# MUFG Climate Report 2024

Mitsubishi UFJ Financial Group

# Contents

# CEO Message

**Hironori Kamezawa**
President & Group CEO

With the global average temperature reaching an all-time high in 2023, the pursuit of a 1.5°C target in response to climate change is reaching a critical juncture. The world faces a complex calculus: Rising geopolitical risks and rapid inflation make a stable energy supply increasingly important to economic growth, and transitioning to a sustainable society must be made in a just and equitable manner, preserving and restoring natural capital and respecting human rights.

These complexities demand that individuals, businesses, communities, and nations work in unison toward common goals. But pathways toward decarbonization vary tremendously due to regional characteristics, including geographic conditions and industrial structures. A cooperative spirit that acknowledges these regional differences is essential.

What then are our responsibilities as a financial institution? Not only must we meet our own emission-reduction targets; we must deepen engagement with our clients and deploy financial solutions supporting their transitions as well. Financial institutions that operate on a global scale are also expected to lead discussions for developing international frameworks while we communicate regional challenges and initiatives to a broad range of stakeholders worldwide, including government authorities and institutional investors.

Mindful of these considerations, in 2021 MUFG became the first Japanese bank to declare carbon-neutrality, and we are engaged in initiatives to achieve neutrality by 2050.

First, regarding emissions from our own operations, we have switched to 100% renewable power sources for in-house contracted electric power in Japan in FY2022 and are making steady progress toward our 2030 target to achieve net zero emissions.

Regarding emissions from our financed portfolio, we have set interim 2030 net-zero targets for greenhouse gas (GHG) emissions in five sectors: Power, Oil & Gas, Real Estate, Steel, and Shipping. These targets are based on guidelines set by the Net-Zero Banking Alliance (NZBA), which MUFG joined in 2021, and we are now disclosing our progress in each sector.

Regarding transition support for clients, we have steadily built a record of sustainable finance that enables investments in renewable energy, infrastructure advancements, new manufacturing technologies, and supply-chain enhancements. We have achieved this by leveraging our frontrunner strength in project finance for the renewable energy sector. We have also partnered with clients to release the MUFG Transition Whitepaper and MUFG Asia Transition White Paper, to globally communicate the direction and necessary initiatives for decarbonization in Japan and in Asia, respectively.

Beyond this, we are active in leading the development of international frameworks, for example by serving as chair of a key NZBA working group, helping develop guidelines for transition finance and quantifying the impact of

# CEO Message

transition efforts. I personally have engaged with many stakeholders who are keen to remind me of their high expectations for MUFG in this area.

This MUFG Climate Report 2024 presents our efforts and progress made since announcing the MUFG Carbon Neutrality Declaration, as well as our process for setting new interim targets. We hope it helps a broad range of stakeholders understand our transition plan and underlying approach for climate change related initiatives.

Key to our transition plan is providing managed transition support, and monitoring efforts to meet our 2030 interim targets. To implement the plan, we have strengthened processes for evaluating clients' transition status, and for reviewing each transactions individually. We have also introduced a framework for monitoring progress toward our emissions targets and set new interim targets for the Automotive, Aviation, and Coal sectors, in addition to the five sectors mentioned above. We will keep optimizing how we monitor the progress of our overall transition plan in a manner demanded by this dynamic process.

In our new medium-term business plan launched in April 2024, we set forth a policy of collaborating with stakeholders to create a world in which social value and economic value are clearly linked. This is in line with our stated purpose of being "Committed to empowering a brighter future." In this new plan, one of MUFG's top priorities is taking action to combat climate change. We will promote Green Transformation (GX) investment in Japan, overseas clean energy development and imports, and overseas GX-based business support for value chains as a growth strategy. Foreseeing rising demand, we have raised our social and sustainable finance targets from 35 trillion yen to 100 trillion yen by 2030. We will continue to support our clients' transition efforts and anticipate their transition needs through our function as a financial intermediary.

Paths toward decarbonization will not be easy. But we will not waver in our determination to achieve carbon neutrality by 2050. We pledge to work toward sustainability – in terms of environment and society – by marshalling our global strengths in a united Group effort, hand-in-hand with our diverse stakeholders.

We greatly appreciate your interest.

**Hironori Kamezawa**
President & Group CEO

# Executive summary

- In May 2021, MUFG announced the MUFG Carbon Neutrality Declaration, aiming to become carbon neutral by 2050. To reach carbon neutrality, we have been pursuing various initiatives based on three unwavering commitments: helping achieve the 1.5°C target by achieving carbon neutrality by 2050, supporting a smooth transition to a decarbonized society, and creating a sustainable society by fostering a virtuous cycle between the environment and the economy.
- In addition, following the November 2022 publication of Glasgow Financial Alliance for Net Zero (GFANZ)'s transition plan guidance, we have been preparing to develop a transition plan in line with this framework.
- This MUFG Climate Report 2024 is designed to showcase the progress and achievements of MUFG's wide-ranging efforts toward decarbonization, including the content of our transition plan and our decarbonization approach, to our investors and various stakeholders.
- The following describes our key stance underlying MUFG's actions to address climate change.

→ Carbon neutrality cannot be achieved by financial institutions alone; it is enabled through the carbon neutrality of clients, which means decarbonizing the real economy. To this end, it is crucial to realize steady progress in decarbonizing carbon intensive industries and regions through client engagement and support, including transition finance.

→ Decarbonization pathways depend on regional characteristics, such as geographic conditions and industrial structure. Asia, in particular, is in the midst of economic development, and its increasing energy demand is expected to continue. It is therefore important to strike a balance between decarbonization and economic development.

→ To both support clients and achieve MUFG's interim target for 2030, proper management for transition support and target achievement are necessary, and it is important to establish an effective framework to support these activities.

- MUFG's four main strategies for achieving carbon neutrality, as presented in this report, are (1) reducing emissions from own operations, (2) engagement and support, (3) reducing emissions from our financed portfolio, and (4) risk management and governance. This constitutes the main content of this report, with each chapter providing details on MUFG's approach to each strategy. The key points for each strategy are listed on the following page.

# Executive summary

## Key points in each strategy

### 1 Reducing emissions from own operations

- Roadmap to net zero emissions by 2030 and measures to achieve the interim target for FY2026
- Initiatives in the four areas of mobility, office buildings, energy, and resources to reduce environmental impact
- Achieving business co-creation through partnership with clients, including through the use of MUFG branches and facilities

### 2 Engagement and support

- Promoting engagement in line with our approach to support decarbonization
- Establishing Green Transformation (GX) value chain support as a main strategy in the new medium-term business plan and raising the sustainable finance target to 100 trillion yen
- Building frameworks for transition finance, promoting transition support through the Transition Whitepaper and Asia Transition White Paper, and making policy suggestions

### 3 Reducing emissions from our financed portfolio

- Setting 2030 interim targets for the automotive, aviation, and coal sectors to meet commitments under Net-Zero Banking Alliance (NZBA) guidelines
- Developing an operating framework for effective management (transition assessment framework, transaction screening process, escalation process, financed emissions monitoring, transition plan monitoring, etc.)
- FY2022 performance for sectors with interim targets and approach to achieve 2030 targets

