
- Yuasa Mechatronics (M) Sdn.Bhd.
- Recomm Business Solutions (Malaysia) Sdn.Bhd.
- LOGISTEED Malaysia Sdn.Bhd.

Efficient Switch Energy Storage

ZEB (Decarbonization) Energy DX Platform

iForcom Inc.



Overview of Products and Services

-A solution that enhances energy efficiency by improving the operation of building facilities.
-By efficiently managing the operation of facilities, considering factors such as electricity demand forecasting, renewable energy generation forecasting, and battery storage status, the solution helps reduce power consumption and mitigate GHG emissions.
-Key technologies include AI-based energy demand forecasting, IoT-based monitoring, and operational control technologies for facility management.

Key Points of Decarbonization and Sustainability

•The solution can be implemented not only in newly built facilities but also in existing facilities with older equipment.
•By improving the operational rules of the equipment, it becomes possible to reduce GHG emissions and operate in a more sustainable manner.

Achievements / Case Studies

•In Malaysia, the solution has been implemented in buildings such as the IRDA (Iskandar Regional Development Authority) building, as well as hotels in Johor and Kota Kinabalu.
•The solution has been deployed in over 2,500 locations across five ASEAN countries, including Malaysia, and in Japan.
•It has achieved an energy-saving effect of over 20% in air conditioning.

Company Information

Company Name:
iForcom Inc.

Industry:
IT Services
Address:
Yokohama, Kanagawa Prefecture, Japan

Contact Person:
Masakazu Hirokawa
Phone :
+81-42-771-1456
Email:
m.Hirokawa@iforcom.jp

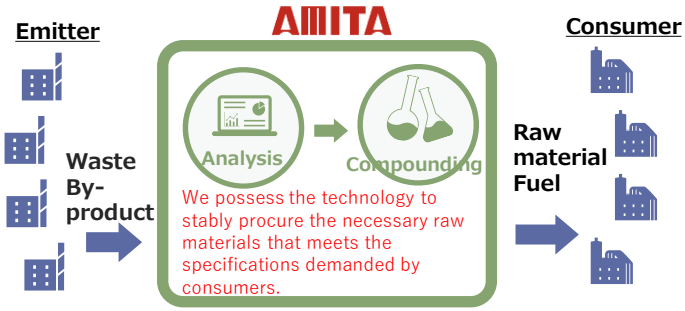
Company Website:
https://www.iforcom.jp/

Efficient Switch Biomass Demand Creation

Sustainable raw material and fuel production and procurement support

Amita Holdings Co., Ltd.

Amita Berjaya Circular Resource Manufacturing Plant



100% Recycling System

Overview of Products and Services

Since 2017, leveraging the expertise developed in Japan, we have established a joint venture with a local company in Malaysia and are operating a 100% recycling business. Rather than simply disposing of or partially recovering waste, our proprietary technology enables 100% recycling with no residual waste by converting designated waste into alternative raw materials (ARM) and alternative fuels (AF) as substitutes for natural raw materials and fossil fuels in cement production. In addition to utilizing industrial waste-derived materials and fuels, we also support sustainable sourcing for companies, which includes the use of household waste and biomass resources.

Key Points of Decarbonization and Sustainability

By maximizing the circulation of resources that have already surfaced, we help reduce the consumption of underground resources (such as limestone for raw materials and coal for fuel) used by our clients, primarily cement companies.

Achievements/ Case studies

-Annual production volume using alternative materials and fuel recycling
33,574 tons

-Estimated reduction in CO2 emissions by providing recycled products (alternative to fossil fuels)
5,036 tons

Award by Waste Management Association of Malaysia

AMITA
AMITA HOLDINGS CO., LTD.

Company Information

Company Name:
Amita Holdings Co., Ltd.

Industry:
Circular economy support
Address:
Kyoto Prefecture (head office)
Malaysian subsidiary
is located in Kuala Lumpur

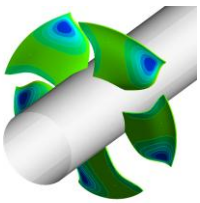
Contact Person:
Overseas Business Management Group Atsuo Morita
Phone :
03-5281-8360
Email:
jmorita@amita-net.co.jp

Company website:
http://www.amita-net.co.jp/

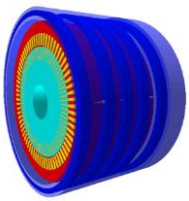
Efficient Switch

Use of simulation technology to achieve carbon neutrality

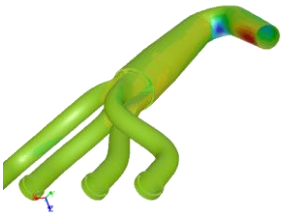
Cybernet Systems Malaysia Sdn.Bhd.



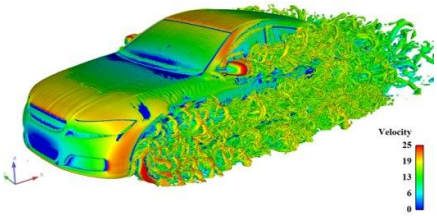
Optimal fin design



Cooling analysis of transmission motors.



Optimal manifold design



Fluid analysis around vehicles.

Overview of Products and Services

We support activities toward carbon neutrality using various digital engineering technologies mainly on simulation. By utilizing simulation technology, it is possible to virtually perform prototyping, experiments, and searching for optimal shapes on a computer, which are essential for product development. As a result, we can reduce waste through prototyping and experimentation, and develop more energy-efficient products.

We provide these simulation software, as well as related training, consulting services, and contract services (we provide services not only to Malaysia but also to customers in other Southeast Asian countries such as Singapore, Vietnam, and Thailand).

Key Points of Decarbonization and Sustainability

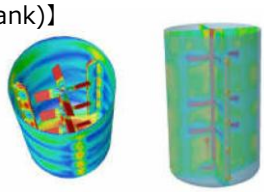
By using simulation technology to reproduce actual phenomena on a computer, you can deepen your knowledge of products and technologies with a minimum of prototyping and experiments. Various optimization techniques are also available.

For example, by using topology optimization techniques, it is possible to reduce product mass while maximizing its rigidity. It is also possible to streamline the development process itself by combining appropriate optimization methods and AI technology depending on the issue and purpose.

Achievements/Case studies

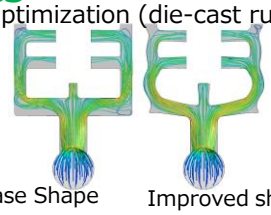
We will introduce various optimization simulation results. Simulation technology can be applied to various phenomena and purposes.

【Dimension optimization (stirred tank)】



Objective function: minimisation of the sedimentation area
Parameters: position of rotor blades, number of blades, pitch, etc.
Sedimentation area: 21% reduction

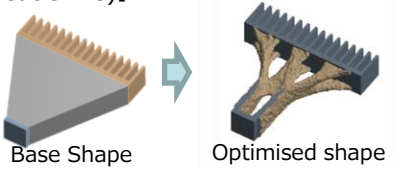
【Shape optimization (die-cast runners)】



Base Shape　　Improved shape.

Pressure loss reduction : 26%

【Thermal & structural optimization (heat sinks)】



Base Shape　　Optimised shape

Objective function: thermal & structuralConstraints: 20% mass retention.

CYBERNET

Company Information

Company Name :
Cybernet Systems Malaysia Sdn.Bhd.

Industry :
Software
Address :
SO-32－3 A, Menara 1, KL Eco City, Jalan Bangsar, 59200 Kuala Lumpur, Malaysia

Contact Person :
Takashi Sakakibara
Phone :
+603-2201-1221
Email :
information@cybernet.asia

Company Website :
http://www.cybernet.asia/

Efficient Switch Energy Storage

CMP WAY: Comprehensive Energy Solutions for Operating Factories

CM Plus Corporation

"Comprehensive Decarbonization Engineering Solutions"

Engineering Approach

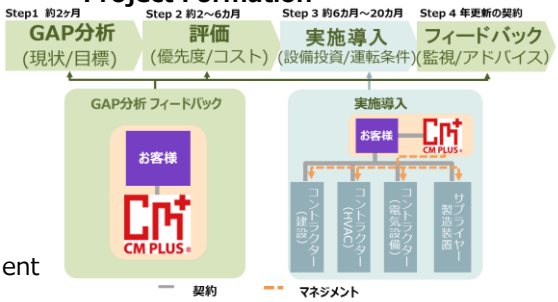
- Optimization of energy consumption
- Introduction of energy-efficient new equipment
- Integration with upgrade plans for production and utility facilities

"Targeting the entire production system for high-value-added products"

Reevaluating energy efficiency under stringent environmental constraints

- Manufacturing equipment
- Buildings
- Air conditioning
- Electricity/Utility/Water

Project Formation



Overview of Products and Services

Based on its extensive engineering experience, CM Plus presents the "CMP Way," offering comprehensive decarbonization solutions for high-value-added production systems.
We reevaluate energy efficiency for production equipment, buildings, air conditioning, electricity, utilities, and water under stringent environmental constraints.
Our approach includes optimizing energy consumption, introducing energy-efficient new equipment, and aligning with upgrade plans for production and utility facilities, providing an all-encompassing decarbonization solution.

Key Points of Decarbonization and Sustainability

To decarbonize high-value-added production systems, we conduct a GAP analysis focused on:

1. Addressing inefficient energy use
2. Selecting high-efficiency technologies
3. Optimizing operations
4. Offering financial solutions
5. Proposing renewable energy adoption

Achievements/Case studies

Stage 1: Feasibility Study

Conduct GAP analysis on production and utility systems, proposing comprehensive energy-saving methods and a roadmap to achieve targets.

Stage 2: Solution Proposal

Provide technical solutions, including conceptual design, cost estimation, construction management, and validation.

Stage 3: Advisory

Monitor baseline and roadmap progress, offering ongoing optimization and improvement advice.

Company Infomation

Company Name :
CM Plus Corporation

Industry :
Facility Equipment Consulting
Address :
6F Minato Mirai Grand Central Tower, 4-6-2 Minato Mirai, Nishi-ku, Yokohama, Kanagawa 220-0012, Japan

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Company Website :
https://cm-plus.com/
https://cm-plus.co.jp/

Efficient Switch

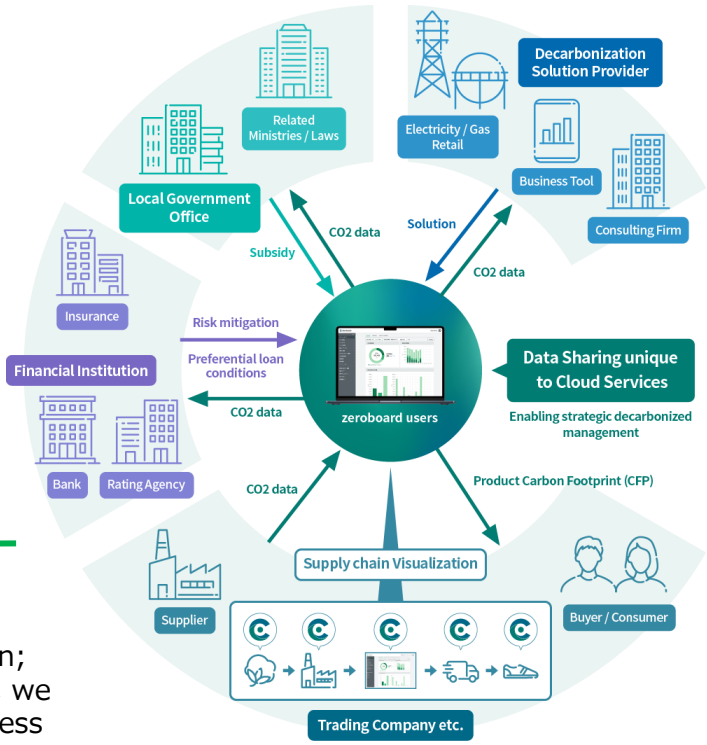
Energy Secure

Greenhouse Gas Emissions Calculation and Visualization Solution

Zeroboard Inc.

Overview of Products and Services

Calculating and visualizing greenhouse gas (GHG) emissions, which contribute to global warming, not only enhances corporate value but also aids in cost reduction. Zeroboard is a service that calculates GHG emissions in compliance with international standards and enables companies to manage initiatives aimed at emission reductions.



Key Points of Decarbonization and Sustainability

Our service goes beyond GHG emissions calculation; by collaborating with over 100 partner companies, we provide tailored GHG reduction solutions that address each client's unique challenges. This approach enables us to responsibly support clients in achieving the more essential goal of actual GHG reductions.

Achievements/Case studies

With over 10,000 companies, including group companies, using the platform, Zeroboard serves a wide range of businesses—from large companies focused on decarbonization management and publicly listed companies in the Prime Market required to disclose Scope 1-3 emissions, to medium-sized and smaller enterprises.

Case Studies:

- Okuno Chemical Industries Co., Ltd.: Employee awareness of decarbonization has evolved, with a growing number of new graduates citing environmental consideration as a reason for joining. The development of environmentally friendly products has also boosted the company's competitiveness.

- Nippon Chemical Industrial Co., Ltd.: Environmental initiatives, including decarbonization, have contributed to BCP (Business Continuity Planning) and an age-friendly work environment (for example, LED adoption reduced power consumption and provided brighter, safer lighting for older workers). Employee attitudes toward work have also shifted positively.

-**Bank of Ayudhya Public Co., Ltd.:** In February 2024, Ayudhya Bank Group in Thailand will adopt Zeroboard to enhance and streamline the calculation of GHG emissions.

Zeroboard

Company Information

Company Name:
Zeroboard Inc.

Industry:
IT
Address:
Tokyo, Bangkok

Contact Person:
Mr. Suzuki
Phone :
+66(0)935826365
Email:
shintaro.suzuki@zeroboard.jp

Company Website:
https://zeroboard.jp/

Efficient Switch

「NATRUS+e WSensor」
Earth-friendly and people-friendly automatic door sensor

Nabtesco Corporation

Overview of Products and Services

Image Sensing W

赤外線センサー + 画像センサー

NATRUS+e W

-Equipped with dual sensors—infrared and imaging—"Image Sensing W" expands the detection area for traffic analysis by approximately four times compared to previous models. The wide detection area accurately identifies the speed and direction of people and objects, reducing unnecessary door openings.
-By minimizing idle open time (when the door opens with no pedestrian traffic), this system supports energy savings and CO_2 reduction in buildings.
-It prevents unnecessary airflow of outdoor temperature changes, enhancing indoor climate.
-By precisely tracking pedestrian movement, it predicts arrival times, allowing the door to open at the optimal moment based on walking speed, ensuring smooth passage.

Key Points of Decarbonization and Sustainability

NATRUS+e W utilizes unique sensing technology to reduce unnecessary automatic door openings. By decreasing idle open time, it helps lower energy consumption and air conditioning costs. Additionally, its excellent energy-saving performance contributes to CO_2 reduction.

Achievements/Case studies

When a demo unit was installed on the automatic doors at the "NEOPASA Suruga Bay Numazu Downhill" service area on the Shin-Tomei Expressway, the following effects were observed:

-Reduction in unnecessary door openings: Approximately 21% reduction.

- Improvement in passage efficiency: Approximately 20% improvement in overall passage flow.

- Reduction in malfunctions: Decreased errors caused by fog-related issues.

(Graph) Comparison of Door Opening Times by Day of the Week

NABCO

Company Information

Company name:
Nabtesco Corporation

Industry:
Machine industry
Address:
102-0093
JA Mutual Aid Building, 2-7-9
Hirakawacho, Chiyoda-ku,
Tokyo

Contact Person:
XiaoLi Li
Housing Environment Company
Sales Department Sales
Promotion Section
Phone :
+813-5213 1157
Email :
Xiaoli_Li@nabtesco.com

Corporate website:
https://nabco.nabtesco.com/en/

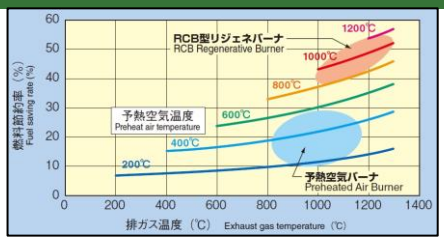
Efficient Switch

Decarbonization and energy-efficient products in heat treatment equipment

PT. CHUGAI RO INDONESIA

Hydrogen burner

Regenerative burner



Regenerative Burner Fuel Saving Rate Chart

Overview of Products and Services

1. Burners and combustion control equipment (hydrogen burners, ammonia burners, regenerative burners, oxygen burners, etc.)
2. Heating furnaces and heat treatment furnaces for steel and non-ferrous metals (SUS-APL/BAL, Cu-APL/BAL, AL-CAL, CGL, H2-BAF, CCL/AL-CCL)
3. Heat treatment furnaces for automotive and machine parts, battery, circuit boards, catalysts, magnetic materials, profile materials, pipes, and wire rods
4. Air purification equipment (RTO), environmental process equipment (multi-tube rotary kilns, fluidized bed heating equipment)
5. Maintenance support for remote locations (regardless of furnace manufacturer)
6. ASEAN locations include not only Indonesia but also Thailand, covering the entire ASEAN region through these two hubs.

Key Points of Decarbonization and Sustainability

1. Development of cutting-edge technology for heat sources, such as hydrogen burners.
2. Energy-saving design and insulation design for the heating chamber.
3. The world's largest range of heat treatment equipment handled.
   → Only Chugai Ro has the ability to approach energy saving and decarbonization from various angles worldwide.

Whether you wish to:
- "Change only the fuel of the currently used burner,"
- "Increase combustion efficiency within a limited budget,"
- "Reduce heat radiation from the furnace without stopping operation to lower costs,"

We offer various options that meet your specific requirements.

Achievements/Case studies

(ASEAN)
-RTO and Regenerative Burner Deliveries in ASEAN
- Significant track record in delivering RTOs (Regenerative Thermal Oxidizers) and regenerative burners across various ASEAN countries.
- Extensive maintenance experience for equipment from other manufacturers.
- Proven success in energy-saving and workplace environment improvements through high-performance insulation materials and exterior insulation construction.

(Japan)
- 1994: Developed and began selling heat recovery exhaust gas treatment systems, now with over 320 units delivered, making it the top choice in Japan.
- 2018: Co-developed the world's first general-purpose hydrogen burner with Toyota Motor Corporation.
- 2021: Selected for NEDO's "Energy and Environmental New Technology Leading Research Program (Decarbonization of Industrial Furnaces through Innovative Ammonia Combustion)" and "Ammonia Co-firing Power Generation Technology Demonstration Project."
- 2022: Received an order for Japan's first hydrogen combustion exhaust gas treatment system.
- 2023: Participated in the Ministry of the Environment's JCM project, "Decarbonization and Smart City Formation Project in Sakai City, Japan and Vietnam."
- 2023: Selected for NEDO's "Green Innovation Fund Project/Decarbonization of Heat Processes in the Manufacturing Sector."

Company Information

Company name:
PT. CHUGAI RO INDONESIA

Industry:
Construction
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Corporate website :
https://chugai.co.jp/

Efficient Switch

Renewable Energy Zone

Support for Obtaining GBI (Green Building Certification)

Plus PM Consultant Sdn.Bhd.

Overview of Products and Services

As a project management (PM) consultant for construction projects, we provide comprehensive support for obtaining the Green Building Index (GBI). From the planning stage, we assist with the introduction and selection of GBI consultants, support cost estimation for achieving various GBI rankings, and develop scenarios for obtaining GBI certification. Through these efforts, we promote the overall sustainability of the project.

Key Points of Decarbonization and Sustainability

1. Support for GBI Certification
Through obtaining the Green Building Index (GBI) certification, we enhance the energy efficiency and environmental performance of buildings, contributing to a decarbonized society.

2. Support from the Planning Stage
From the early stages of the project, we assist in selecting GBI consultants and adjusting construction costs, effectively advancing sustainable construction practices.

3. Minimization of Environmental Impact
We develop scenarios for achieving each GBI rank, reducing energy consumption and waste, and minimizing the overall environmental impact of the project.

Achievements/Case studies

We supported the acquisition of the Green Building Index (GBI) certification from the early stages of two major projects: the relocation project of Japanese food processing company A and the new construction of hazardous material warehouse T, a German company. In both projects, we provided comprehensive support, overseeing the entire process from selecting GBI consultants to adjusting costs for achieving each rank.

The decision for Plus.

Plus PM Consultant

Company Information

Company name:
Plus PM Consultant Sdn.Bhd.

Industry:
Construction Consulting
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KL, Malaysia

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Corporate website :
https://www.plus-pm.com/ja/

Efficient Switch

Fuel Switching and High-Efficiency Equipment (Oil → Gas)

MIURA BOILER MALAYSIA SDN.BHD.

Overview of Products and Services

1. Fuel Switching and High-Efficiency Equipment (Oil → Gas) Switching the fuel of boilers from oil to gas can reduce CO_2 emissions by approximately 26%. This change could potentially reduce up to 1.79 million tons of CO_2 by 2030.

2. Waste Heat Recovery and Utilization By combining waste heat recovery boilers with heat pumps, unused heat can be effectively utilized. Additionally, heat recovery compressors can convert heat that is typically wasted into useful energy. This presents an opportunity to reduce CO_2 emissions by 620,000 tons annually.

3. DX (Visualization) Both Miura products and other manufacturers' equipment can be monitored to visualize energy usage. This can be done via computers, contributing to energy management and energy savings through monitoring.

4. DX (Energy Audit) Energy efficiency diagnostics are provided for the entire factory, not just individual equipment—covering steam, air, water, and electricity. We offer comprehensive improvement proposals for overall energy efficiency.

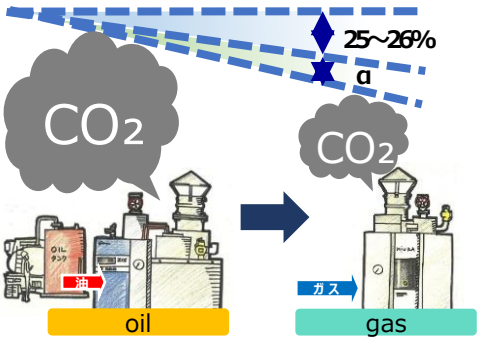
Key Points of Decarbonization and Sustainability

Our goal is to switch over 90% of operational boilers to gas-fired boilers, which are the current mainstream, by 2030. Just by switching fuels, we can reduce CO_2 emissions by approximately 26% per unit. Additionally, through improving boiler efficiency, which enables more steam production with less fuel, we can expect even further CO_2 reductions. By achieving energy savings, we aim to reduce 1.79 million tons of CO_2 between 2002 and 2030. Instead of incurring significant costs, Miura's approach is to start with achievable steps and gradually implement improvements.

Achievements/Case studies

Starting in 2024, we are collaborating with Yamanashi Prefecture and Suntory to promote the use of "green hydrogen" produced from solar power. Additionally, through our partnership with Ehime Prefecture and Shikoku Electric Power, we joined demonstration experiments starting in 2024. Hydrogen-fired boilers were commercialized in 2017, and we have successfully reduced NOx emissions to below the national standards for the first time in the country.

Reduction



High efficiency improvement

By switching from oil to gas, approximately 25-26% of CO_2 can be reduced! Additionally, with improved boiler efficiency, further CO_2 reduction (=α) and energy savings are possible (CO_2 reduction is also achievable with gas-to-gas conversion).

MIURA

Company Information

Company name :
MIURA BOILER MALAYSIA SDN.BHD.

Industry :
Energy

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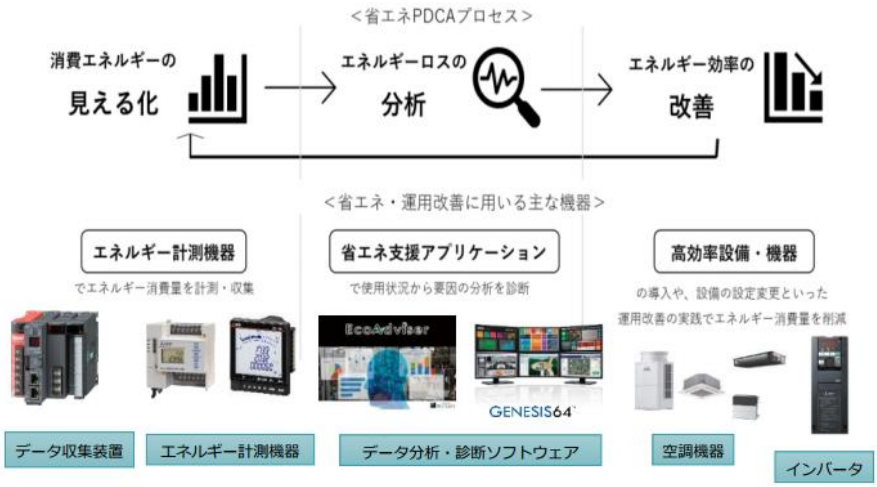
Corporate website :
https://miura.com.my

Efficient Switch

Energy-Saving Solutions

Mitsubishi Electric Sales Malaysia Sdn.Bhd.



Overview of Products and Services

We comprehensively support CO2 reduction in buildings and factories by promoting energy-saving through visualization, analysis, and improvement of energy consumption using measurement devices, applications, and high-efficiency equipment.

Key Points of Decarbonization and Sustainability

«Energy-Saving PDCA System»

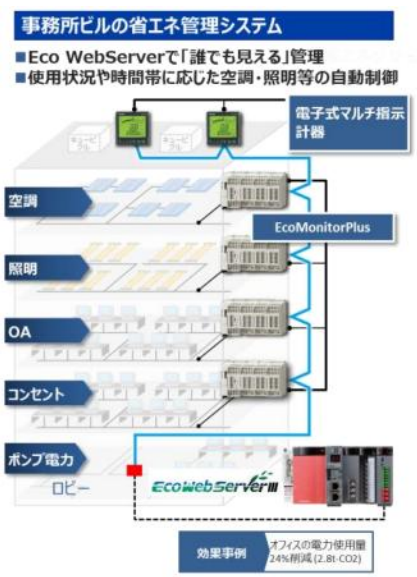
- Energy visualization
- Analysis of energy losses
- Introduction of high-efficiency equipment
- Energy-saving support applications

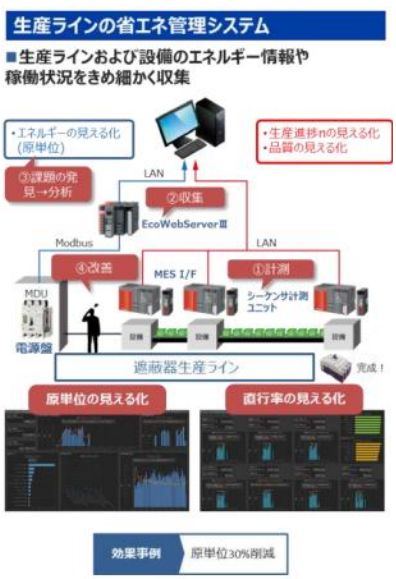
Through these processes, we help reduce energy waste and CO_2 emissions, providing a foundation for sustainable operations in businesses and facilities.

Achievements/Case studies

＜Example of System Configuration for Buildings and Factories＞

Case Study: Mitsubishi Electric Corporation Fukuyama Works





Company Infomation

Company Name :
MITSUBISHI ELECTRIC SALES MALAYSIA Sdn.Bhd.

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https://www.mitsubishielectricfa.com.my/

Efficient Switch

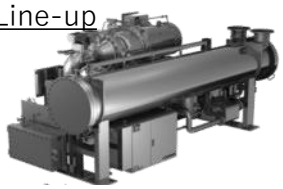
Renewable Energy Zone

Industrial Energy-Saving, Decarbonisation Solutions by MHI

Mitsubishi Heavy Industries, Ltd.

Energy saving : Product Line-up

Natural Gas Engine Power Generation



High Efficiency Turbo Chillers

Heat Pump

Waste Heat Recovery Power Generation

Compact CO_2 Capture System

Overview of Products and Services

Mitsubishi Heavy Industries Group provides a wide variety of technologies for decarbonisation and achieving a low carbon society (energy transition, energy saving, electrification, CO_2 recovery etc) according to the needs of customers. The reduction of CO_2 emissions is an important business challenge in Malaysia and while rooftop solar power generation etc is being introduced, the effectiveness may depend on power generation capacity or output fluctuations. As CO_2 emission sources differ with industries and factories, it is important to accurately assess the current situation according to CO_2 emission scope, and select the appropriate solution while ensuring that economic performance is not compromised.

Key Points of Decarbonization and Sustainability

Our company supports the reduction of CO_2 emissions for the respective scopes, through the following solutions.

Scope 1 (Direct Emissions)

- Utilisation of Waste Heat (Exhaust heat that is disposed of, without utilisation) via Heat Pump
- Compact CO_2 Capture for Exhaust Gas (Melting Furnace, Combustion Furnace, Cement Kiln etc)

Scope 2 (Indirect Emissions)

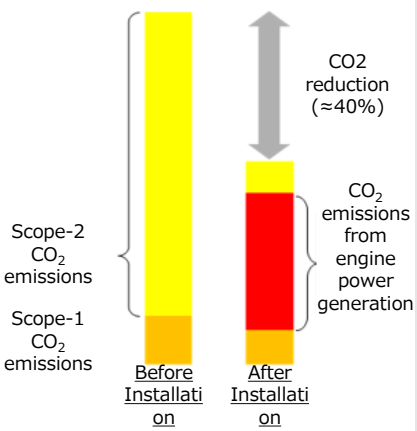
- Independent Power Generation via Gas Engine Power Generator

For independent power generation, as an alternative fuel for natural gas, bio gas which has a variety of production methods, as well as HVO, can be used. Furthermore, we will propose solutions that give consideration to hydrogen/ammonia as a future green fuel.

- High Efficiency Turbo Chillers
- Power Generation via Waste Heat, making use of ORC (Organic Rankine Cycle)

Achievements/Case studies

Our company has provided decarbonization solutions for that meet the varying needs of customers. The diagram on the right is a case study of a CO_2 emission calculation of a customer utilising our engine for power generation, where about 40% reduction was achieved. Besides engines, our company's technology is well established and reliable, and in using these technologies as a base, while taking into consideration ICP※, future electric demand growth and solar power implementation of your factory, economic performance improvement, along with CO_2 emission reduction, will be achieved. ※Internal Carbon Pricing



Engine Power Generation/High Efficiency Chillers:
Major Share in Domestic Market. Heat Pump: For small heat pump, major share in domestic market. For large heat pump, a market is being built, with a focus on Europe.
ORC: Several track records from Geothermal Power Generation, Bio Mass Power Generation, Waste Heat from Factory Furnace etc.
Compact CO_2 Capture System: Top Share in the World, and the largest plant in the world was built in America. Multiple units have been delivered domestically and overseas, for verification purposes.

MITSUBISHI HEAVY INDUSTRIES

Company Information

Company Name:
Mitsubishi Heavy Industries Ltd.

Industry: Manufacturing
Address: Unit 49-B, Level 49, Vista Tower, The Intermark, 348 Jalan Tun Razak, 50400 Kuala Lumpur, Malaysia

Contact Person:
Daisuke Wakasugi
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daisuke.wakasugi.md@mhi.com

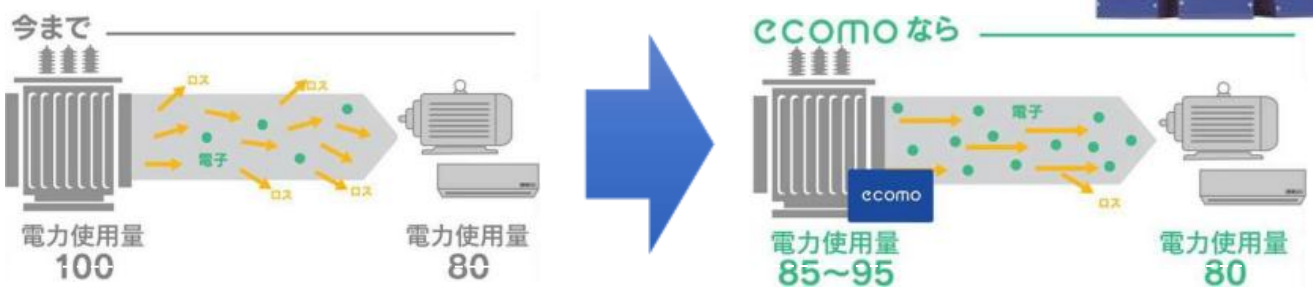
Company Website:
https://www.mhi.com/

Efficient Switch

Next-Generation Power Saving Unit ECOMO

Significant additional savings, even for companies that have already maximized energy efficiency (energy-saving related product).

Yuasa Mechatronics (M) Sdn.Bhd.



Loss occurs when electric current passes through wires and electronic devices.

The electrons generated from ECOMO and the ferrite noise reduction effect help to smooth the flow of electricity.