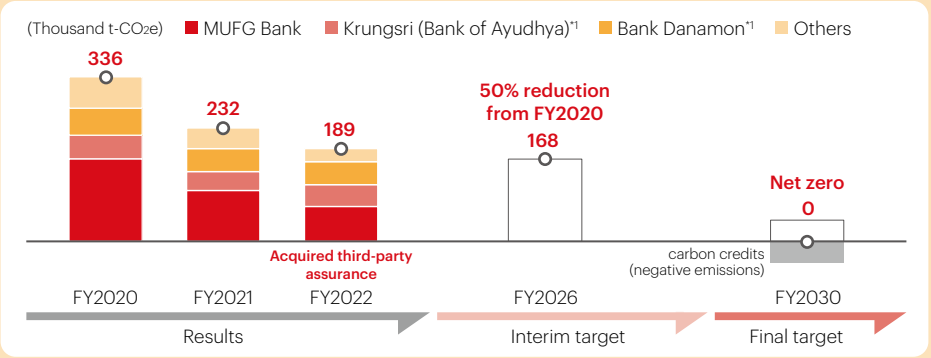
### 4 Risk management and governance

- Establishing a system to properly manage climate change-related risks based on the Risk Appetite Framework and the Top Risk Management
- Establishing a governance structure that enables appropriate decision-making through various meetings aimed at achieving carbon neutrality under the supervision of the Board of Directors.
- Conducting capability building for sales teams to strengthen client engagement

# Executive summary: Highlights

## Reducing emissions from own operations

### Reduction target and progress (Scope 1 and 2)




## Engagement and support

### Sustainable finance

Cumulative financing from FY2019 to 1H FY2023 **27.7 trillion yen**

Raised FY2030 target from 35 trillion yen to **100 trillion yen**

### Renewable energy project finance

**Cumulative in the last 10 years** **No. 1 worldwide*2**

### MUFG Transition Whitepaper

Transition Whitepaper 2023 (September 2023)

Asia Transition White Paper (November 2023)

### Contribution to international initiatives

- As chair of an NZBA working group, contributed to creation of the following reports for promoting transition finance
  - NZBA Transition Finance Guide
  - Developing Metrics for Transition Finance

## Reducing emissions from our financed portfolio

### Progress of interim targets by sector

| | Reference value | FY2022 results | FY2030 targets |
|---|---|---|---|
| Power (g $CO_2e$/kWh) | 328 | 313 | **156–192** |
| Oil & gas (Mt $CO_2e$) | 84 | 81 (-5%) | **-15–-28%** |
| Commercial real estate (kg $CO_2e/m^2$) | 65 | 56 | **44–47** |
| Residential real estate(kg $CO_2e/m^2$) | 27 | 25 | **23** |
| Steel (Mt $CO_2e$) | 22 | 16 (-25%) | **-22%** |
| Shipping (PCA score)*3 | Former standard 0.6% | New standard Minimum 26.2% Striving 30.9% | **PCA≤0%** |
| Automotive (g $CO_2$/vkm) New target | 169 | - | **-23–-46%** |
| Aviation (g $CO_2$/RPK) New target | 130 | - | **71** |
| Coal (Billion yen) New target | Approx. 3 (Approx. 12 for non-OECD countries) | - | **Zero** (FY2040 for non-OECD countries) |

## Risk management and governance

### Building risk management and governance systems

- Establishing the Risk Appetite Framework and managing top risks
- Establishing a system for appropriate decision-making under the supervision of the Board of Directors and reflection in the compensation system

### Capability building

Number of training program participants for strengthening engagement with major corporate clients **Approx. 2,000 participants** (FY2023, cumulative)

*1 Krungsri (Bank of Ayudhya) is an MUFG consolidated subsidiary in Thailand, and Bank Danamon is an MUFG consolidated subsidiary in Indonesia.
*2 Cumulative financing results for 10 years from 2014 to 2023. Source: BloombergNEF, Asset Finance Database: Lead Arrangers League Table
*3 Portfolio Climate Alignment: An index of alignment that indicates the difference from the required level for an entire financed portfolio related to vessels. Calculated by weighted average of the Vessel Climate Alignment (VCA) of each vessel financed as a percentage of the loan portfolio.

# Our response to climate change

# Overview of climate change measures: Positioning in the new medium-term business plan

MUFG has launched a medium-term business plan covering the next three years from FY2024. We have integrated the contribution to address social issues into our management strategies and positioned this as one of the three pillars of the medium-term business plan, and will further strengthen our initiatives in this area.
MUFG has set priority sustainability issues to achieve a sustainable environment and society. Among those issues, one of the most important issues is achieving a carbon neutral society.

## Fundamental direction of the new MTBP

**MUFG Way**

| | |
|---|---|
| Purpose | "Committed to empowering a brighter future." |
| Values | Integrity and Responsibility, Professionalism and Teamwork, Challenge and Agility |
| Vision | Be the world's most trusted financial group |

**New MTBP**

**Fundamental Direction**

—Three years to pursue and produce growth—
To serve our commitment to empowering a brighter future, we aim to fulfill our unique potential to "bridge" the divided world, producing economic and social value.

**Three pillars of the MTBP**

- Expand & Refine Growth Strategies
- Drive Social & Environmental Progress
- Accelerate Transformation & Innovation

**Financial Target**

FY2026 ROE: Approx. 9%

## Priority Issues

MUFG has set priority issues under the sustainability management to achieve a sustainable environment and society.

| | |
|---|---|
| Sustainable Society | Achievement of carbon neutral society |
| | Natural capital and biodiversity restoration |
| | Promotion of circular economy |
| Vibrant Society | Industry development and innovation support |
| | Response to aging population & low birthrate |
| | Increasing access to financial services |
| | Management focusing on human capital |
| Resilient Society | Respect for human rights |
| | Ensuring secure and safe services |
| | Demonstration of robust corporate governance |

# Overview of climate change measures: Timeline

Since announcing the MUFG Carbon Neutrality Declaration in May 2021, we have been working to decarbonize the real economy. Specifically, in addition to creating frameworks for transition finance, contributing to policy engagement activities, and supporting client transitions, we have set interim targets by sector for our financed portfolio.