Overview of Products and Services

・Yuasa Trading Co., Ltd. has signed an exclusive distributor agreement with Satsuki Co., Ltd. and Hayabusa Holdings Co., Ltd. to expand sales of the energy-saving product "ecomo" and has obtained exclusive distributor rights in 10 overseas countries.
・ECOMO is composed of tourmaline, a mineral with properties that generate an electric charge of around 0.06mA, and ferrite, which has a noise reduction effect.
・By simply installing ECOMO on the busbar on the secondary side of the power transformer, it is possible to reduce the overall power consumption of the equipment by 5-15%.
・Before implementation, preliminary data is submitted, followed by a simulation to proceed with the introduction process.

Satsuki Co.,Ltd. Website https://www.ecomo.info/#

Key Points of Decarbonization and Sustainability

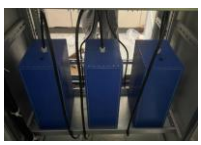
・Patent obtained for 'Power Improvement Device'
・By simply installing it on the secondary side of the power transformer, overall equipment power consumption can be reduced by 5-15%. Expected payback period is 3-5 years.
・The lifespan is approximately 15 years. Once installed, it can be used for an extended period.

Achievements/Case studies

・With over 900 installations primarily in energy management-designated facilities, including major automotive companies and chemical plants.

FOOD INDUSTRY

Installation date : Sept 2024
Unit : 1,000KVA



AUTO PARTS INDUSTRY

Installation date : Sept 2024
Unit : 800,750,1000KVA

AUTO PARTS INDUSTRY

Installation date : Sept 2024
Unit : 30,50KVA

SANITARY PRODUCT INDUSTRY

Installation date : May2024
Unit : 750KVA

YUASA

Company Infomation

Company Name :
Yuasa Mechatronics (M) Sdn.Bhd.

Industry :
Sales Distributor
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Email :
2046hi@yuasa.co.jp

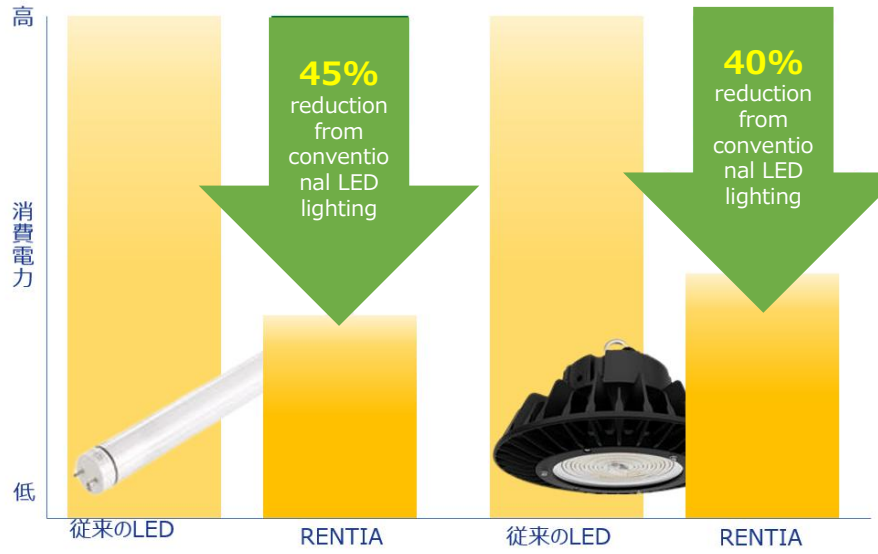
Company Website :
http://www.yuasa.co.jp

Efficient Switch

Our proprietary LED brand "RENTIA" and the new radiative cooling material "Space Cool".

Recomm Business Solutions (Malaysia) Sdn.Bhd.

〈Achieving low power consumption and extended lifespan with our proprietary LED brand "RENTIA"!



①By switching from your current LED lighting, you can achieve a 40-45% reduction!!!

②5-year long-term warranty!

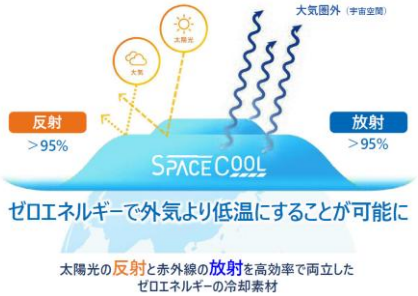
③ Designed for longevity, ensuring you can use it with confidence for years to come!

Achievements/Case studies

Space Cool

~ Proven Energy Savings with Zero Energy Technology ~

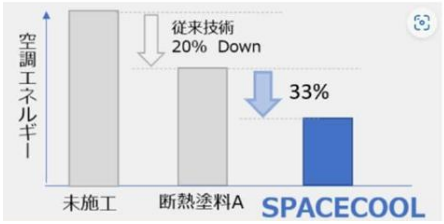
〈Advantage〉



①Highly effective in reducing electricity costs and CO2! Achieve a 15–20% reduction.

② Avoid the risk of equipment failure!

③ Designed for longevity, ensuring you can use it with confidence for years to come!



We are expanding our reach across ASEAN countries, with over 100 companies already implementing our solutions! Contributing to our customers' energy-saving and carbon neutrality initiatives!

Provision of RPA Solutions

Robotic Process Automation (RPA), commonly referred to as RPA, performs tasks previously assumed to require human intervention or more complex operations, taking over these activities on behalf of humans.

Company Information

Company Name :
Recomm Business Solutions (Malaysia) Sdn.Bhd.

Industry :
Manufacturing

Contact Person :
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r.tsuyama@recomm.co. jp

Company website :
https://www.recomm.co.jp

Efficient Switch | Renewable Energy Zone | Energy Storage

Decarbonization and Enhancing Corporate Value for Clients

LOGISTEED Malaysia Sdn.Bhd.

Overview of Products and Services

Transportation, storage, distribution, packaging, customs clearance, inspection, and logistics consulting services.
Focusing on 3PL services for local retail and distribution businesses.
Aiming to meet the growing demand in Malaysia for "fresh, safe, and properly temperature-controlled food logistics," equipped with storage facilities supporting four temperature ranges: frozen, chilled, ambient, and controlled.
Accelerating the development of cold chain logistics.

【Achieving Decarbonization】

We actively reduce the environmental impact of our operations by introducing energy-efficient equipment.
By accurately tracking and visualizing greenhouse gas (CO_2) emissions and reductions, we develop solutions to support our clients' decarbonization efforts, enhancing corporate value and significantly contributing to CO_2 reduction across their supply chains.

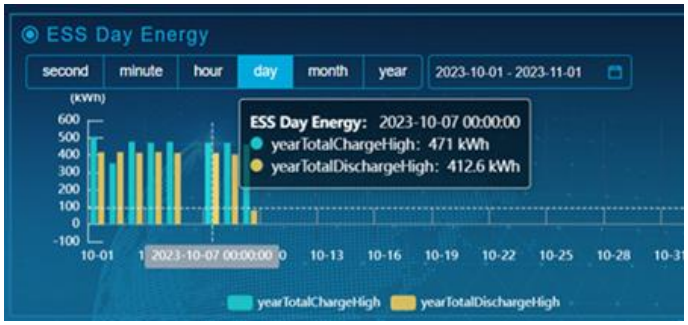
Key Points of Decarbonization and Sustainability

Integration of Solar Power Generation and Battery Storage/LED Implementation

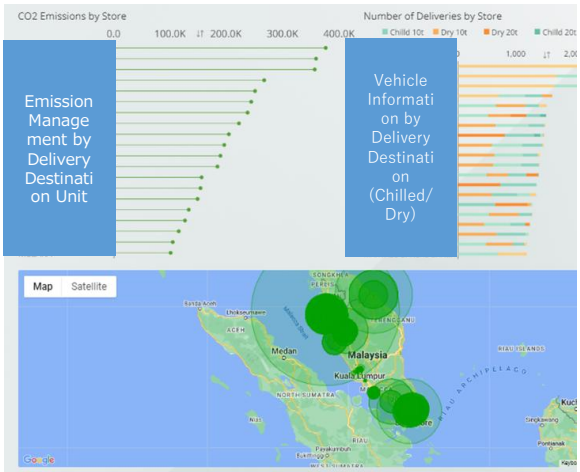
・Solar panels were installed on the rooftop of the headquarters warehouse in Bangi, Selangor (from February 2023).
The system integrates solar power generation with battery storage, enabling surplus daytime energy to be stored for use as emergency power during nighttime or outages.
・LED lighting implemented in warehouses and offices.

CO_2 Reduction

- Set CO_2 emission targets for the company's 118 trucks.
- Visualized emissions per operation unit (from April 2023).
- Obtained ISO14064 certification (an international standard for monitoring, calculating, and verifying greenhouse gas emissions).



Power Generation Usage Progress Data



CO_2 Emission Data by Delivery Destination

Company Information

Company Name :
LOGISTEED Malaysia Sdn.Bhd.

Industry :
Logistics
Address :
Lot3, Jalan 6C/12, Seksyen 16, 43650
Bandar Baru Bangi, Selangor Darul Ehsan, Malaysia

Contact Person :
Yamagata Koji
Contact :
https://my.logisteed.com/logisteed-contact-us/
Phone :
+603-8913-1000

Company Website :
https://my.logisteed.com/

2. Renewable Energy

- Ajinomoto (Malaysia) Berhad
- Iwatani Malaysia Sdn.Bhd.
- ENEOS Oil & Energy Asia Pte. Ltd.
- KYOCERA Propel Network Sdn.Bhd.
- JFE Engineering (M) Sdn.Bhd.
- Shizen Malaysia Sdn.Bhd.
- CHUDENKO Malaysia Sdn.Bhd.
- T.T.E. Engineering (M) Sdn.Bhd.
- Nippon Koei Co., Ltd.・
  Nippon Koei Energy Solutions Co., Ltd.
- MSIG Insurance (Malaysia) Bhd
- Looop Energy Malaysia Sdn.Bhd.

Renewable Energy Zone

Energy Secure

Eco-Conscious Smart Factory

Ajinomoto (Malaysia) Berhad

Overview of Products and Services

Ajinomoto (Malaysia) Berhad (Ajinomoto Malaysia) began its operations in 1961 as a producer of “AJI-NO-MOTO®” monosodium glutamate (MSG), and is one of the first Japanese companies established in Malaysia. Currently, the company is engaged in the production and distribution of HALAL-certified seasonings and food products, not only in Malaysia but also in over 35 countries, including the Middle East, in both the B2B and B2C sectors. In December 2022, a new factory was completed under the concept of a "Smart Factory" that achieves high productivity while being environmentally conscious. The factory spans an area of approximately 46 acres (about 188,000 square meters) and incorporates advanced technologies for automation and digitalization, resulting in increased productivity and an improved work environment.

Key Points of Decarbonization and Sustainability

Decarbonization:
- Scope: Transition from heavy oil and light oil to liquefied natural gas (LNG).
-Scope 2: Utilization of solar panels, purchase of Renewable Energy Certificates (REC), and use of surplus solar power.
- Scope 3: Encouraging raw material suppliers to adopt sustainable practices.

Sustainability:
- Achieved GBI (Green Building Index) Gold Grade certification.
- Introduced recyclable plastic packaging.
- Participated in MAREA (Malaysia Recycle Alliance), a collaborative initiative for recycling in Malaysia.

Achievements/Case studies

Scope1: The fuel used in the factory processes has already been switched to liquefied natural gas (LNG).

Scope 2: 25% of the factory's electricity consumption is covered by solar power. For fiscal year 2024, the plan is to purchase 25% of electricity through **Renewable Energy Certificates (REC)**.

GBI: Achieved CVA Gold Grade certification (as of October 2024).

MAREA: Participating as a *ain Contributor* (2024/06)

Eat Well, Live Well.

AJINOMOTO

Company Information

Company Name :
Ajinomoto (Malaysia) Berhad

Industry :
Food Manufacturing
Factory Address :
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Fujimoto@ajikl.com.my

Company Website :
https://www.ajinomoto.com.my/

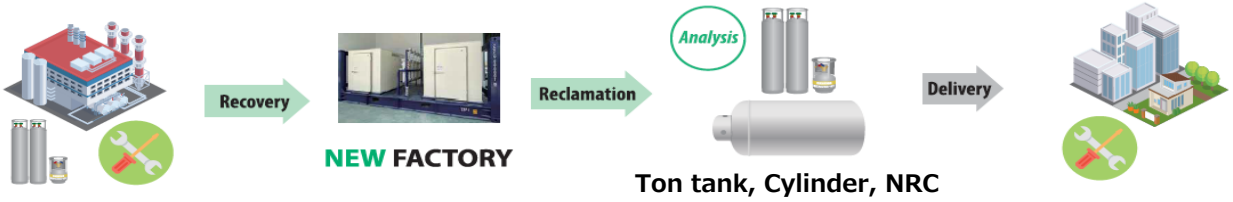
Energy Secure

High-GWP Refrigerant Gas Recovery and Recycling Initiative

Iwatani Malaysia Sdn.Bhd.

Recovery & Reclaimation Scheme

*Refrigerant Gas Recovery and Recycling Process Flow



Overview of Products and Services

- Greenhouse Gas Emissions and Refrigerant Gas Regulations:
- Refrigerant gases, particularly fluorinated gases (F-gases), are significant contributors to global warming. Under the Kigali Amendment to the Montreal Protocol, the production and consumption of these gases are being phased down globally.
- In Malaysia, starting January 2024, the government has implemented regulations limiting the import of refrigerant gases. This is expected to lead to a significant shortage of certain refrigerant gases in the future.
- Iwatani is the only company in Japan that collects used refrigerant gases from the market, recycles them, and restores them to a usable state as new products. This business model supports sustainability by reducing waste and promoting the reuse of valuable gases, contributing to efforts to minimize environmental impact.

Key Points of Decarbonization and Sustainability

Traditionally, when updating air conditioning systems or car air conditioners, refrigerant gases have been released into the atmosphere. These gases have a Global Warming Potential (GWP) that is hundreds of times greater than that of CO2, making their environmental impact significant.

Iwatani's goal is to recover these refrigerant gases and reduce their release into the atmosphere. This initiative is a key factor in achieving a sustainable society, as it directly contributes to lowering greenhouse gas emissions and mitigating climate change.

Achievements/Case studies

In 2017, Iwatani introduced refrigerant gas regeneration equipment through a JICA demonstration project. Starting in 2024, the company has been collaborating with air conditioning manufacturers to collect and regenerate refrigerant gases from discarded air conditioners.

Iwatani is also working with refrigerant gas retailers to recover residual gases from used refrigerant gas containers.

The refrigerant gases involved in this process include R22, R32, R410A, and R134a.

Iwatani
Iwatani Malaysia Sdn. Bhd.

Company Information

Company Name :
Iwatani Malaysia Sdn.Bhd.

Industry :
Trading
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Level 26, Menara 3 PETRONAS, Persiaran KLCC, Kuala Lumpur City Center,
50088, Kuala Lumpur, Malaysia

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y-yoneda@iwatani.co.jp

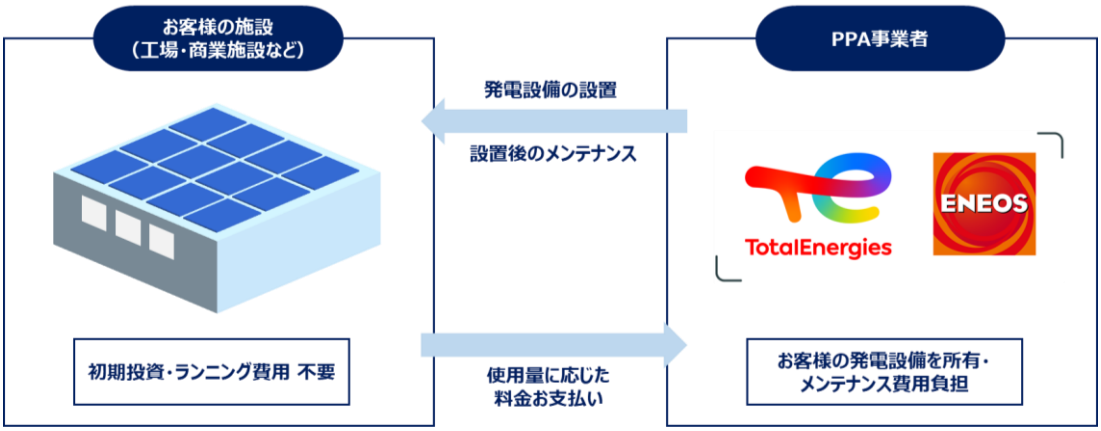
Company Website :
https://www.iwatani.com.my/

Renewable Energy Zone

Energy Secure

Corporate Solar Power Self-Consumption Support Program

ENEOS Oil & Energy Asia Pte. Ltd.



Overview of Products and Services

-We operate corporate solar power solutions across nine countries in Asia (Malaysia, Japan, Singapore, Thailand, Vietnam, Indonesia, the Philippines, Cambodia, and India).
-Our service involves installing solar power systems on corporate customers' premises or facilities (such as factories or commercial buildings) with zero upfront costs, enabling reductions in electricity costs and the provision of low-carbon energy.

Key Points of Decarbonization and Sustainability

During the Power Purchase Agreement (PPA) period, a significant reduction in electricity costs can be expected.
By introducing solar power systems, companies can greatly reduce carbon dioxide emissions, showcasing their commitment to environmental sustainability and contribution to the SDGs to both internal and external stakeholders.

Achievements/Case studies

Through a joint venture between ENEOS and TotalEnergies, we have a solar power capacity exceeding 300 MW across nine countries in Asia, including operational and development projects. in Malaysia
- 1.0 MWp: Paper product factory
- 0.7 MWp: Petroleum product factory
- 0.6 MWp: Food processing factory
- 0.5 MWp: Chemical product factory
- Numerous other installations

Company Information

Company Name :
ENEOS Oil & Energy Asia Pte. Ltd.

Industry :
Mining (metals, nonmetals, oil, gas, coal, etc.)
Address :
Temasek Boulevard, #23-01 Suntec Tower Two, Singapore 038989

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Company Website :
https://solar.totalenergies.asia/

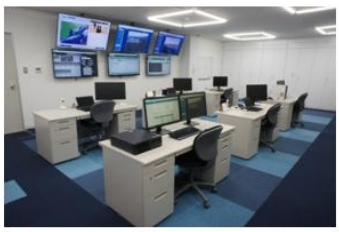
Renewable Energy Zone

Energy Secure

Renewable Energy : Solar Power Project Support Program

KYOCERA Propel Network Sdn.Bhd.



Overview of Products and Services

Kyocera began researching and developing solar cells in 1975 and started mass production of multicrystalline solar panels in 1982. The company continues to demonstrate the high technology and long-term reliability of its solar cells.

Kyocera Propel Network (KCPN) offers system solutions using Kyocera solar cells:
- KCPN is a specialist in the design, procurement, and construction of public and industrial solar power systems, and has expanded its operations across Southeast Asia.
- The company provides support for solar power projects, ranging from conceptual proposals to construction, operation, and maintenance.
- Kyocera is collaborating with Mitsubishi HC Capital to offer financing proposals. Both self-investment and financing options from Mitsubishi HC Capital are available.

Key Points of Decarbonization and Sustainability

・Kyocera Group's Renewable Energy Business: Delivering New Value and Clean Energy for the Future
- Leveraging over 40 years of experience, Kyocera began its solar power business in 1975, offering high-quality services rooted in its deep knowledge and expertise.
- The company simulates reduction plans based on corporate CO2 emission reduction targets.
- Kyocera supports sustainability management with detailed, tailored services to help businesses achieve their environmental goals.

Achievements/Case studies

Solar Power Plant Construction Achievement
- Total in Japan: **1,042 MW**
- (as of April 2024)
- Solar power systems for Japanese companies in Malaysia
- Power supply project for off-grid villages in Myanmar (World Bank funded), totaling 1,538.8 kW, among others.

KYOCERA PROPEL NETWORK SDN. BHD.

Company Name :
KYOCERA Propel Network Sdn.Bhd.

Industry :
Telecommunications and Environmental Engineering
Address :
84-1 & 84-2, Jalan Sungai Burung AA32/AA, Bukit Rimau, Seksyen 32,40460 Shah Alam, Selangor Darul Ehsan, Malaysia

Contact Person :
Takeshi Wakamatsu
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takeshi-wakamatsu@kccs.co.jp

Company Website :
https://propelnetwork.com.my/

Renewable Energy Zone

Energy Secure

Solar power supply service with no initial investment required

JFE Engineering (M) Sdn.Bhd.

Overview of Products and Services

-No Initial Investment Required: Installing Solar Power Systems on Customers' Roofs for Stable Power Supply (Long-term PPA)
O-ffering a one-stop service for planning, obtaining permits, installation, and maintenance.
-Achieving CO2 reduction while also saving on electricity costs.

Key Points of Decarbonization and Sustainability

By eliminating the need for initial investment, this solution reduces the economic burden on companies while promoting the spread of clean energy.
The service stands out for offering a one-stop solution covering planning, permit acquisition, installation, and maintenance, allowing customers to adopt renewable energy without hassle. This not only contributes to CO2 reduction but also provides economic benefits through electricity cost savings. By reducing environmental impact and supporting companies' sustainability goals, this service is an important solution for building a sustainable society.

Achievements/Case studies

(Total: 3.3MW)

- Toyochem Specialty Chemical 1.1MW Currently in operation
- SMC Automation 0.6MW Currently in operation
- Kayaku Safety Systems 1.2MW Currently under construction
- Okayasu Rubber 0.4MW Currently under construction

Solar PPA of 1,097 kWp for Toyochem Specialty Chemical Co.

JFE

Company Information

Company Name :
JFE Engineering (M) Sdn.Bhd.

Industry :
Construction
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50350 Kuala Lumpur

Contact Person :
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03-2202-7272
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ishibashi-hiroshi@jfe-eng.co.jp

Company Website :
https://jfem.com.my/

Renewable Energy Zone

Energy Secure

Renewable Energy supply in Malaysia (Solar off-site PPA and environmental certificate procurement services)

Shizen Malaysia Sdn.Bd./ Natural power

Overview of Products and Services

-Power Purchase Agreement (PPA), Mainly Off-Site PPA**
We contribute to decarbonization by supplying renewable energy-derived electricity generated at our solar power plants, along with related environmental certificates, to corporate clients through PPAs (Power Purchase Agreements). One of our strengths is our ability to consistently support renewable energy procurement across Asia, including in Japan and Malaysia, through a single point of contact.
-Environmental Certificate Services
We assist clients in achieving their decarbonization goals by procuring renewable energy certificates and carbon credits.

Key Points of Decarbonization and Sustainability

In Malaysia, the government has been enhancing renewable energy procurement schemes for businesses in recent years. Options for off-site PPAs (Power Purchase Agreements), such as the CGPP introduced last year and the CRESS scheme announced in September this year, have been expanding. These new schemes increase flexibility for companies in procuring renewable energy, making them an important factor in achieving decarbonization goals. Companies must consider these schemes in light of policy changes and market developments to make well-informed decisions.

Achievements/Case studies

Solar Power Business Achievements in Malaysia:
- Hokuto Malaysia: Rooftop solar power system (0.7 MW)
- Top Glove: Rooftop solar power system (6.1 MW)
- In 2023 CGPP :29.9 MW of ground-mounted solar power was authorized by the government

Collaboration with State Governments on Solar Development:
- April 2024: MOU signed with Majuperak Holdings Berhad, the investment arm of the Perak State Government, for future solar power development.
- August 2024: MOU signed with Terengganu Inc, a subsidiary of the Terengganu State Government, for collaboration on solar development within the state.

Off-site PPA Achievements (Japan):
- Microsoft: Off-site PPA for 31 MWp of solar power
- Google: Off-site PPA for 30 MWp of solar power
- Bourbon*: Off-site PPA for 6.5 MWp of solar power

SHIZEN ENERGY

Company Information

Company Name :
Shizen Malaysia Sdn.Bhd.
(Parent Company : Shizen Energy Inc.)

Industry :
Renewable Energy
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(Malaysia Office) A-29-06, TOWER A, Lorong Utara C, Pjs 52, 46200 Petaling Jaya, Selangor, Malaysia
(Head Office)1-1-6 Arato, Chuo-ku, Fukuoka City, Fukuoka Prefecture
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Email :
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Company Website :
https://www.shizenenergy.net/

Renewable Energy Zone

Energy Secure

Providing one-stop services to achieve environmental goals

CHUDENKO Malaysia Sdn.Bhd.

Overview of Products and Services

Comprehensive Support for Achieving Clients' Environmental Goals through Integrated Solutions:

1.Rooftop solar installations through direct investment
2.Rooftop solar installations through on-site PPA (no upfront investment required)
3.Off-site PPA for renewable energy usage
4.Utilization of renewable energy certificates (REC) for renewable energy sourcing

•Continuous monitoring service by a dedicated maintenance team ensures solar power systems are maintenance-free.
•Proposals for various energy-saving initiatives.

Key Points of Decarbonization and Sustainability

The comprehensive approach, combining multiple solutions, is designed to support clients in achieving their environmental goals. Through continuous monitoring services by a specialized team, we ensure maintenance-free solar power systems, promoting efficient use of sustainable energy. This approach provides strong support for clients' CO2 reduction and energy-saving efforts.

Achievements/Case studies

Through our partnership with local renewable energy engineering company Samaiden Sdn.Bhd., we provide services backed by extensive experience and a proven track record (300 projects / total installed capacity of 900MW).

- Yakult Malaysia Sdn.Bhd.: On-site PPA rooftop solar installation (766.65kW across 2 sites), currently operational.
- CGPP Project (off-site PPA): 43.32MW, recognized by the Malaysian government in 2023.

CHUDENKO (Malaysia)

Company Information

Company Name :
CHUDENKO Malaysia Sdn.Bhd.

Industry :
Electrical installation
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59000 Kuala Lumpur

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Nakanishi
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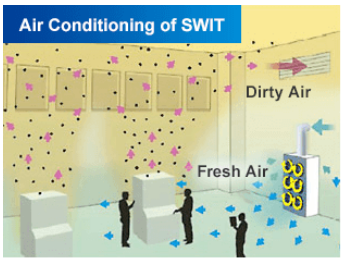
Company Website :
https://samaiden.com.my/
(Partner Company, Samaiden Sdn.Bhd., Website)

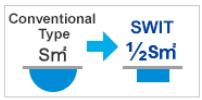
Energy Secure

Swirling Induction type TAKASAGO HVAC System SWIT®
Takasago Clean Room Swirling Induction Type TCR-SWIT®
Energy Saving Dehuminifier WINDS®Series
T.T.E. Engineering (M) Sdn.Bhd. Takasago Thermal Engineering Malaysia subsidiary

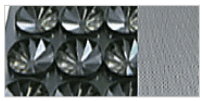
Overview of Products and Services

SWIT® is a stratified air conditioning system that advances displacement ventilation technology by leveraging the natural principle where cold air descends and warm air rises, utilizing a vortex-indued flow.
TCR-SWIT® applies SWIT® technology to large-scale clean rooms, achieving both indoor environmental control and energy efficiency as a next-generation clean room solution.
WINDS® is designed to meet the low dew point requirements of battery manufacturing environments, supplying dry air with dew points ranging from -50°C to -70°C or lower, while ensuring energy efficiency.

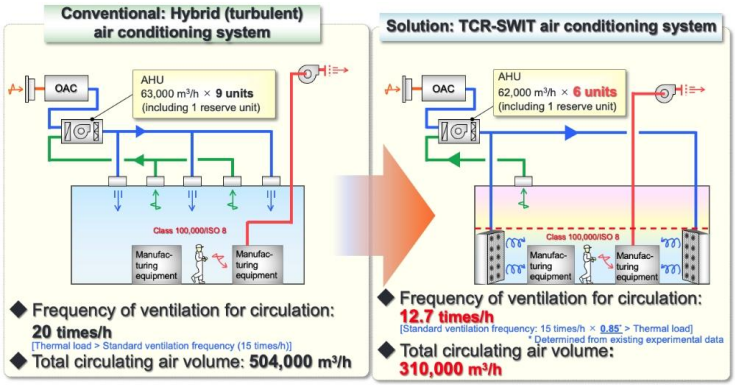




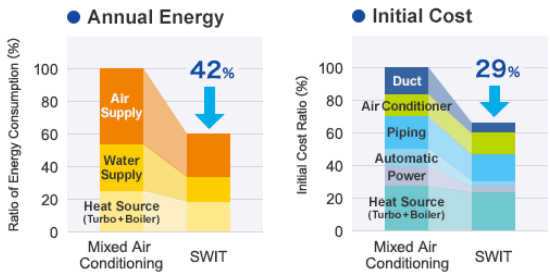
The installation area is reduced to 1/2 or less through swirling flow



Thanks to the design of the swirl guide vane arrangement, attraction from the upper part of the air supply unit is reduced, and air conditioning efficiency is improved



Roughly 40% reduction of circulating air volume from conventional clean rooms with hybrid air conditioning systems!



Calculation example with improvement of indoor environment 100 W/m² with floor area 20000 m² (outside air condition: Tokyo)

Key Points of Decarbonization and Sustainability

SWIT® and TCR-SWIT® are sustainable air conditioning systems that contribute to improved energy efficiency and reduced CO2 emissions. By maintaining clean environments and utilizing natural airflow for superior ventilation efficiency, these systems reduce transport power requirements and enhance the efficiency of heat source equipment.
WINDS® meets the dual demands of low dew point requirements and energy-efficient, low-CO2 solutions in battery manufacturing environments. This supports optimal resource utilization and the creation of sustainable environments, simultaneously achieving comfort and reduced environmental impact.

Achievements/Case studies

The SWIT and TCR-SWIT systems, as well as WINDS, have numerous proven installations across Japan. In Malaysia, the SWIT system has also been successfully implemented.
https://www.tte-net.com/solution/swit.html
https://www.tte-net.com/solution/winds.html

Company Information

Company Name :
T.T.E. Engineering (M) Sdn.Bhd.
（Takasago Thermal Engineering Malaysia Subsidiary.）

Industry　:
General Construction
Address :
13th Floor, Menara Choy Fook On, No. 1B, Jalan Yong Shook Lin, Pjs 7, 46050 Petaling Jaya, Selangor

Contact Person :
Sato
Phone :
0124406784
Email :
tadashi_sato@tte-net.com

Company Website :
https://www.ttemalaysia.com.my/

Renewable Energy Zone | Energy Storage | Energy Secure | Others

Smart energy technology demonstration study for green electricity distribution

Nippon Koei Co., Ltd.・ Nippon Koei Energy Solutions Co., Ltd.

*BESS services provided in Belgium and the UK

Overview of Products and Services

■The Malaysian government has set a policy to achieve carbon neutrality by 2050 and increase the renewable energy share to 70% to support this goal.
■Sabah State and its capital, Kota Kinabalu, are also exploring measures and solutions to align with the trend toward carbon neutrality and decarbonization.

Project ①: Large-Scale Solar Power Generation (LSS) + Grid-Scale Battery Energy Storage System (BESS)
Introducing Malaysia's first grid-scale BESS with renewable energy to ensure stable green power supply.

Project ②: Development and implementation of a green power supply and demand control (energy-saving) platform for industrial parks.
A model project optimizing green power operations, integrating rooftop solar, BESS, demand control, Energy Management System(EMS), and Electric Vehicles(EV) technology in industrial parks.

Key Points of Decarbonization and Sustainability

・Building a green power supply system with LSS + BESS to reduce greenhouse gas emissions and achieve a decarbonized society.
・Developing model cases with industrial park tenants to optimize energy use and ensure stable green power supply.
・Promoting green, smart industrial parks to attract eco-conscious businesses and drive economic growth.

Achievements/Case studies

【Achievements】
・Since the 1970s, we have designed, managed, and constructed hydroelectric power plants and medium- to high-voltage transmission lines in Peninsular Malaysia, Sabah, and Sarawak.
・In Europe, where large-scale grid batteries are being introduced, we developed, constructed (EPC), and operated 75MW/150MWh storage facilities, starting operations in early 2023.
【Case Studies】
・Battery Storage EPC Project in the United Kingdom
・BESS Project in Belgium
・Solar Power, Battery Storage, EMS, and VPP with a Comprehensive Data Platform Survey Project in Vietnam Industrial Parks

Company Infomation

Company Name :
Nippon Koei Co., Ltd.・
Nippon Koei Energy Solutions Co., Ltd.

Industry :
Consultant
Address :
5-4 Kojimachi, Chiyoda-ku, Tokyo, Japan

Contact Person:
Mr.Kumagishi
General Manager, International Marketing & Promotion Dept.
Phone :
03-5276-3596
Email :
int.a@gx.n-koei.co.jp

Company Website :
https://www.n-koei.co.jp/consulting/english/

Renewable Energy Zone Energy Secure

Insurance products supporting Malaysia's transition to a decarbonized society

MSIG Insurance (Malaysia) Bhd

Overview of Products and Services

- ◘ SOLAR PV ALL RISKS (Solar Panel Insurance) / SOLAR PV FOR HOME INSURANCE (Solar Panel Insurance for Residential Use)
  - ➢ Compensation for damage or loss of solar panels due to accidental causes (such as fire, breakage, theft, etc.).
  - ➢ Compensation also includes loss of savings caused by the accidents above.
  - ➢ Optional cover for liability to third parties (e.g., damages caused by falling panels).
- ◘ BUILT BACK BETTER GREEN CLAUSE (An optional add-on to fire insurance)
  - ➢ Compensation covers additional costs for eco-friendly improvements to reduce CO2 emissions, during the reinstatement of buildings caused by perils covered by fire insurance.