**2017**

- Support for the TCFD recommendations

**2018**

- Establishment of the Environmental Policy Statement
- Establishment of the Environmental and Social Policy Framework (updated annually thereafter)

**2019**

- Establishment of sustainable finance targets (20 trillion yen)
- Signing of the Principles for Responsible Banking
- Establishment of the MUFG AM Responsible Investment Policy

**2020**

- Creation of the Chief Sustainability Officer position
- Publication of the Sustainability Report

**2021**

- **Announcement of the Carbon Neutrality Declaration**

  **Net zero GHG emissions from our financed portfolio by 2050**

  **Net zero GHG emissions from our own operations by 2030**

- Joined the NZBA
- Joined the NZAM
- Revision of sustainable finance target (35 trillion yen)

**2022**

- Publication of the Progress Report 2022
- Establishment of the interim target for 2030 (power and oil & gas sectors)
- Publication of the Transition Whitepaper 2022
- Establishment of the NZAM 2030 interim target
- Establishment of the MUFG AM Sustainable Investing Policy

**2023**

- Publication of the Progress Report 2023
- Establishment of the interim target for reducing emissions from own operations
- Establishment of the interim target for 2030 (real estate, steel, and shipping sectors)
- Publication of the Transition Whitepaper 2023
- Publication of the Asia Transition White Paper

**2024**

- **Publication of the MUFG Climate Report 2024**
- **Establishment of the interim target for 2030 (automotive, aviation, and coal sectors)**
- **Revision of the sustainable finance target (100 trillion yen)**

# Overview of climate change measures: Three unwavering commitments

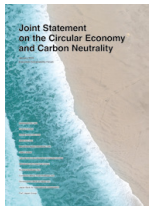
MUFG has been taking action based on three unwavering commitments: (1) to help achieve the 1.5°C target, (2) to support a smooth transition to a decarbonized society, and (3) to create a sustainable society by fostering a virtuous cycle between the environment and the economy. We also take into account the growing importance of natural capital, circular economy, human rights, just transition, and climate adaptation with our climate initiatives.

## MUFG's three unwavering climate change commitments

1. Helping achieve the 1.5°C target of the Paris Agreement by achieving carbon neutrality by 2050
2. Supporting a smooth transition to a decarbonized society through our financial services
3. Proactively contributing to creating a sustainable society by fostering a virtuous cycle between the environment and the economy

## Key points considered by MUFG along with climate change action


**TNFD Report**
Published April 2024




### Connection to natural capital and circular economy

**Joint Statement on the Circular Economy and Carbon Neutrality**[*1]
Joint announcement as a participant in the PwC Executive Sustainability Forum


### Consideration for human rights and just transition

**MUFG Human Rights Report**
Published June 2023


### Consideration for climate adaptation

**Climate Adaptation Target Setting Guidance**
Participation in the Principles for Responsible Banking (PRB) Climate Adaptation Target Setting Working Group and joint guideline announcement

*1 Announced the Joint Statement on the Circular Economy and Carbon Neutrality jointly with participating companies in PwC Japan Group's Executive Sustainability Forum

# Overview of climate change measures: Key features of our portfolio

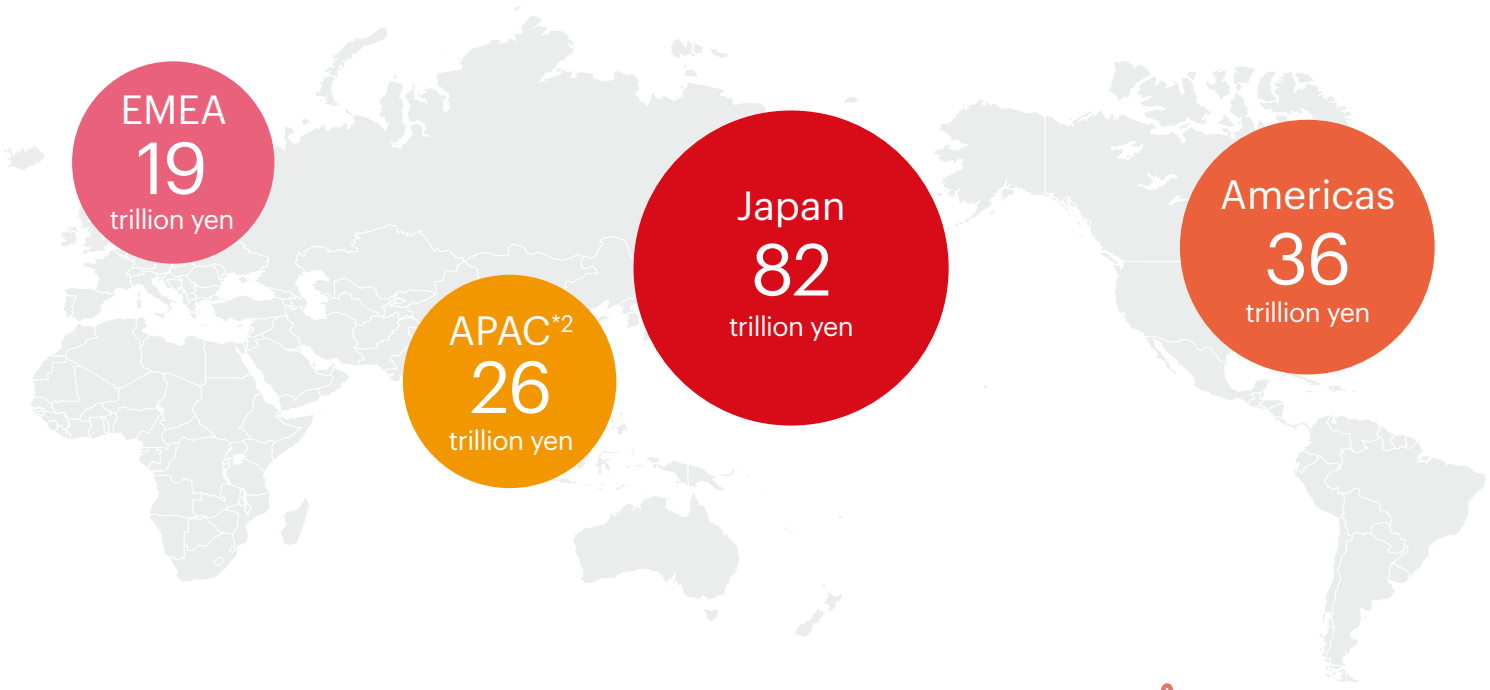
Though MUFG is a financial institution placing Asia including Japan as our home market, our portfolio is globally diversified, with a high credit share in Europe and the United States for the power and oil & gas sectors.
We are also ranked No. 1 worldwide in project finance for renewable energy in the past decade.

## A global financial institution with Asia as its home market

Share of Americas and EMEA in each sector portfolio*1 (clients with interim targets)

**Power sector**
55%

**Oil & gas sector**
65%




**No. 1 worldwide*3** in project finance for renewable energy (last 10 years, cumulative)

Note: Credit balances are based on the borrower's country location. This includes undrawn-committed amounts, market risk, project finance, and domestic mortgages. It excludes interbank transactions and credit to government agencies and central banks. Data is as of September 30, 2023. Currency is converted at 1 U.S. dollar = 149.58 yen.
*1 Measured based on outstanding loan balances and undrawn-committed amounts to clients for which interim targets have been set for 2030.
*2 APAC data includes outstanding loan balances to Krungsri (Bank of Ayudhya) and Bank Danamon.
*3 Cumulative financing for 10 years from 2014 to 2023. Source: BloombergNEF, Asset Finance: Lead Arrangers League Table

# Key strategies

MUFG's four main strategies to achieve carbon neutral are (1) reducing emissions from own operations, (2) engagement and support, (3) reducing emissions from our financed portfolio, and (4) risk management and governance. These strategies are central to MUFG's transition plan, through which we aim to achieve carbon neutrality by 2050.