Key Points of Decarbonization and Sustainability

- ➢ SOLAR PV ALL RISKS covers solar panels itself and loss of savings caused by accidents, supporting the Net Energy Metering (NEM) scheme by the Sustainable Energy Development Authority (SEDA).
  - ※ A system where the power generated by solar panels, minus self-consumption, allows surplus electricity to be sold to the utility company, e.g. TNB.
- ➢ The BUILT BACK BETTER GREEN CLAUSE compensates for additional reinstatement costs of replacing damaged materials with sustainable materials during rebuilding, based on standards set by the Green Building Index (GBI).

Achievements/Case studies

- ☐ SOLAR PV ALL RISKS (Solar Panel Insurance)
  - ➢ Compensation was provided for the loss of savings from electricity sales that would have been earned during the restoration period after solar panels were damaged in a fire accident.
- ☐ BUILT BACK BETTER GREEN CLAUSE (An optional add-on to fire insurance)
  - ➢ Additional compensation was provided for the costs of installing solar panels and a water recycling system when reinstating the completely damaged building.

MSIG

Company Information

Company Name :
MSIG Insurance (Malaysia) Bhd

Industry :
Finance/Insurance
Address :
Level 15, Menara Hap Seng 2, Plaza Hap Seng, No 1. Jalan P Ramlee, 50250 Kuala Lumpur

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Company Website :
https://www.msig.com.my

Renewable Energy Zone | Energy Storage | Energy Secure

Self-consumption type solar power generation/ storage battery system providing solutions

Looop Energy Malaysia Sdn.Bhd.

Rooftop solar power generation.

Container-type battery storage system

Cabinet-type battery storage system

Overview of Products and Services

- Main products and services: Design, construction, and after-sales service for solar power generation and storage battery systems
- Main proposal scheme
  - Self-investment type (CAPEX): Maximize the effect of reducing electricity bills
  - Power sales type (PPA): Third-party ownership model with no initial costs
- Target countries: Flexible support mainly in Southeast Asia including Malaysia and the Philippines (For other areas, please consult on a case-by-case basis)

Key Points of Decarbonization and Sustainability

- We support our customers' efforts to reduce CO^2 and electricity bills.
- If you are introducing a system with your own investment, you can also consider taking advantage of tax incentives.
- For customers with limited roof load capacity, we proactively make proposals using lightweight solar panels.
- Regarding storage batteries, we can design them to meet the diverse needs of our customers, such as maximizing power generation by combining solar power generation systems, reducing electricity costs, and providing emergency power sources.

Achievements/Case studies

- Based on the know-how we have cultivated in Japan since our founding in 2011, we began providing services in Malaysia in 2018.

Japan

- Solar power generation business: 350MW or more

Malaysia/Philippines

- Panel procurement business: 120MW or more
- Solar power generation business: 6.8MW
- Storage battery business: 2.39MWh

Company Information

Cpmpany Name :
Looop Energy Malaysia Sdn.Bhd.

Industry :
Renewabel Energy

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Unit 33-13A, Level 33, Q Sentral, 2A,
Jalan Stesen Sentral 2,
50470, Kuala Lumpur,
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Matsuo Sayumi

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Company Website :
https://looop.my/

3. Hydrogen

- **IHI Corporation**
- **Sumitomo Corporation**
- **Mitsubishi Heavy Industries Ltd.**

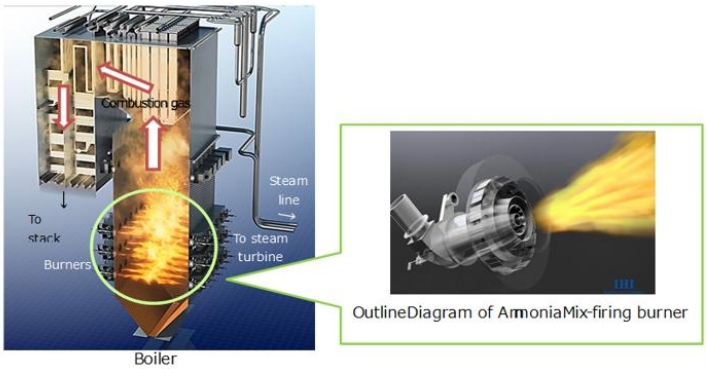
Green Hydrogen

Coal-fired ammonia/Biomass co-firing

IHI Corporation

Overview of Products and Services

- ✓ Conversion of fuel for boilers used in thermal power generation from coal to clean fuels such as ammonia and biomass
- ✓ Not only power plants of electric power companies but also on-site boilers in factories are subject to fuel conversion



Key Points of Decarbonization and Sustainability

- ✓ Fuel conversion using existing facilities can promote gradual decarbonization with lower initial investment compared to new construction
- ✓ It is important to consider not only the technical aspects of retrofitting existing facilities, but also the commercial aspects of securing fuel and evaluating economic efficiency.

Achievements/Case studies

- ✓ Ammonia: Demonstration operation of 20% ammonia co-firing has been completed at JERA Hekinan Thermal Power Plant Unit 4 (1000MW).
- ✓ Biomass: We have a lot of experience in co-firing with coal and converting to biomass co-firing, and have experience in co-firing EFB pellets derived from palm waste at coal-fired power plants in Japan and Malaysia.

IHI
Realize your dreams

Company Information

Company Name :
IHI Corporation

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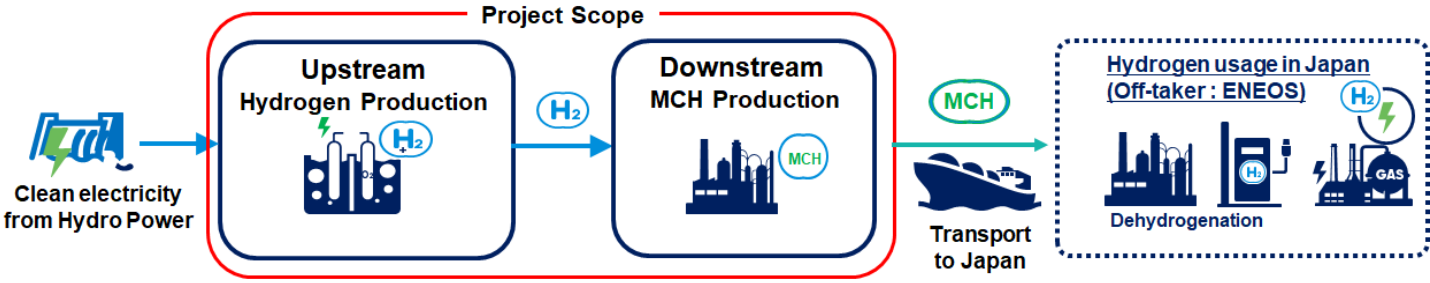
Green Hydrogen

Establishing a Clean Hydrogen Supply Chain

Sumitomo Corporation



Overview of Products and Services

Establishing a clean hydrogen supply chain through the development of a clean hydrogen production and export project.

Key Points of Decarbonization and Sustainability

Hydrogen is an effective decarbonization solution, capable of long-term storage and long-distance transport, usable in high-temperature combustion processes, and able to promote carbon recycling by combining with carbon.

Since hydrogen production capacity and potential demand do not always align, the goal is to establish a global hydrogen supply chain to optimize the supply-demand balance.

Achievements/Case studies

In December 2023, a joint development agreement was signed among ENEOS Corporation, SEDC Energy Sdn Bhd and Sumitomo Corporation to establish a clean hydrogen supply chain utilizing renewable energy.
This project aims to produce clean hydrogen utilizing renewable energy from hydropower in Sarawak, convert it into methylcyclohexane (MCH), one of the efficient transportation forms, and ship it by sea to demand centers in Japan.

Company Infomation

Company Name :
Sumitomo Corporation

Industry :
Trading
Address :
Otemachi Place East Tower, 2-3-2 Otemachi, Chiyoda-ku, Tokyo

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Company Website :
https://www.sumitomocorp.com/ja/jp

Green Hydrogen Hydrogen for Power

Hydrogen Production Technology, Hydrogen and Ammonia Combustion Technology

Mitsubishi Heavy Industries, Ltd.

Hydrogen Production and Hydrogen, Ammonia Power Generation: Product Line-Up

Hydrogen Production Equipment (SOEC)


Hydrogen Firing Gas Turbine


Ammonia Firing Gas Turbine


Ammonia Firing Boiler

Overview of Products and Services

■Hydrogen Production

In Mitsubishi Heavy Industries (MHI) Group, we mainly focus on hydrogen utilisation for power generation, and are working on three types of hydrogen production technologies, namely a high pressure, high effectiveness, high capacity SOEC (Solid Oxide Electrolysis Cell), small-scale and low-cost next generation AEM*1 Electrolyzer, and manufacturing of turquoise hydrogen via methane pyrolysis.

■Hydrogen, Ammonia Power Generation

Our company also specialises in power generation technologies that make use of hydrogen and ammonia, which are anticipated as the green fuels that do not emit CO_2 during combustion, and developing combustion technologies such as hydrogen co-firing, ammonia/hydrogen single fuel firing combustion and developing an ammonia single firing burner for coal fired boiler, to achieve CO_2 emission reduction in coal fired power generation.

※1 AEM: Anion Exchange Membrane

Key Points of Decarbonization and Sustainability

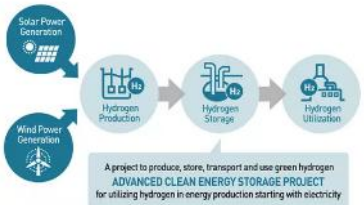
MHI Group is advancing the energy transition as a growth engine based on the following 3 initiatives: decarbonize existing infrastructure, build a hydrogen solutions ecosystem, and build a CO_2 solutions ecosystem, based on “MISSION NET ZERO”, which declares our aim to achieve carbon neutrality by 2040.

Through the development of technologies that enable fuel conversion to hydrogen and ammonia, we will promote decarbonization of existing thermal power plants, in other words, the “decarbonization of existing infrastructure”. On the other hand, hydrogen does not exist in nature, and production costs are high, and additionally there are issues such as the establishment of transportation methods and infrastructure for storage, making it necessary to build a value chain that includes the primary energy supply necessary for production, until transport, storage, and utilisation, in other words, "building a hydrogen ecosystem.“

In order to advance the hydrogen and ammonia value chain as a realistic approach, instead of simply providing technologies and products in isolation, it is very important to build a interconnected value chain, and thus MHI Group is actively collaborating with other companies, and participating in cutting-edge projects in various parts of the world, while aiming to build a value chain.

Achievements/Case studies

As an example of our cutting-edge project initiatives, MHI is participating in the Advanced Clean Energy Storage Project in America, Utah. In this project, green hydrogen, manufactured via the electrolysis of water using renewable energy, is stored in underground salt dome caverns, and supplied to power plants that use hydrogen-fired gas turbines that were deployed by our company. Our company has delivered a 840 MW-class hydrogen-fired gas turbine for this project, which will utilize 30 percent hydrogen fuel at start-up in 2025, with a goal of achieving 100 percent hydrogen by 2045.



MITSUBISHI HEAVY INDUSTRIES

Company Information

Company Name:
Mitsubishi Heavy Industries Ltd.

Industry:
Manufacturing
Address:
Unit 49-B, Level 49, Vista Tower, The Intermark, 348 Jalan Tun Razak, 50400 Kuala Lumpur, Malaysia

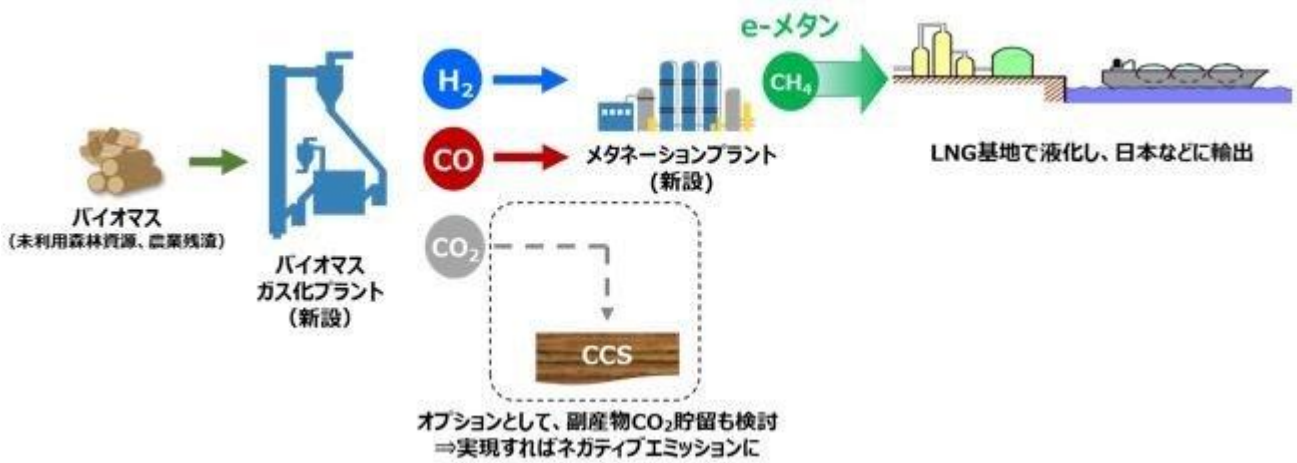
Contact Person:
Daisuke Wakasugi
Tel: +60 1123525827
Email:
daisuke.wakasugi.md@mhi.com
Company Website:
https://www.mhi.com/

4. Bioenergy

- **Osaka Gas Co., Ltd.**
- **Chitose Laboratory Corp**
- **HANWA (MALAYSIA) Sdn.Bhd.**
- **Marubeni Corporation**

Biomass-Based e-Methane Production Business

Osaka Gas Co., Ltd.



Overview of Products and Services

In April 2023, a Memorandum of Understanding was signed with IHI Corporation and PETRONAS Global Technical Solutions Sdn.Bhd. in Malaysia to initiate detailed studies aimed at deciding on the implementation of the Front-End Engineering Design (FEED) for an e-methane production project utilizing unused forest resources and agricultural residues as biomass.

•Aiming to produce e-methane using biomass as an energy source that is not affected by the price of renewable electricity

Key Points of Decarbonization and Sustainability

Syngas, which consists mainly of hydrogen, carbon monoxide, and carbon dioxide, is produced by gasifying unused forest resources, agricultural residues, and other biomass at high temperatures. The resulting syngas is then used for methanation to produce e-methane, which is unaffected by the price of renewable electricity.

Achievements/Case studies

The company aims to liquefy the e-methane produced in 2030 at an LNG terminal owned by Petronas in Malaysia and export it to Japan and other countries. The possibility of negative emissions will also be studied in the future when biomass-derived CO2 obtained as a by-product is stored in the ground (CCS).

Company Information

Company Name :
Osaka Gas Co., Ltd.

Industry :
Gas/Energy

Address :
4-1-2 Hirano-machi, Chuo-ku, Osaka-shi, Osaka 541-0046, Japan

Contact ;
https://www.osakagas.co.jp/ssl/form/mailshori/index.html

Company Website :
https://www.osakagas.co.jp/

MATSURI

Chitose Laboratory Corp

Overview of Products and Services

MATSURI (MicroAlgae Towards Sustainable and Resilient Industry) is a groundbreaking project led by CHITOSE Group, known for its expertise in large-scale microalgae production powered solely by sunlight. Collaborating with industry, government, and academia, the project aims to establish a new microalgae industry that has never been achieved before. It simultaneously advances the development of bio-based products and the large-scale production of microalgae to promote microalgae-based products that support people's daily lives.
As part of its scale-up efforts, the project is currently developing economically viable and environmentally sustainable microalgae production technologies in Kuching, Sarawak, leveraging abundant sunlight and stable year-round temperatures, under the commission of NEDO (New Energy and Industrial Technology Development Organization).

Key Points for Decarbonisation and Sustainability

Decarbonization requires transitioning from a fossil resource-dependent world to a bio-based era that enables energy and material circulation driven by sunlight.
Microalgae absorb CO2 and produce various organic compounds like proteins, lipids, and carbohydrates using solar energy. They require minimal water and no soil, making them an environmentally low-impact resource.
This project aims to develop a sustainable society by utilizing microalgae biomass, produced on a large and stable scale, as raw material for diverse applications such as chemicals, cosmetics, fuels, animal feed, and food products.

Achievements / Case Studies

As part of a NEDO-commissioned project※1, the world's largest microalgae production facility※2, the 5-hectare "CHITOSE Carbon Capture Central (C4)," has been constructed in an industrial park in Kuching, Sarawak, to demonstrate large-scale, stable microalgae production.
Additionally, a 100-hectare facility※3 is under construction in the same region, scheduled to begin operations in 2027.
Looking ahead to commercialization, production will scale up to 2,000 hectares, enabling an annual supply of 140,000 tons (dry weight) of algae biomass at a cost below ¥300/kg for use as raw material in various products.

※1 Development of Production Technologies for Biojet Fuel Project.
https://www.nedo.go.jp/english/activities/activities_ZZJP_100127.html
※2 Scalable flat-panel type photobioreactor system suitable for the efficient production of microalgal biomass.
※3 Green Innovation Fund Project, adopted by NEDO
https://green-innovation.nedo.go.jp/en/project/bio-manufacturing-technology/

CHITOSE

Company Infomation

Company Name :
Chitose Laboratory Corp

Industry :
Biotechnology-related services
Address :
CHITOSE Carbon Capture Central,
Jalan Kampung Goebilt,
Kampung Goebilt, 93010
Kuching, Sarawak, Malaysia
(Chitose Laboratory Sarawak Branch)

Contact Person :
Ryo Iko
Email :
contact@chitose-bio.com

Company Website :
https://chitose-bio.com/

Consulting of decarbonization and Supply of biofuels

HANWA (MALAYSIA) Sdn.Bhd.

Overview of Products and Services

We procure PKS (a by-product of palm oil extraction) from Southeast Asia and wood pellets (fuel made by compressing sawdust) from around the world, boasting the largest handling volume in Asia, around 2 million tons annually. Through upstream investments in Indonesia, long-term charter contracts, and our own warehouse, we ensure a stable supply of these biomass fuels. Additionally, to meet our customers' decarbonization needs in transportation, we also sell biofuels (biodiesel) for trucks and ships, as well as the raw materials for these fuels.

Key Points of Decarbonization and Sustainability

As a means of decarbonization in the power generation and shipping industries, new fuels such as hydrogen and ammonia are expected in the medium to long term. However, due to the significant investments and technological developments required, we are currently supplying biofuels that can be used directly in existing equipment as immediate decarbonization fuels. Biofuels are considered carbon-neutral because the plants used as raw materials absorb CO2 from the atmosphere during their growth process, offsetting the CO2 emitted during combustion.

To contribute to the stable supply of energy, we have also invested in a wood pellet factory with plantation in Indonesia. The plantation area is 27,000 hectares, and we plant trees every year. Each tree absorbs 25 kg of CO2 annually. Since the project began, we have planted approximately 9 million trees. In the first phase, we plan to plant 45 million trees.

Achievements/Case studies

Confidential

Company Information

Company Name :
HANWA (MALAYSIA) Sdn.Bhd.

Industry :
Trading
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Lot 19-5, Level 19 Menara Hap Seng 2, No 1, Jalan P. Ramlee 50250 Kuala Lumpur.

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park-Cheulsoo@hanwa.co.jp

Company Website :
https://www.hanwa.co.jp/en/

Malaysia/Biomass-Based SAF Production Project

Marubeni Corporation

Overview of Products and Services

- MOU signed (May 15, 2024) to conduct a feasibility study (Pre-FS) in Sarawak, Malaysia, on the production of aviation fuel (SAF) using the abundant forest residues and other biomass resources available in the area.
- The MOU will be signed on May 15, 2024, to conduct a pre-FS study on the feasibility of SAF production using biomass resources.
- This project aims to produce SAF using resources that were previously disposed of, and will contribute to the global decarbonization of Malaysia and the development of the state of Sarawak.

Key Points of Decarbonization and Sustainability

The project will promote the production of carbon-neutral aircraft fuel through the effective use of discarded biomass resources. In cooperation with local companies, the project will also contribute to the sustainable development of Malaysia through the efficient use of resources and the revitalization of the local economy. Furthermore, the project will contribute to global decarbonization, environmental conservation, and the creation of a resource-recycling society.

Achievements/Case studies

Pre FS (investigation of raw materials, adopted technologies, economic feasibility, etc.) will be conducted during FY2024 to determine the feasibility of the project.

Company Information

Company Name :
Marubeni Corporation

Industry :
Trading
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Menara Hap Seng 3, 5th Floor, Lot 5-03 & 5-03A, No.1 & 3, Jalan P.Ramlee, 50250. Kuala Lumpur

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shibuya-takashi@marubeni.com

Company Website :
https://www.marubeni.com/jp/

5． Green Mobility

- SANDEN AIR CONDITIONING(M) Sdn.Bhd.
- All Nippon Airways Co., Ltd.
- Nippon Koei Co., Ltd.
- BERJAYA SOMPO INSURANCE Berhad

Future Mobility

Car Air Conditioning System Solutions for Automotive Decarbonization

SANDEN AIR CONDITIONING(M) Sdn.Bhd.

Electric compressor

Electric coolant heater (For EVs and Hybrids)

Thermal management system

Thin and lightweight heat exchanger

Overview of Products and Services

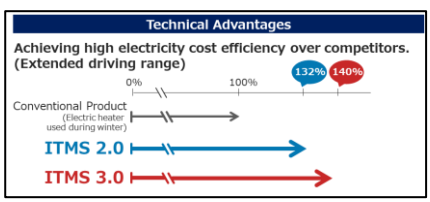
Development, manufacturing, and sales of automotive air conditioning systems and components.
-In order to accelerate the decarbonization of automobiles, including electrification (EV), we will provide solutions to the automobile industry through car air conditioning systems.
-To accelerate the decarbonization (EV) of automobiles, we will provide ITMS (Integrated Thermal Management System) and high-efficiency EC (Electric Compressor)/ECH (Electric Coolant Heater) that contribute to extending cruising range.
The industry's thinnest lightweight heat exchanger (evaporator/condenser) contributes to improving automobile fuel efficiency and electricity consumption.

Key Points of Decarbonizaation and Sustainability

1. Accelerating the trend toward EVs by providing solutions to car air conditioner issues as vehicles become EVs
2. Contributing to improving vehicle fuel efficiency and electricity consumption and reducing CO2 emissions by making parts smaller and lighter.

Achievements/Case studies

Integrated thermal management system(ITMS) for electric vehicles. Increase cruising range by up to 140% succeeded in improving



Aluminum material reduction of 26 tons per year in heat exchangers with the same size and heat dissipation performance

By making parts smaller and lighter, it reduces fuel consumption and CO2 emissions of automobiles, and improves electricity costs and cruising range of EVs.
In addition, the production of aluminum materials consumes so much electricity that it is called "canned electricity," and 15,000 kWh of electricity is required to produce 1 ton of aluminum. Therefore, reducing the amount of aluminum used can directly reduce electricity consumption. The amount was reduced.

SANDEN
INNOVATING COMFORT

Company Information

Company name :
SANDEN AIR CONDITIONING（M）Sdn.Bhd.

Industry :
Automotive parts manufacturing and sales
Address :
No.16, Jalan Pemaju U1/15、Seksyen U1, HICOM Glenmarie Industrial Park, 40150 Shah Alam

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Kazuhiro.Iwata.wu@g-sanden.com

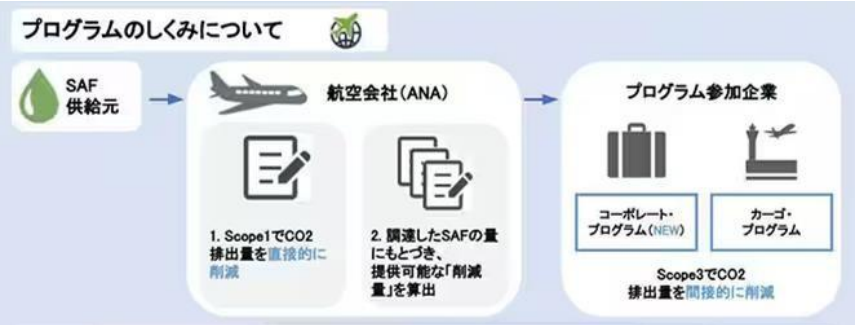
Corporate website :
http://www.sanden.com.my

Future Mobility Future Fuel

Reducing CO_2 Emissions in Air Transportation Through the Use of Sustainable Aviation Fuel (SAF)

All Nippon Airways Co., Ltd.

SAF Flight Initiative
For the Next Generation



Overview of Products and Services

ANA launched the "SAF Flight Initiative" in 2021, the first program of its kind in Asia, aiming to reduce CO_2 emissions in air transportation through the use of sustainable aviation fuel (SAF) and to contribute to cross-industry CO_2 reduction in collaboration with participating companies.

Participating companies can receive certificates verified by third-party organizations to ensure transparency. These certificates can be used to reduce CO_2 emissions in the value chain under GHG Protocol Scope 3 and for calculating disclosure data.

We offer two types of programs:

①A corporate program for companies working to reduce CO_2 emissions during employee business trips.

②A cargo program for companies aiming to reduce CO_2 emissions in freight transportation and delivery.

Key Points of Decarbonization and Sustainability

1. By procuring SAF, ANA achieves direct emissions reductions in its core operations under Scope 1.
2. Participating companies in the SAF Flight Initiative can achieve indirect CO_2 reductions under Scope 3, Category 4 (freight transportation) and Category 6 (business travel). The reduction figures can be used for stakeholder disclosures, as well as for corporate symbol usage.

Achievements/Case studies

Kyocera Corporation has joined as the first shipper company, contributing to the reduction of CO_2 emissions across the entire value chain and supporting the achievement of its long-term environmental goal of carbon neutrality by 2050.

This participation was made possible through the cooperation of Kyocera's freight forwarding partners, Nippon Express Co., Ltd. and Kintetsu World Express, Inc. Many other corporate customers are also utilizing this initiative.

NIKKEI 日経優秀製品・サービス賞 2022

※The SAF Flight Initiative received the "2022 Nikkei Superior Products and Services Award" organized by Nikkei Inc.

ANA Inspiration of JAPAN

Company Information

Company Name :
All Nippon Airways Co., Ltd.

Industry :
Air transportation

Address :
1-5-2 Higashi-Shinbashi, Minato-ku, Tokyo
Shiodome City Center

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Kusakabe

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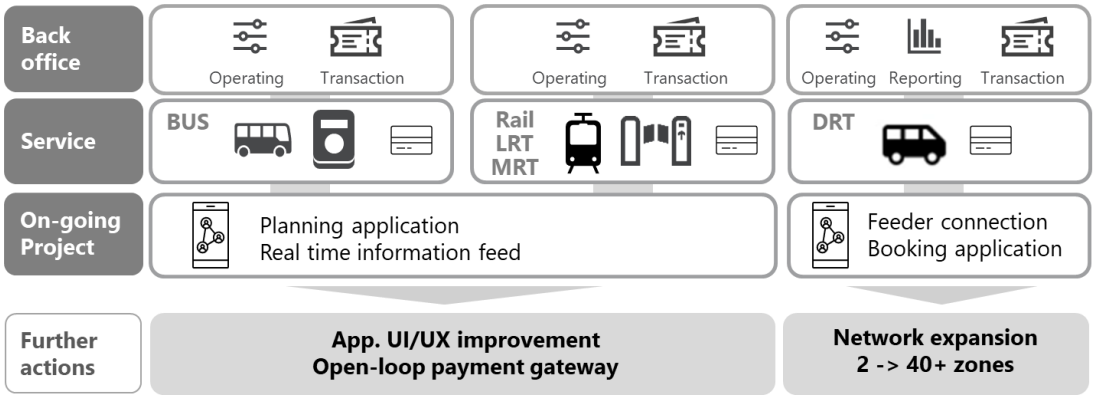
Company Website :
https://www.ana.co.jp/ja/my/

Future Mobility

A MaaS demonstration project integrating terminal transportation and public transportation in Kuala Lumpur

Nippon Koei Co., Ltd.



*Organizing requirements for a data integration platform (MaaS platform) to support public transport integration in Kuala Lumpur.

Overview of Products and Services

■In Kuala Lumpur, Malaysia, car dependency and urbanization worsen traffic congestion, hindering growth and daily life.
■Prasarana Malaysia Berhad, operating LRT, MRT, monorails, and buses, is enhancing public transport by expanding payment options, testing on-demand services, and improving UI/UX.
■This project aims to improve convenience through public transport integration, evaluate on-demand transport, and explore MaaS platform requirements.

Key Points of Decarbonization and Sustainability

Decarbonization
・Improving the convenience of public transportation and reducing car usage.
・Reducing exhaust emissions and contributing to combating global warming by lowering car usage.
Traffic congestion alleviation
・Utilizing information and communication technology and big data to propose seamless mobility solutions, leading to reduced traffic congestion.
Regional revitalization
・Creating opportunities for outings through the provision of seamless mobility solutions.

Achievements/Case studies

【Achievements】
Extensive Experience with Municipalities and Government Agencies
We develop and implement MaaS-based projects to optimize urban development and transport while reducing environmental impact.
【Case study】
・MaaS Payment Information Utilization Demonstration in Indonesia
・MaaS Demonstration for Large-Scale Private Sector Area Development in Vietnam
・Tourism-Oriented MaaS Demonstration in Siem Reap, Cambodia

Company Infomation

Company Name :
Nippon Koei Co., Ltd.

Industry :
Comprehensive Consultant
Address :
Kojimachi 5-4, Chiyoda-ku, Tokyo, Japan

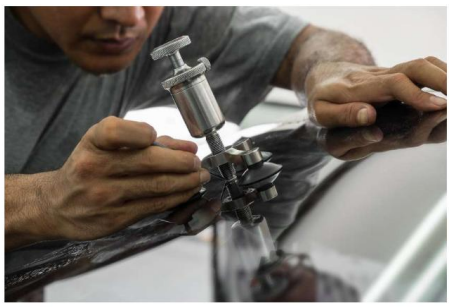
Contact Person :
Mr.Kumagishi
General Manager, International Marketing & Promotion Dept.
Phone :
03-5276-3596
Email :
int.a@gx.n-koei.co.jp

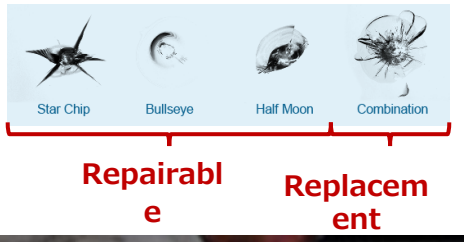
Corporate website :
https://www.n-koei.co.jp/consulting/english/

Future Mobility

Windscreen Repair Recommendation for Automotive Windshield Repair

BERJAYA SOMPO INSURANCE





Overview of Products and Services

Recommendation for Environmentally Friendly Windshield Repair

Recommendation for Repairing Windshields Damaged in Auto Accidents

Key Points of Decarbonization and Sustainability

We promote windshield repair over replacement in auto accidents to reduce waste, support decarbonization efforts, and contribute to a sustainable society, aiming to minimize environmental impact and enhance sustainability awareness.

Achievements/Case studies

- Fiscal Year 2023: 113 cases
- As of the end of September 2024: 71 cases

BERJAYA SOMPO INSURANCE

Company Infomation

Company Name :
BERJAYA SOMPO INSURANCE Berhad

Industry :
Non-Life Insurance Business
Address :
Level 36 (Lobby C), Menara Bangkok Bank,
105, Jalan Ampang, 50450 Kuala Lumpur.

Contact Person :
Kobayashi
Contact :
Global Business
Phone :
018-288-0076
Email :
kobayashi@bsompo.com.my

Company Website :
https://www.berjayasompo.com.my/

6. CCUS／CCS

- IHI Corporation
- Asuene APAC Pte. Ltd.
- Kawasaki Kisen Kaisha, Ltd.
- GREEN CARBON Co., Ltd.
- Mitsui & Co., Ltd.
- Mitsubishi Heavy Industries, Ltd.