## Main strategies for achieving carbon neutrality

1

### Reducing emissions from own operations

▶ Chapter 1

2

### Engagement and support

▶ Chapter 2

3

### Reducing emissions from our financed portfolio

▶ Chapter 3

4

### Risk management and governance

▶ Chapter 4

# Transition plan based on GFANZ guidance

MUFG has developed its own transition plan in accordance with the transition plan guidance framework by GFANZ. The content of this report is aligned with the transition plan guidance framework as shown in the following table.

| GFANZ guidance framework themes and recommended components*1 | | | MUFG's response |
|---|---|---|---|
| Foundations | Objectives and priorities | • Definition of targets and timeline to achieve net zero emissions by 2050 (or earlier) to achieve a 1.5°C pathway<br>• Financing strategies (including priorities) for measurable medium- and long-term goals and achieving net-zero emissions | **New MTBP** \| p.9 **CN declaration** \| p.10 **3 commitments** \| p.11 **New MTBP GX** \| p.26 **Sustainable finance target** \| p.27 **Interim target** \| p.46 |
| Implementation strategy | Products and services | • Existing and new products and services to support client transitions to achieve 1.5°C<br>• Support for net-zero transition of the real economy and advice on portfolio decarbonization | **Engagement approach** \| p.24 **Engagement structure** \| p.25 **New MTBP GX** \| p.26 **Sustainable finance target** \| p.27, 93 **Investment & innovation** \| p.28 |
| | Activities and decision-making | • Embed the financial institution's net-zero objectives and priorities in its evaluation and decision-making tools and processes to support its net-zero commitment | **Effective management framework** \| p.52 **Transition assessment** \| p.53 **Project review process** \| p.55–56 **Sector-specific risk analysis** \| p.77 |
| | Policies and conditions | • Establish and apply policies and conditions on priority sectors and activities such as thermal coal, oil and gas, and deforestation<br>• Include other high-emitting sectors to define business boundaries in line with net-zero objectives | **Policy framework** \| p.55 **Approach to achieving targets** \| p.58–72 |
| Engagement strategy | Clients and portfolio companies | • Proactively and constructively provide feedback and support to clients to encourage net zero-aligned transition strategies, plans, and processes<br>• Escalation process when engagement is ineffective | **Engagement approach** \| p.24 **Transition support** \| p.30 **Escalation process** \| p.52 **Transition assessment** \| p.53 |
| | Industry | • As appropriate, exchange transition expertise and collectively work on common challenges<br>• Represent the financial sector's views cohesively to external stakeholders, such as clients and governments | **Engagement approach** \| p.24 **Transition support** \| p.30 **Transition whitepaper** \| p.32–37 |
| | Government and public sector | • Direct and indirect lobbying and partner with governments/public sector toward net-zero transitions<br>• Ensure alignment between client/portfolio companies' lobbying and initiatives for net zero | **Engagement approach** \| p.24 **Transition support** \| p.30 **Policy engagement** \| p.38 |
| Metrics and targets | Metrics and targets | • Establish appropriate metrics to drive execution of the net-zero transition plan and monitor the progress | **Operational emissions** \| p.17 **Sustainable finance target** \| p.27 **Portfolio FE** \| p.42 **Interim target** \| p.46 **Approach to achieving targets** \| p.58–72 |
| Governance | Roles, responsibilities, and remuneration | • Define roles for the Board of Directors or management/organizations responsible for managing net-zero targets<br>• Review remuneration systems and transition plans regularly | **Governance structure** \| p.78 **Meeting structure** \| p.79 **Skill set** \| p.80 **Compensation system** \| p.81 |
| | Skills and culture | • Training and development support to provide skills and knowledge (including the Board of Directors and management)<br>• Programs and communications to embed the net-zero transition plan into the organization's culture and practices | **Capability building** \| p.82 **Fostering culture** \| p.83 |

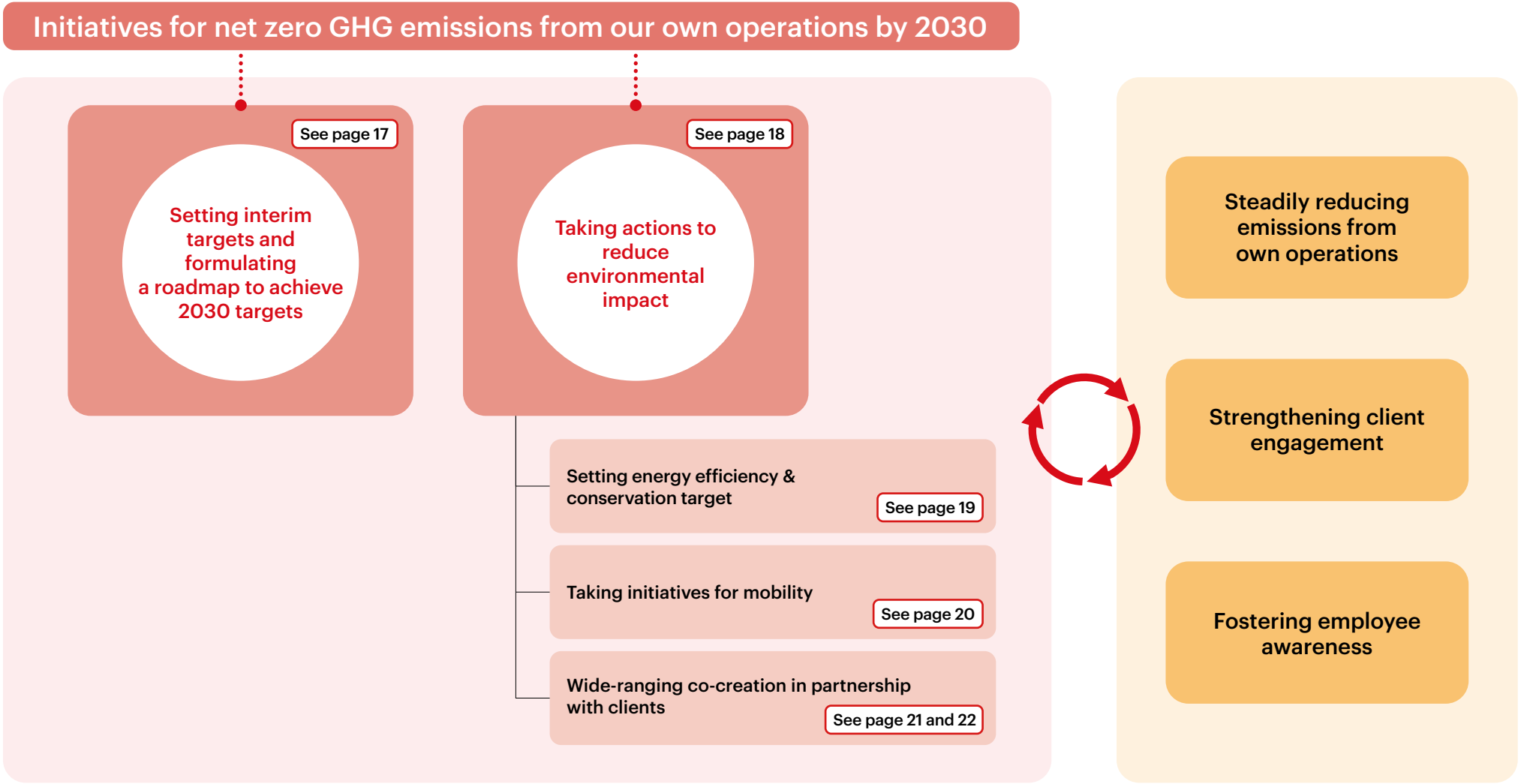
*1 Based on "Financial Institution Net-zero Transition Plans – Fundamentals, Recommendations, and Guidance" (Nov. 2022)

# 1 Reducing emissions from own operations

# Approach to reducing emissions from own operations

Based on the MUFG Carbon Neutral Declaration released in May 2021, we are working to reduce GHG emissions from our own operations to net zero by 2030.
In addition to emissions reduction activities such as energy efficiency & conservation and renewable energy, we will drive forward a wide range of initiatives contributing to resource conservation and recycling through partnerships with MUFG clients, including startup companies. Furthermore, we at MUFG will independently and proactively engage in these initiatives, thereby strengthening engagement with clients and fostering employee awareness.