CCS

CO2 Capture and Methanation

IHI Corporation

CO2 Capture Equipment

Methanation Equipment

Overview of Products and Services

- ✓ Separation and recovery of carbon dioxide from exhaust gases from factories and power plants (CO2 recovery), and synthesis with hydrogen to produce methane, the main raw material for city gas (methanation)
- ✓ Possible to provide an integrated package from CO2 capture to methanation, including hydrogen production
- ✓ In-house service for visualization of CO2 reductions using blockchain technology is also available.
- ✓ Possible to provide not only individual design of both facilities, but also small-capacity standard equipment

Key Points of Decarbonization and Sustainability

- ✓ Establish uses for recovered CO2 by producing methane, a valuable resource, as a raw material from recovered CO2.
- ✓ By producing methane, the main raw material for city gas, it can be used as fuel at existing facilities in the plant and existing infrastructure such as gas pipes.

Achievements/Case studies

- ✓ Proven track record in supplying Japanese gas companies and manufacturers

IHI
Realize your dreams

Company Information

Company name :
IHI Corporation

Industry :
Heavy industry
Address :
19th Floor, UBN Tower, 10 Jalan P Ramlee, Kuala Lumpur, Malaysia

Contact person :
Atsushi Kimura
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+60-3-2072-1255
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kimura8375@ihi-g.com

Company website :
https://www.ihi.co.jp/en/

CCS

Asuene – Cloud Service for CO2 Emissions Visualization, Reduction, and Reporting

Asuene APAC Pte. Ltd.

Overview of Products and Services

- A cloud-based platform for CO2 visualization, reduction, and reporting, integrated with SX consulting, AI-OCR, and ISO14064-3 certification, automates the calculation of Scope 1-3 greenhouse gas emissions.
- Leveraging extensive experience, it supports international initiatives (TCFD, SBTi, CSRD), boundary setting, and calculation.
- Provides a one-stop CO2 reduction solution by implementing optimal methods such as renewable energy, energy-saving suppliers, and carbon offsets.

Key Points for Decarbonisation and Sustainability

Provides a cloud platform that automatically collects and calculates Scope 1-3 greenhouse gas emissions. Supports calculation and reporting aligned with international standards like TCFD, SBTi, and CSRD. Enables optimal CO2 reduction strategies through renewable energy, energy-efficient technologies, and carbon offsets. With extensive experience, offers a one-stop solution from calculation to reduction and reporting, contributing to decarbonization and sustainability efforts.

Achievements / Case Studies

➢ Kanematsu Corporation

Developed logic for data collection and input, reducing and optimizing workload.
Achieved rapid progress, starting Scope 3 calculations within two months of implementation.

➢ OPTEX Group Co., Ltd.

Took the first step in visualizing CO2 emissions as a group.
As a global niche top company, we have communicated our commitment to decarbonization and product excellence both internally and externally, successfully advancing CDP disclosure efforts.

➢ UCC Japan Ltd.

Centralized management of Scope 3 data across domestic and international operations.
Enabled smooth data input and calculation from overseas sites with multilingual support.

Company Infomation

Company Name :
Asuene APAC Pte. Ltd.

Industry :
Address :

Sontact Person :
Masaaki Hamada (Mr.)
Email :
https://earthene.com/asuzero/en/form/contact

Company Website :
https://earthene.com/

CCS

LNG Transportation and CCS Value Chain Development for Low-Carbon and Decarbonization Goals

Kawasaki Kisen Kaisha, Ltd.

79,960m3(Membrane-Type) LNG Carrier *LAGENDA SETIA*

CCS Value Chain Development Between Japan and Malaysia

Overview of Products and Services

■ LNG Transportation Business

Leveraging 41 years of safe operation expertise and a strong network, we provide LNG transportation services, contributing to the stable supply of energy. (*In 1983, we launched Japan's first LNG carrier, Bishu Maru.)

■ CCS Business

We participate in CCS (Carbon dioxide Capture and Storage) projects involving advanced liquefied CO2 maritime transport, contributing to a sustainable society by supporting low-carbon and decarbonization efforts.

Key Points of Decarbonization and Sustainability

Our group is advancing various initiatives for low-carbon and decarbonization efforts for both our company and society, guided by the "K" LINE Environmental Vision 2050.

In Malaysia, we support sustainable low-carbon and decarbonization efforts for client companies through our LNG transportation and CCS businesses.

Achievements/Case studies

■ LNG Transportation for Petronas

In February 2020, we signed a long-term charter contract with Malaysia's PETRONAS Group.

Three newly built LNG carriers—LAGENDA SURIA, LAGENDA SERENITY, and LAGENDA SETIA—are deployed for transporting LNG from Bintulu Port, Sarawak, to overseas destinations.

■ Sarawak Offshore CCS Value Chain Development

In September 2023, we signed a basic agreement with JAPEX, JGC Group, and PETRONAS Group to study the commercialization of a CCS value chain offshore Sarawak, aiming for the early realization of CCS operations.

This project has been selected as part of JOGMEC's "Advanced CCS Projects."

Company Information

Company Name :
Kawasaki Kisen Kaisha, Ltd.

Industry :
Transportation

Address :
2-1-1 Uchisaiwaicho, Chiyoda-ku, Tokyo, Japan

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Company Website :
https://www.kline.co.jp/ja/index.html

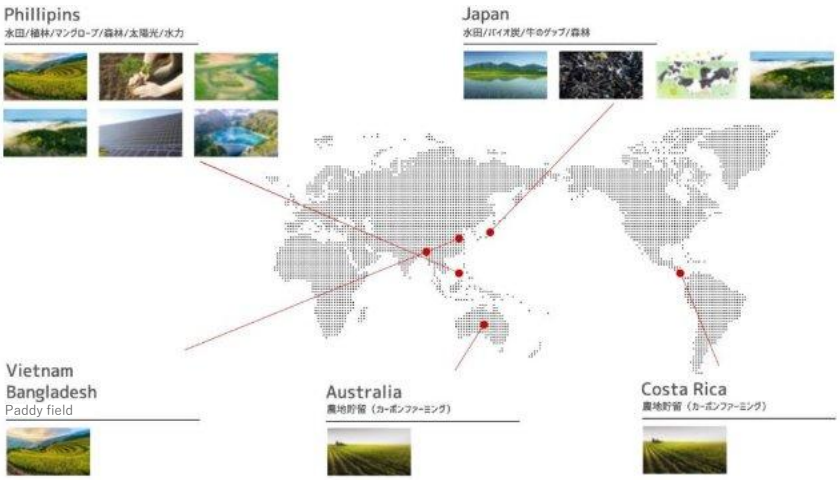
CCS

Mitigating climate change and increasing farmers' income "Agricultural carbon credit creation project"

GREEN CARBON Co., Ltd.

Overview of Products and Services

・Carbon credit creation project generation and consulting business
・Research and development project for plants that absorb a large amount of carbon dioxide
The company conducts research and development centered on genome editing aimed at accelerating the growth rate of plants and improving carbon dioxide absorption.
・Carbon credit buying and selling business
・ESG consulting business



Key Points of Decarbonization and Sustainability

Our company is engaged in carbon credit generation project generation and consulting business. In particular, we are focusing on research and development of plants that absorb a large amount of carbon dioxide, using genome editing technology to accelerate the growth rate of plants and improve their ability to absorb CO2. We also support sustainable management by promoting market transactions through the carbon credit buying and selling business, and by developing ESG consulting services for companies. Through these efforts, we aim to achieve both environmental protection and economic growth.

Achievements/Case studies

Carbon credit creation project

Carbon credit generation projects are already underway in Japan, the Philippines, Vietnam, Bangladesh, Australia, and Costa Rica using methods such as rice paddies (AWD), farmland storage, forest and mangrove plantations, biochar, and cow burp control.

green carbon

Company Information

Company Name:
GREEN CARBON Co., Ltd.

Address:
107-0052
IsaI AKASAKA, 5-2-33
Akasaka, Minato-ku, Tokyo

Contact Person:
Seno
Email:
t.senoo@green-carbon.inc

Company website:
https://green-carbon.co.jp/

CCS

Southern Offshore Peninsular Malaysia CCS

Mitsui & Co., Ltd.

Overview of Products and Services

The Southern Offshore Peninsular Malaysia CCS project involves capturing CO2 from diverse industrial emission sources across Western Japan, liquefying it, transporting it via liquefied CO2 carriers, and storing it in depleted gas field offshore Peninsular Malaysia.

Mitsui & Co., Ltd. ("Mitsui"), PETRONAS CCS Solutions Sdn.Bhd., a subsidiary of Malaysia's national oil company PETRONAS, and TotalEnergies Carbon Neutrality Ventures, a subsidiary of the French integrated energy company TotalEnergies, commenced joint development of the CO2 storage site.

Mitsui, together with The Kansai Electric Power Co., Inc., Kyushu Electric Power Co., Inc., Cosmo Oil Co., Ltd., The Chugoku Electric Power Co., Inc., Electric Power Development Co., Ltd., Resonac Corporation, and Mitsubishi UBE Cement Corporation, applied for and was selected under the Japan Organization for Metals and Energy Security's (JOGMEC) FY2024 bid for Advanced CCS Project. The consortium is now engaged in conducting the engineering design work for the CCS project in Southern Offshore Peninsular Malaysia.

Key Points of Decarbonization and Sustainability

Mitsui will actively use its knowledge of energy value chain development, including the development of energy resources, and its extensive business networks, to drive progress on this development project with the aim of achieving an early startup of the CCS business. Mitsui will continue to contribute to the creation of an eco-friendly society by providing CO2 reduction solutions through our global CCS business.

Achievements/Case studies

- Japan: Participation in large-scale Tomakomai CCS demonstration through Mitsui Oil Exploration.
- UK: Development of the Acorn CCS project via Storegga.
- Australia: CO2 injection tests and feasibility studies for commercializing the Waitsia Blue Ammonia Project; development of the Cygnus CCS Hub Project.
- Australia: Development of the Angel CCS Project.
- Indonesia: Development of Tangguh LNG CCS (EGR) project.
- USA: Development of the Hackberry CCS Project.
- USA: Development of the Corpus Christi Project.
- Malaysia: Feasibility study (FS) on CCS value chain development, focusing on storage site surveys with PETRONAS.
- Indonesia: FS on CCS value chain development, focusing on storage site surveys with Pertamina
- FS with Shell on the establishment of a CCS value chain centered on a survey of suitable storage sites in Asia and the Pacific, including Japan

MITSUI&CO.

Company Information

Company Name :
Mitsui & Co., Ltd.

Industry :
Wholesale Business

Address :
1-2-1 Otemachi, Chiyoda-ku, Tokyo 100-8631, Japan

Company Website :
https://www.mitsui.com

CCS

Initiatives for CCUS/CCS Value Chain by MHI

Mitsubishi Heavy Industries, Ltd.

Overview of Products and Services

Mitsubishi Heavy Industries (MHI) Group has set its sights on the optimisation of the entire CCUS value chain, from CO_2 capture to transportation, conversion, and storage, and provides an effective solution for the effective and stable reduction of CO_2.

In addition, in order to build a CCUS value chain, we are expanding our lineup of products related to CCUS, including cutting-edge CO_2 capture technology, compact CO_2 capture systems, LCO_2 carriers, and compressors, as well as developing CO2NNEX™, a digital platform for visualizing the CCUS value chain, to make use of CO_2 as a valuable resource.

Regarding Decarbonisation and Sustainability

One of the key technologies that make up the CCUS value chain is CO_2 capture technology. MHI, in collaboration with The Kansai Electric Power Co., Inc., has continued to conduct R & D on CO_2 capture technology from flue gas using a chemical absorption method, for more than 30 years. The KM CDR Process™, which is the result of these efforts, is a product that commands the world's top market share for commercial plants, with its high reliability (CO_2 capture rate of more than 95% from flue gas, purity of more than 99.9% for captured CO_2) and maintainability. Also, we are developing capture technology for CO_2 from the atmosphere (DAC), which is an essential aspect of achieving carbon neutrality.

Delivery Record, Case Studies

- As of September 2024, MHI has delivered a total of 18 commercial CO_2 capture plants worldwide.
- MHI is participating in the Tohoku Region West Coast CCS initiative, one of the advanced CCS projects promoted by JOGMEC*. For this initiative, 7 companies are carrying out a joint study regarding separation and capture of CO_2 at steel factories etc, as well as ship transportation (to candidate storage locations) and storage of CO_2.

World's Largest CO2 capture plant (America, Petra Nova)

*JOGMEC: Japan Organization for Metals and Energy Security

Company Information

Company Name:
Mitsubishi Heavy Industries Ltd.

Industry:
Manufacturing
Address:
Unit 49-B, Level 49, Vista Tower, The Intermark, 348 Jalan Tun Razak, 50400 Kuala Lumpur, Malaysia

Contact Person:
Daisuke Wakasugi
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daisuke.wakasugi.md@mhi.com

Company Website:
https://www.mhi.com/

7. Others

- MUFG Bank (Malaysia) Berhad
- Sagri Co., Ltd.
- J&T Naza Alam Murni Sdn.Bhd.
- JFE Steel Corporation
- Sumitomo Mitsui Banking Corporation Malaysia Berhad
- Daikin Malaysia Sdn.Bhd.
- Dynapac GF (Malaysia) Sdn.Bhd.
- Mizuho Bank (Malaysia) Berhad
- Mitsubishi Research Institute

Others

MUFG - Net Zero World “MUFG N0W”

MUFG Bank (Malaysia) Berhad

Malaysia, 05 March 2024 – MUFG Bank (Malaysia) Berhad gathered close to 100 business leaders, policymakers and industry experts and partners to its inaugural MUFG N0W conference in Kuala Lumpur, Malaysia

“MUFG N0W – journeying to a Net Zero World” (MUFG N0W) is MUFG’s flagship climate thought leadership to lead, drive and facilitate conversations around environment, social, and governance (ESG) in Asia Pacific. This event brings together private and public stakeholders to strengthen collective responses to the challenges and opportunities of sustainable development in the region. MUFG N0W underscores a growing awareness and commitment among companies in embracing sustainability and incorporating ESG best practices and solutions in their businesses.

The inaugural event in Malaysia, held on 5 March 2024, received high praise from participants. In response to the positive feedback and to meet the expectations of our stakeholders, MUFG is excited for its return, with the next event set for March 2025.

Highlights of MUFG N0W 2024

MUFG N0W emphasized the urgent need for collaboration between the private and public sectors to mobilize transition financing for decarbonization, harness technological innovation, and, more importantly, leverage on Malaysia’s strengths, from its abundant natural resources to its global stature as an Islamic finance hub.

Prominent speakers from Bank Negara Malaysia, leading energy and industrial corporations, including MUFG experts, joined in lively discussions followed by networking, facilitating the exchange of valuable insights and fostering potential collaborations.

Keynote address by Madelena Mohamed Director, Sustainability Unit at Bank Negara Malaysia

Ryoichi Abe, Chief Representative in Singapore at the Japan Bank for International Cooperation

Dr Noor Miza Razali Head, PMO Energy Transition at TNB (Tenaga Nasional Berhad)

Chen Ping Shang Head of Strategy, Planning and Finance for Hydrogen at Gentari

MUFG N0W 2.0, March 2025!

The next MUFG N0W will cover broader topics, including the potential of green energy in East Malaysia and the possibilities for further business collaboration with local companies. The event is planned for March 2025. If you wish to participate or have any inquiries, please contact our representative or visit the URL on the right.

MUFG

Company Infomation

Company Name :
MUFG Bank (Malaysia) Berhad

Industry :
Finance

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(+60) 03-2034 6010
Email :
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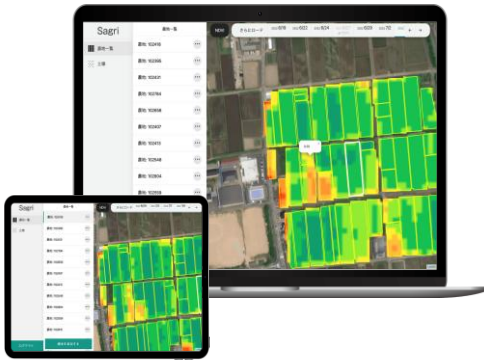
michelle.lim@my.mufg.jp

Company Website :
https://www.bk.mufg.jp/malaysia/index.html

Others

Decarbonization of Farmland and Generation of Carbon Credits Utilizing Satellites and AI

Sagri Co., Ltd.



Overview of Products and Services

We are providing a decarbonization service for farmland, using satellite and AI technology, to food and agricultural companies, enabling the creation of carbon credits from farmland in ASEAN countries. Our patented AI polygon technology, developed in Japan, accurately detects small farmland parcels in Southeast Asia. This technology allows for a quick and precise assessment of farmland sizes, which serves as a foundation for projects generating carbon credits. Our soil prediction model, based on satellite data, enables affordable soil diagnostics and can help address the common issue of over-fertilization on ASEAN farmlands. By reducing nitrous oxide (N_2O) emissions from chemical fertilizers, we further contribute to the creation of carbon credits. Additionally, in collaboration with JAXA, we use satellite-based water detection technology for objective monitoring of alternate wetting and drying (AWD), a methane reduction technique in rice farming.