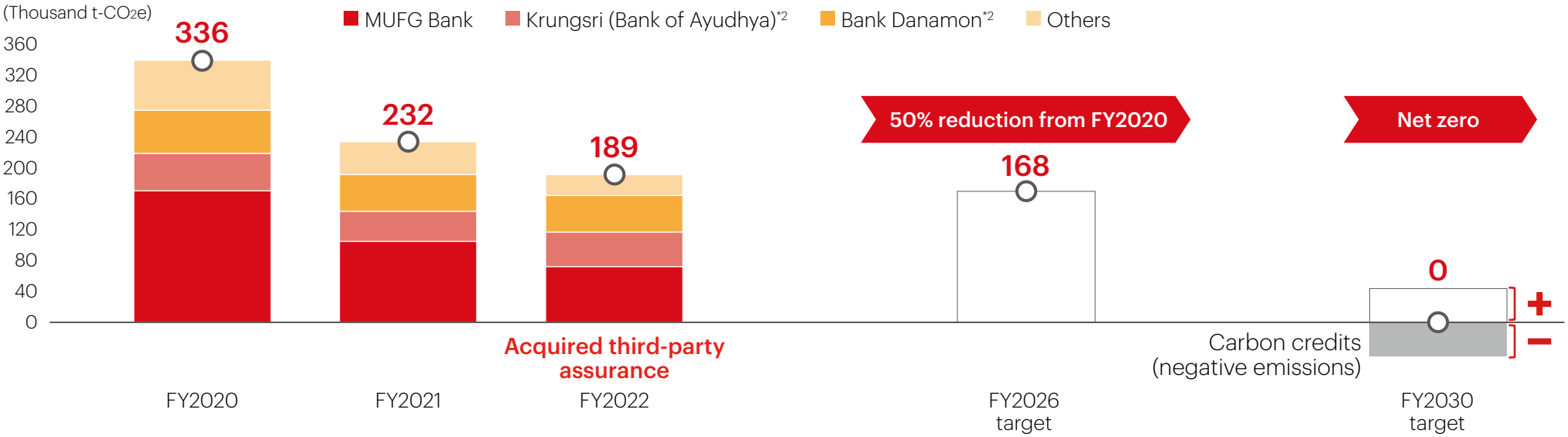
## Initiatives for net zero GHG emissions from our own operations by 2030



# Interim target and roadmap

In FY2022, our emissions significantly reduced by 44% from FY2020 to 189,000 t-$CO_2$e due to switching to 100% renewable power sources for in-house contracted electric power at all consolidated subsidiaries in Japan.
To achieve our remaining targets, we will continue to reduce GHG emissions in Japan and overseas through energy efficiency & conservation, converting electricity contracted by other companies to renewable energy, purchasing non-fossil fuel certificates, and achieving carbon neutrality for our business vehicles. In addition, we will further contribute to reducing our environmental impact by strengthening procurement of renewable electricity with additionality*1.

## Scope 1 and 2 reduction roadmap




- Switched to 100% renewable power sources for in-house contracted electric power at all consolidated subsidiaries in Japan
- Began power procurement from new solar power plants

**MUFG Bank**

- Energy efficiency & conservation (reduce energy use in Japan by 30% versus FY2019 by FY2030)
- Convert electricity contracted by other companies to renewable energy and strengthening procurement of renewable energy with additionality
- Achieve carbon neutrality for business vehicles

**Krungsri (Bank of Ayudhya), Bank Danamon**

- Energy efficiency & conservation and shift to renewable energy through purchase of non-fossil fuel certificates
- Achieve carbon neutrality for business vehicles

*1 Additionality refers to the effect of encouraging an increase in new renewable energy facilities.
*2 Asian partner banks Krungsri (Bank of Ayudhya) and Bank Danamon are MUFG consolidated subsidiaries in Thailand and Indonesia, respectively.

# Measures to reduce environmental impact: Overview

In addition to in-house initiatives such as achieving carbon neutrality for business vehicles and setting energy efficiency & conservation targets, MUFG is driving forward to solving environmental and social issues through various types of business co-creation in partnership with clients.
These initiatives will focus on four priority areas: mobility, office buildings, energy, and resources.

## Overview of initiatives for reducing environmental impact*1

### Mobility

**Achieving carbon neutrality for business vehicles**
Reducing gasoline use with the transition to carbon neutrality
See page 20

**Providing charging facilities to clients**
Contributing to the spread of EV charging networks in Japan
See page 20

**EV energy management**
Effective use of renewable energy

### Office buildings

**Setting energy efficiency & conservation targets (30% reduction vs. FY2019)**
Fostering employee awareness toward reducing energy use
See page 19

**Eco-friendly branch with energy generation and storage facilities**
Creating and effectively utilizing renewable energy
See page 21

**Acquisition of environmental certifications**
Contributing to environmental protection and increasing recognition

### Energy

**Procuring renewable energy with additionality**
Reducing GHG emissions and contributing to the spread of renewable energy

**Procuring renewable energy utilizing storage batteries**
Reducing GHG emissions and effectively utilizing renewable energy

**Utilizing perovskite solar cells*2**
Contributing to the spread of next-generation solar cells

**Improving air conditioning efficiency with wireless power supply technology**
Efficient use of energy

### Resources

**Recycling used cooking oil**
Effective use of waste (converting to domestically produced SAF)
See page 22

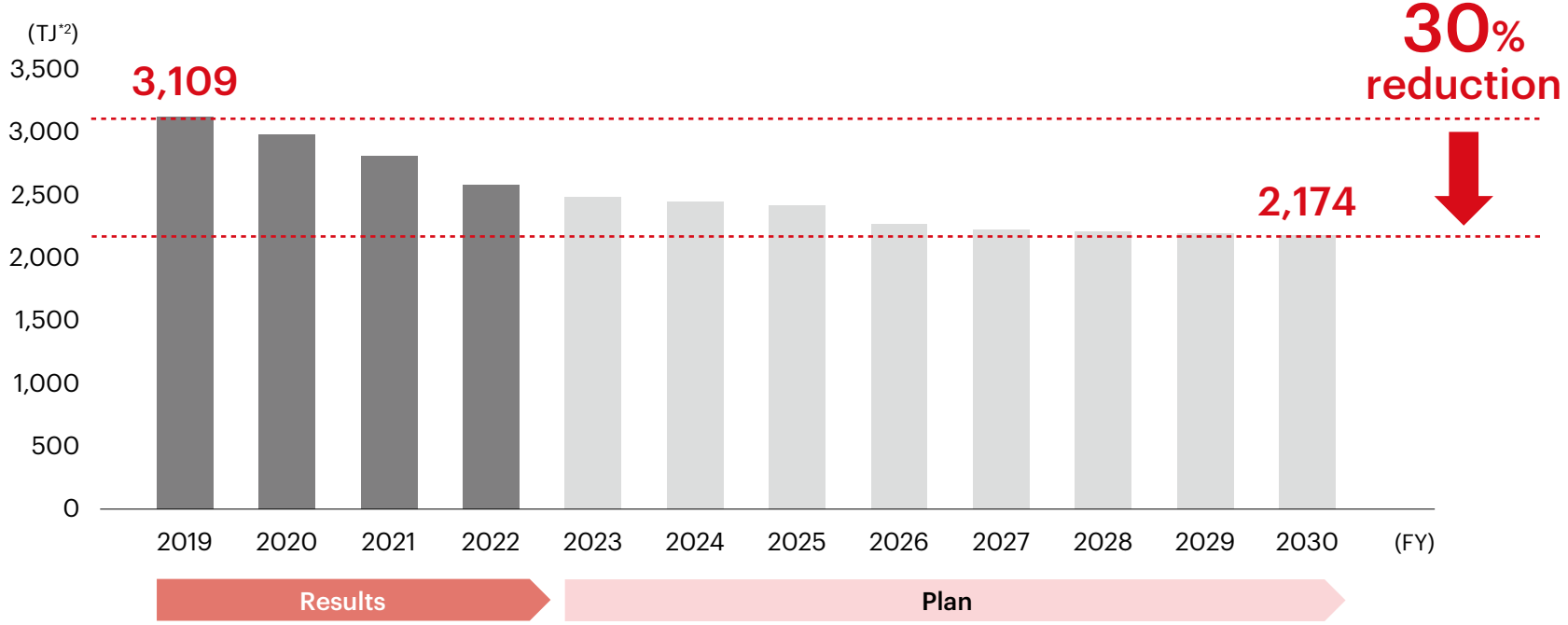
**Recycling grease trap waste from cafeterias*3**
Reducing GHG emissions by effectively utilizing waste

*1 Includes projects under consideration *2 A new type of solar cell using materials with a crystalline structure called perovskite *3 Reusing oil and grease collected in cafeteria wastewater systems as biofuel

# Measures to reduce environmental impact: Setting energy efficiency & conservation target

MUFG has set a target for reducing energy consumption in order to both control greenhouse gas (GHG) emissions and reduce costs arising from its business activities, as well as to foster environmental awareness throughout the organization.
Specifically, we aim to reduce energy consumption*1 in bank buildings in Japan by 30% by FY2030 compared to FY2019 by combining direct, high-impact measures, such as the introduction of energy-saving equipment and optimization of office sizes, and soft measures, such as optimizing air conditioning temperature settings in offices and active energy-saving actions by employees. By regularly disclosing the status of our progress, we will build company-wide momentum toward achieving our target.

## MUFG Bank energy consumption in Japan

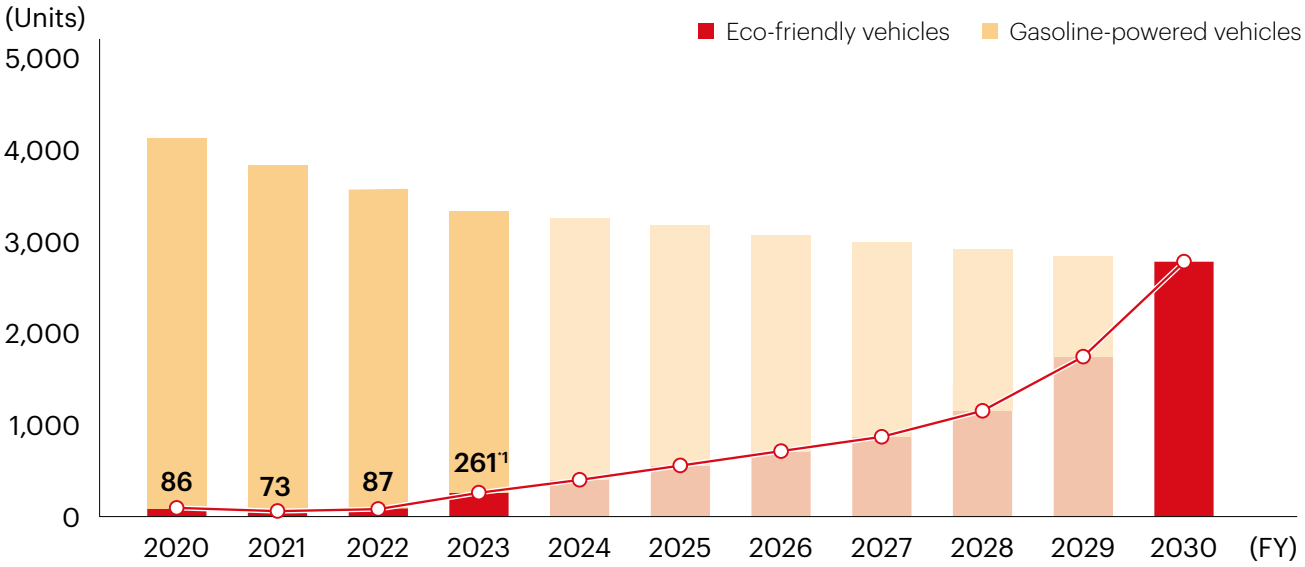



*1 Converted to primary energy consumption; to ensure consistency in assessment, FY2019 coefficients are used for plan values.
*2 Energy consumption is expressed in terajoules (TJ).

# Measures to reduce environmental impact: Taking initiatives for mobility

MUFG is working to reduce GHG emissions from business activities on a global basis, and chooses methods flexibly based on the circumstances in each country and region and the state of related technologies. As for business vehicles, we are gradually switching to EVs for short-distance travel, mainly in Japan. In the medium to long term, we will determine optimum eco-friendly methods by making careful assessments of changes in rules and social conditions in each country and region, and the degree of progress and adoption of related technologies. In Japan, to meet our clients' needs, we will install EV chargers in some areas of our parking lots as a pilot project.

## Achieving carbon neutrality for business vehicles used by MUFG Bank in Japan




### MUFG Bank initiatives in Japan

- EV chargers will be installed in owned and leased parking lots, and in principle, renewable energy will be used to supply power to EVs.
- In FY2023, we switched 210 business vehicles to EVs at 36 branches in Tokyo, Nagoya, and Osaka.
- We plan to switch 100 to 200 vehicles in FY2024.