Key Points of Decarbonization and Sustainability

- We can advance the decarbonization of the agricultural sector, one of the main sources of emissions in Malaysia.
- By leveraging satellites and AI, we make it possible to conduct broad-scale, low-cost, and accurate monitoring—key for effective decarbonization.
- Our services also support Scope 3 emissions measurement for food companies sourcing raw materials from farmland.
- By creating carbon credits and redistributing sales profits to farmers, we can help alleviate poverty among farming communities.
- Selling these carbon credits to large Japanese corporations also contributes to the achievement of carbon neutrality for Japanese companies.

Achievements/Case studies

- We currently have no track record in Malaysia but are operating in ten countries worldwide, including ASEAN nations. ***Palm trees are not included in the analysis scope of our satellite services.***

Sagri

Company Information

Company Name :
Sagri Co., Ltd.
(Singapore Subsidiary)

Industry:
Agritech
Address:
51 GOLDHILL PLAZA, #07-10/11, Singapore 308900

Contact Person:
Kazuki Sakamoto
Phone Number:
+65 8657 8375
Email:
Sakamoto-kazuki@sagri.co.jp

Company Website:
https://sagri.tokyo/

Others

Decarbonization through Proper Management of Designated Industrial Waste

J&T Naza Alam Murni Sdn.Bhd.

Overview of Products and Services

Equipped with sanitary landfill, cement solidification, incineration, and waste heat recovery facilities.
Licensed by the Malaysian Department of Environment to handle all 77 waste codes (SW Codes), except explosive waste, for both solid and liquid waste.

Key Points of Decarbonization and Sustainability

Contributing to environmental impact reduction through the detoxification and stabilization of hazardous industrial waste. This plant's stable operations promote proper waste management to address the growing industrial waste pollution issue in Malaysia.
The industrial waste incinerator imported from Japan helps reduce landfill disposal volumes, while the waste heat recovery system lowers CO2 emissions.

Achievements/Case studies

This joint venture was made possible through capital participation from J&T Environmental Co., Ltd., a member of the JFE Engineering Group, which operates industrial waste recycling businesses in Japan.
A factory manager for the incineration plant was dispatched from Japan to ensure compliance and provide proper waste management services. The facility accepts and processes waste from numerous Japanese and non-Japanese companies.

NAZA

Company Information

Company Name :
J&T Berjaya Alam Murni Sdn.Bhd.

Industry :
SW Treatment
Address :
Bukit Tagar Enviro Park, Selangor

Contact Person :
Sathish Kurup
(Berjaya Eco Services Sdn.Bhd.)
Phone :
03-2302-6664
019-759-4877
Email :
sathish@berjayaeco.com

Company Website :
https://jt-bam.com.my/

Others

JFE Steel Corporation supplies green-steel named ”JGreeX™”

JFE Steel Corporation

(JFE + Green + GX)

Overview of Products and Services

○ In the first half of FY2023, JFE Steel began supplying JGreeX™, a green steel product that significantly reduces GHG emissions in the manufacturing process compared to conventional products.
○ JGreeX™ applies the steel mass balance approach, calculating emission factors and reduction amounts based on ISO standards. It ensures transparency and additionality through third-party certification.

Supply Availability	**Approximately 500,000 tons(FY2024)**
Certification Body	**ClassNK (Nippon Kaiji Kyokai)**

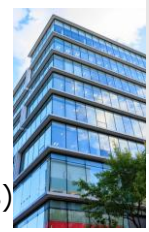
JFE Steel Website: "About Green Steel 'JGreeX™'
JFE Steel Corporation | Products| About JFE's green-steel "JGreeX™"
The Japan Iron and Steel Federation Website: "Overview of the Steel Mass Balance Approach"
https://www.jisf.or.jp/en/activity/climate/documents/ENMassB-GS_eng_2s.pdf
Applicable ISO Standards ISO 20915 ISO 14064 ISO 22095

Key Points of Decarbonization and Sustainability

Overview of the " JGreeX™ "

STEP.1 ----------
Calculate the emissions intensity of any steel product to apply this approach
STEP.2 ----------
Identify emissions reduction projects and determine their emissions reduction levels
STEP.3 ----------
Issue a reduction certificate based on the determined reduction level, grant the certificate, and supply steel materials.

Achievements/Case studies



Ships, Bridges,
Buildings (Office Buildings, Logistics Warehouses)
Industrial machinery, Transformers, and Cans (Badges)

Company Information

Company Name :
JFE Steel Corporation

Industry :
Steel making
Address :
16 Raffles Quay, No.15-03, Hong Leong Building, 048581, Singapore

Contact Person :
Kobayashi Atsushi
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65-6220-1174
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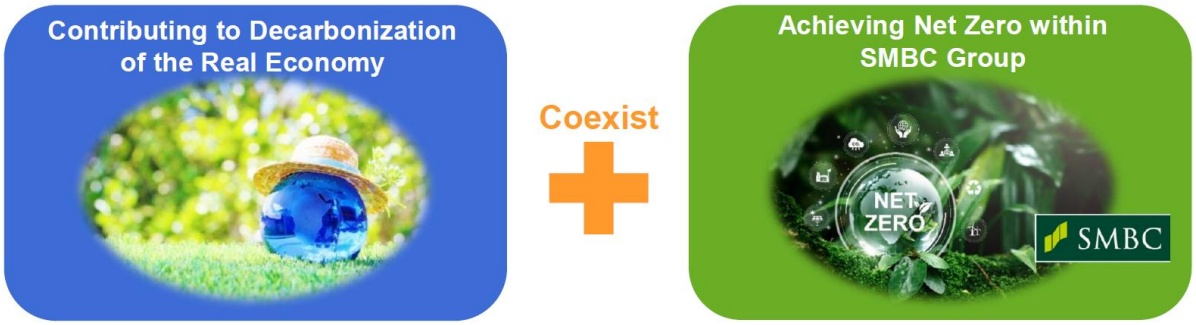
ats-kobayashi@sg.jfe-steel.com

Company Website :
https://www.jfesteel.co.jp/en/index.html

Others

Sustainable Finance Initiatives for Fulfilled Growth

Sumitomo Mitsui Banking Corporation Malaysia Berhad



Overview of Products and Services

- **Project Finance**

  Financing mainly for renewable energy projects.

- **Real Estate Finance**

  Financing related to properties that have obtained green building certification

- **Green Loan**

  Lending with limited use of proceeds: only towards green projects in line with LMA/APLMA Green Loan Principles.

- **Social Loan**

  Lending with limited use of proceeds: only towards social projects in line with LMA/APLMA Social Loan Principles.

- **Sustainability Linked Loan (SLL)**

  Lending with unlimited use of proceeds: linked to ESG-related numerical targets (Sustainability Performance Target "SPT") consistent with the borrower's business strategy, and in line with LMA/APLMA Sustainability Linked Loan Principles.

- **ESG Related Trade Financing**

  Green, Social, and Sustainability-Linked Trade Financing.

- **Green Deposit**

  Deposits which provide customers with ESG/SDG investment opportunities. Funds from the Green Deposits are used to finance environmentally beneficial projects such as renewable energy.

Key Points for Decarbonization and Sustainability

To support the sustainable growth of our customers and contribute to the decarbonization of the real economy by providing a wide range of sustainable finance products. For details, please contact us.

Achievements / Case Studies

- **Islamic Green Financing**

A company entered into Islamic Green Financing. The funds granted under Islamic Green Financing will be used for installation of solar power generation facilities at the plant. It is a financing in MYR for a tenor of 5 years. Contributing to the company's initiative towards sustainability, as well as building presence and reputation in local markets.

- **SMBC Group's sustainable finance in the global market**

Global			
1st	Green loan*1	2nd	Sustainable loan*2, Social loan*1

*1: Dealogic (amounts extended in FY2023)
*2: Environment Finance (number of credits executed in FY2023)

SMBC SUMITOMO MITSUI BANKING CORPORATION MALAYSIA BERHAD

Company Information

Company name :
Sumitomo Mitsui Banking Corporation Malaysia Berhad

Industry :
Finance

Address :
Suite 22-03, Level 22, The Intermark, Integra Tower, 348, Jln Tun Razak, Kampung Datuk Keramat, 50400 Kuala Lumpur, Wilayah Persekutuan

Person in charge :
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generalenquiries@my.smbc.co.jp

Company website :
https://www.smbc.co.jp/global/malaysia/

Others

Daikin Malaysia's Decarbonization Initiatives

Daikin Malaysia Sdn.Bhd.

Overview of Products and Services

Daikin Malaysia Sdn.Bhd. is the only air conditioning manufacturer in Malaysia producing a wide range of HVAC equipment for the Malaysian and global export markets from basic residential air-conditioners to high technology light commercial and commercial heat pump, air-cooled and water-cooled chillers.

Key Points for Decarbonisation and Sustainability

1. Eliminate LPG Usage- Change of LPG gas to Natural Gas for painting, brazing and drying oven process
2. Eliminate Diesel Usage - Change of Diesel usage for boiler, engine and forklift
3. Installation of Solar-PV to generate renewable energy
4. Refrigerant Recovery from process to reduce emission to air
5. Reclamation of recovered refrigerant from manufacturing process
6. Promote on low GWP products
7. Rainwater Harvesting System
8. Implement 3R activity to reduce waste go to landfill
9. Control use of VOC chemical in the manufacturing
10. Energy & Refrigerant Management to reduce CO2 emission to achieve Carbon Neutral Factory by 2030

Achievements and examples

1. Stop use of LPG gas and Diesel in manufacturing.
2. 16% of electricity usage from Solar PV which reduces 3,310 tCO2 yearly.
3. Avoidance of refrigerant emission by optimize the refrigerant recovery from manufacturing process.
4. Avoidance of incineration of refrigerant with 85% reclamation rate.
5. Produce 90% of lower GWP product that use refrigerant (R32).
6. 17% of water was from harvested rainwater (25,508m^3 in FY23) that able to reduce city water usage.
7. 86% of waste was recycled that reduce quantity go to landfill.
8. Prohibit use of hazardous chemical to protect worker health
9. Achieve 33% reduction of CO2 emission from base year 2019 and plan to achieve 50% reduction in FY25

Company Information

Company name :
Daikin Malaysia Sdn.Bhd.

Industry :
Manufacturing of HVAC
Address :
Sungai Buloh, Selangor

Contact Person :
Calvin Tan
Phone :
03-6145 8600
Email :
calvintan.chunseong@daikin.com.my

Company website :
www.daikinmalaysia.com

Others

Reducing Greenhouse Gases in Packaging Materials (Others)

Dynapac GF (Malaysia) Sdn.Bhd.

Overview of Products and Services

1. Manufacturing and sales of cardboard made from low greenhouse gas emission paper.
2. Manufacturing and sales of pulp mold, a low greenhouse gas emission material.

Key Points of Decarbonization and Sustainability

Leveraging expertise in raw materials, processes, and design development capabilities, we contribute to reducing greenhouse gas emissions in our customers' Scope 3 through the following four pillars:

1. Reducing the amount of paperboard used in cardboard packaging.
2. Transitioning to low-CO2 emission paperboard.
3. Replacing offset printing with water-based inkjet printing.
4. Substituting chemical cushioning materials with paper-based materials.

Achievements/Case studies

<Examples of CO2 Emissions and Component Cost Reduction>

・**Electrical Product Manufacturer A**
Use of low CO2 emission paperboard + review of cardboard material
-CO2 reduction: 529g/box (-33%)
-Component cost reduction: 2.5% per box

・**Food Manufacturer B**
Use of low CO2 emission paperboard + review of packaging design and cardboard material
-CO2 reduction: 3,066g/packaging set (-42%)
-Component cost reduction: 26.0% per packaging set

・**Electrical Product Manufacturer C**
Styrofoam cushioning material → Paper cushioning material (pulp mold)
-CO2 reduction: 523g/cushioning set (-37%)
-Component cost reduction: 3.9% per cushioning set

Dynapac

Company Information

Company Name :
Dynapac GF (Malaysia) Sdn.Bhd.

Industry :
Paper & Pulp
Address :
No.10, Jalan TP4, Taman Perindustrian Bukit Rambai
MuKim Tanjung Minyak, 75250
Melaka

Contact Person :
One Kazuya
Phone :
+60-12-611-6410
Email :
ohno@dynapac-gr.com.my

Company Website :
https://dynapac-gr.com.my/

Others

Mizuho Bank Malaysia's Commitment to Decarbonization

Mizuho Bank (Malaysia) Berhad

Overview of Products and Services

Sustainability-Linked Loan (SLL)

A product aimed at promoting and supporting sustainable economic activities and growth by setting Sustainability Performance Targets (SPTs) based on Key Performance Indicators (KPIs) linked to the borrower's ESG strategy, with borrowing terms such as interest rates tied to the achievement of these targets.

Case Study 1

Aeon Credit Service Malaysia (2023)

KPI Efforts include CO2 emission reduction and expanding financing for electric motorcycle buyers.

Case Study 2

Petroleum Storage Terminal Construction Project (2023)

KPI Reduction of GHG emissions, workplace accidents, and hazardous material releases.

ESG Rating Advisory

- ESG ratings provide a systematic approach to measure a corporation's ESG performance, primarily used by investors for evaluation and engagement.
- Mizuho supports corporate clients in understanding and improving their performance across various ESG rating models.

Understand current ESG efforts and achievements → Analyze and identify gaps between ESG efforts and rating agency requirements. → Develop an action plan for improvement.

- This service is available for corporations with established sustainability strategies and measured key non-financial data, aiming to obtain or optimize ESG ratings (offered in English only).

Joint Study Group with State Government

- In 2023, Mizuho established a joint research group between Japan and Malaysia to strengthen decarbonization efforts.
  - — Malaysia excels in energy and natural resource-related industries.
- Share insights with state governments on current trends and challenges in decarbonization, introduce interested Japanese companies

MIZUHO

Company Information

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Mizuho Bank (Malaysia) Berhad

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03-2058-6881
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yuichi.kato@mizuho-cb.com

Company Website :
https://www.mizuhogroup.com/asia-pacific/malaysia

Others

Business Development and Implementation Support in the GX (Green Transformation) and Decarbonization Sectors

Mitsubishi Research Institute, Inc.

Mitsubishi Research Institute, Inc. is an independent think tank and consulting company. Leveraging its expertise and technology across various fields, it supports policy development and implementation in Asia, the Middle East, and other regions to address energy and sustainability challenges and promote a sustainable international society.

Overview of Products and Services

We provide support in scheme design and business development to Japanese companies conducting business in Malaysia, Malaysian companies, and the Malaysian government.

◎Research, feasibility assessment, and demonstration support for decarbonization technologies and services (e.g., CCUS)
◎Consulting on the creation, procurement, and utilization of carbon credits, including methodology development
◎Implementation support, feasibility assessment, and development of implementation structure for renewable energy and biofuel projects
◎Research and demonstration support for hydrogen demand expansion and market formation
◎Optimal operation support for distributed energy resources
◎Support for power system reform and digital transformation (DX) in transmission and distribution sectors

Key Points of Decarbonization and Sustainability

✓ We have a team of approximately 160 consultants and researchers covering critical issues in the fields of energy and sustainability, including green transformation and decarbonization, renewable energy, power systems, stable energy supply, and resource circulation. Our team has extensive experience and an extensive relevant network.
✓ We provide solution services to private companies and government agencies, offering scheme design, policy recommendations, technology assessments, support for the demonstration and commercialization of advanced projects, and research and consulting to support business and industrial development domestically and internationally, as well as through our own business operations and subsidiaries.

Achievements/ Case studies

With overseas offices in Hanoi and Dubai, we have abundant experience in ASEAN including Malaysia where we have a proven track record in ACN, TLP and CEFIA.*

[Implementation Details]
・ Research, recommendations, and knowledge sharing on clean energy technologies
・ Operational support for collaborative activities with Malaysia's SEDA* as part of CEFIA flagship activities, including planning and organizing workshops

※*Asia CCUS Network (ACN), Technology List and Perspectives for Transition Finance in Asia (TLP), Cleaner Energy Future Initiatives for ASEAN (CEFIA), Sustainable Energy Development Authority (SEDA)*

Mitsubishi Research Institute

Company Information

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Mitsubishi Research Institute

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Company Website :
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https://forms.office.com/r/LBCxsCqJrB

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