## Overview of EV charging facility installation

### Standard charging facilities

| | |
|---|---|
| **Target stores** | : Ichikawa-Yawata, Tsudanuma, Kugayama branches (two chargers per branch, total of six chargers) |
| **Business hours** | : 24 hours a day |
| **Charger provider** | : Toyo Carmax Corporation |
| **Payment agent** | : Yourstand Co., Ltd. |
| **Target clients** | : Open to the public |

### Fast charging facilities

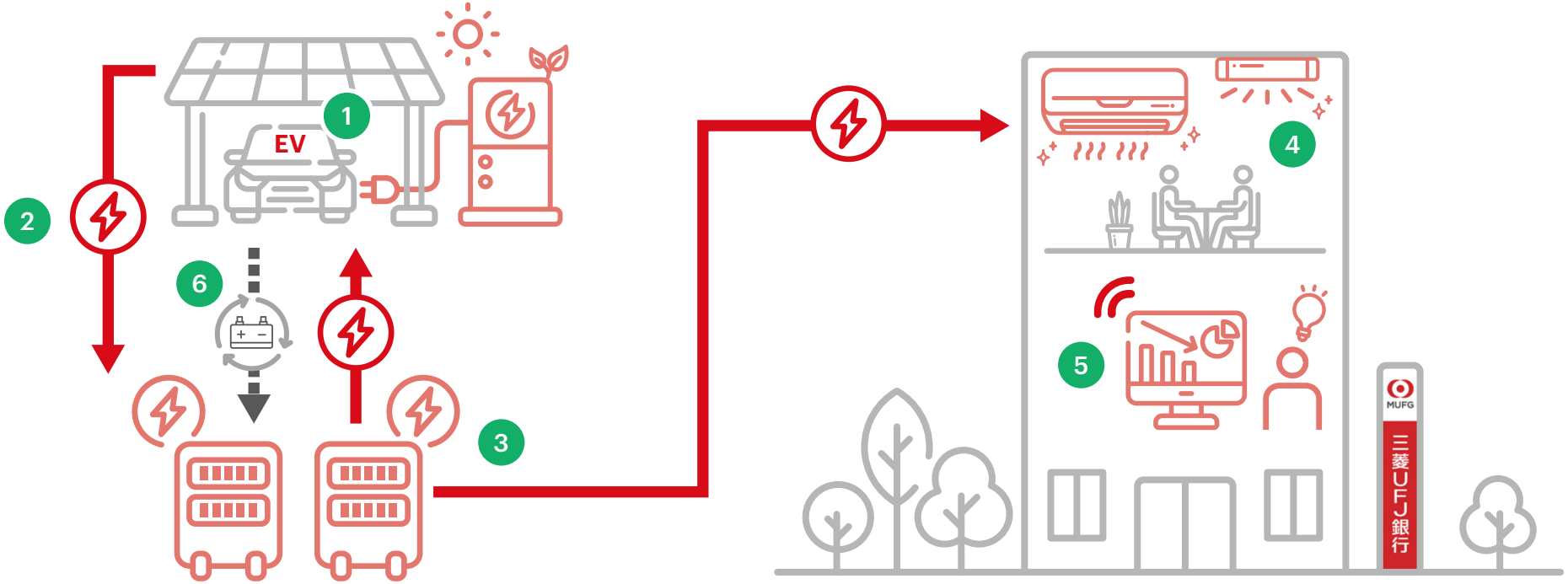
| | |
|---|---|
| **Target stores** | : Nagoya Building (two fast chargers) |
| **Business hours** | : 9:00 a.m. to 4:00 p.m. |
| **Charger provider** | : MUFG Bank |
| **Payment agent** | : ENEOS Corporation |
| **Target clients** | : Limited to MUFG clients |

*1 In FY2023, 210 EVs were introduced. Of these, 36 units introduced in the previous year were returned to the leasing company.

# Measures to reduce environmental impact: Eco-friendly store

In partnership with Hitachi, Ltd., MUFG is to introduce movable storage batteries, solar power generation, and EVs at the bank's Nerima Branch as an eco-friendly store and begin demonstration for effectiveness. With this demonstration, we aim to identify issues in the operation of eco-friendly stores and develop potential solutions.

## Overview of eco-friendly store



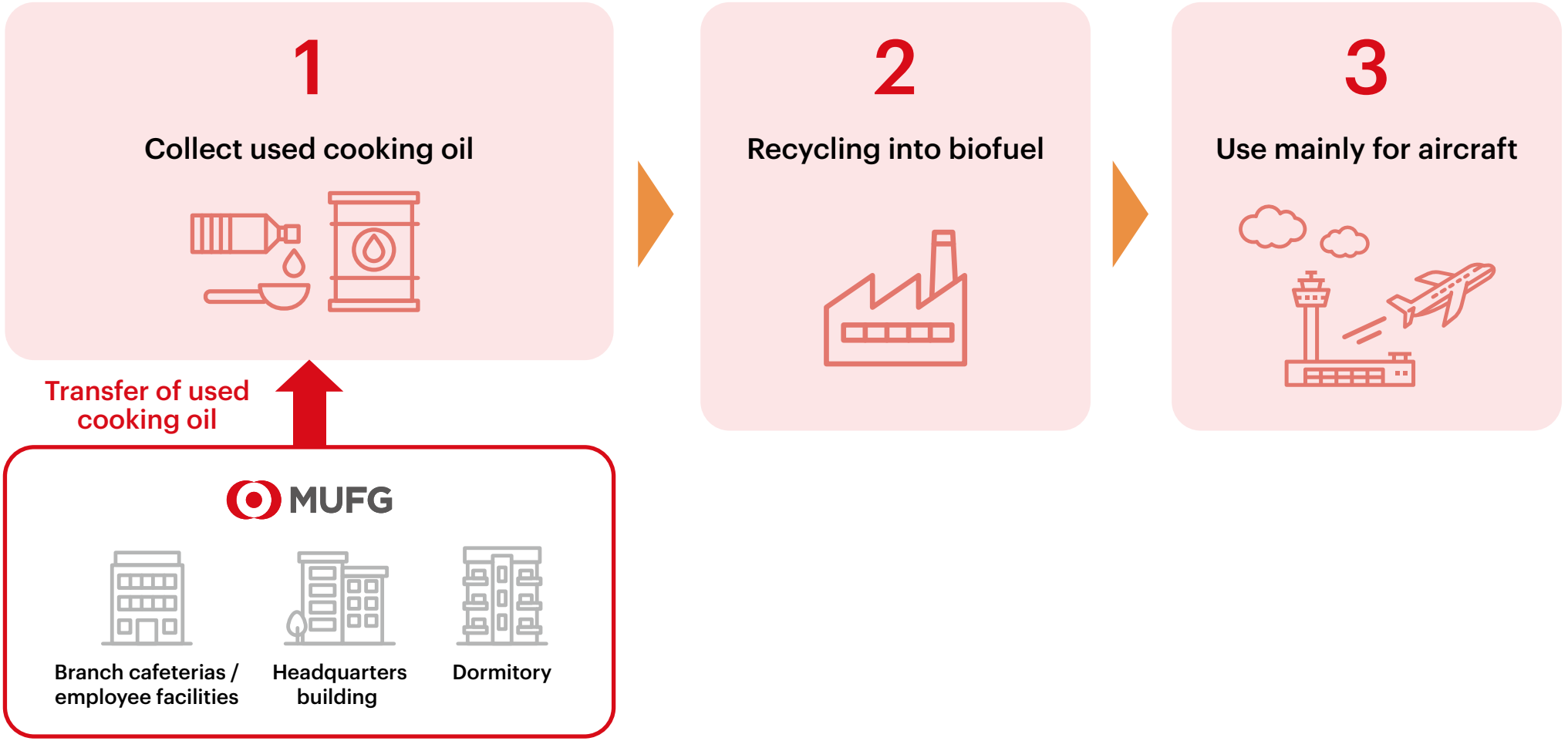

1. Nine business vehicles will be switched to EVs.
2. A solar carport will be installed in the parking lot, and electricity generated by solar power will be stored in a movable storage battery (Battery Cube*1) that utilizes reused batteries provided by Hitachi to make maximum use of the generated renewable energy.
3. EVs will be operated on 100% renewable energy due to 1 and 2 above, which will also increase the store's energy self-sufficiency.
4. Store facilities (lighting, air conditioning, and others) will be replaced with equipment boosting high energy-saving performance, and the building will acquire the highest rank of 5 stars under the Building-Housing Energy-Efficiency Labeling System (BELS) and 'ZEB Ready'*2 certification.
5. The introduction of an energy management system will visualize energy self-sufficiency in stores and encourage voluntary energy efficiency & conservation activities by employees.
6. In the future, we will consider more sustainable ways to utilize resources, such as reusing batteries removed from EVs used in business vehicles in Battery Cubes.

*1 "Battery Cube" is a registered trademark of Hitachi High-Tech Corporation in Japan. *2 A building that significantly reduces primary energy consumption compared to standard buildings while maintaining a comfortable environment.

# Measures to reduce environmental impact: Recycling used cooking oil

Approximately 22,000 liters of used cooking oil is collected per year from 239 cafeterias at MUFG branches, headquarters building, dormitories, and employee facilities in Japan. This oil is provided to REVO International Inc.*1, who then turns it into domestically produced SAF*2, helping to achieve carbon neutrality mainly for the aviation industry.

## Overview of recycling used cooking oil




*1 A core member of ACT FOR SKY, REVO International recycles used cooking oil into biofuel. ACT FOR SKY is an initiative to promote carbon neutrality in the aviation industry through the establishment and spread of SAF supply chain in Japan. MUFG Bank is also a member of this initiative.
*2 "SAF" stands for "sustainable aviation fuel," an energy source that can significantly reduce carbon dioxide emissions compared to conventional aviation fuels.

# 2 Engagement and support

## 2.1 Engagement

# Engagement approach

MUFG will continue to identify new needs and issues through the solutions we provide while offering suggestions to policymakers in collaboration with industries and government agencies. As we deepen our relationships with clients, local governments, and various industries through management-level executive forums to engage with clients, and through efforts of our newly established specialized engagement team, we provide valuable insights to both industries and government agencies on emerging needs and issues related to decarbonization. We are here to collaborate with our clients towards decarbonization in a responsible manner.

## Engagement approach

### 1 Policy suggestions in collaboration with industries and government agencies

Contribute to GX policy formulation by collaborating with government agencies and industries through policy engagement

- Building frameworks for transition finance
- Transition Whitepaper
- Asia Transition White Paper
- Promoting blended financing
- Participating in initiatives in Japan and overseas
- Activities for COP28

### 2 Enhancing our capability to provide solutions that support clients' decarbonization in line with government policies and strategies

Strengthen our capability to provide solutions tailored to each market stage by leveraging the collective strengths of the MUFG Group and collaborating with external partners

- GX value chain support
- Sustainable finance promotion
- Investment and innovation projects

### 3 Leveraging relationships with clients, local governments, and industry associations to identify new needs and issues

Provide feedback to industries and government agencies on new needs and issues identified through decarbonization support, and link to policy suggestions

- Executive Forum for dialogue with clients from a management standpoint
- Specialized engagement team

## Specific engagement activities

**Phase 1**
**Confirm our position**
Explore how MUFG can support clients' current activities to achieve net zero

**Phase 2**
**Analyze client strategies**
Organize client strategies and operational issues, along with financing opportunities

**Phase 3**
**Support in developing financing plans**
Identify financing requirements in line with clients' decarbonization plans

**Phase 4**
**Provide financing**
Agree pricing and solution designs with clients and execute financing contracts

**Phase 5**
**Measure effectiveness and check progress**
Measure effectiveness through progress checks. Support the transition to a decarbonized business model

# Client engagement structure

MUFG has established a project team for the purpose of promoting climate change-related businesses, and is regularly consolidating and sharing knowledge with employees at the executive level and below. This is designed to strengthen our ability to engage with clients seeking carbon neutrality and provide high-quality products and services. Through our global sustainable business promotion structure, we provide solutions for our clients' business transformation and innovations, directed towards addressing environmental and social issues.
In FY2023, we received the Gold Award in the Indirect Financing Category for the third consecutive year and our first Gold Award in the Financial Services (Securities) Category at the Fifth ESG Finance Awards Japan in recognition of our world-class track record for renewable energy projects and contribution to the development of the ESG finance market through spreading the concept of transition finance in Japan and abroad.

**Structure in Japan** | **Structure overseas**

**Japanese Business Units / Headquarters** | **Overseas Business Units / Headquarters**

**Sustainable Business Division**
Promoting business by sharing information and knowledge closely across the MUFG Group in cooperation and collaboration with global ESG teams in each region

### Green Transformation Strategy Project Team (GXPT)

Members from domestic and international sales, product offices, credit departments, planning departments, etc. participate in the team (approx. 500 members).

This team communicates information that contributes to concrete business development and promotion of GX investments and financing.

### Sustainable Business Promotion Leaders

Assigned to each corporate sales location across Japan, they hold study sessions on various solutions regularly.

### Global ESG Conference

Establish a structure and system to consolidate intelligence on regional trends and business opportunities, in order to provide financing and conduct engagement activities with clients in Japan and overseas.

### Global ESG teams

ESG team assigned in each of the three regions (EMEA, Americas, and Asia).

Teams promote sustainable business and engagement on a cross-functional basis.

### MUFG Global Partnership Conference

At top management meetings with partner banks*1, we share sustainable business initiatives.

In addition, MUFG's knowledge and expertise is shared with partner banks to encourage sustainable business.

## Awards received for sustainable business promotion (2023)

**Ministry of the Environment's Fifth ESG Finance Awards Japan**

**Gold award, Indirect Financing Category (Third consecutive year) for the Bank**

**Gold award, Financial Services (Securities) Category for Securities**

**Selected as an Environmental Sustainable Company (Third consecutive year) for MUFG**

**Global Bank of the Year**
*Project Finance International* (PFI), a leading project finance publication, recognizes achievements and accomplishments around the world.

**FinanceAsia Awards 2023**

**Best Sustainable Bank**
*FinanceAsia*, a leading publication in Asia, recognizes outstanding institutions in the region (banks, brokers, rating institutions, etc.).

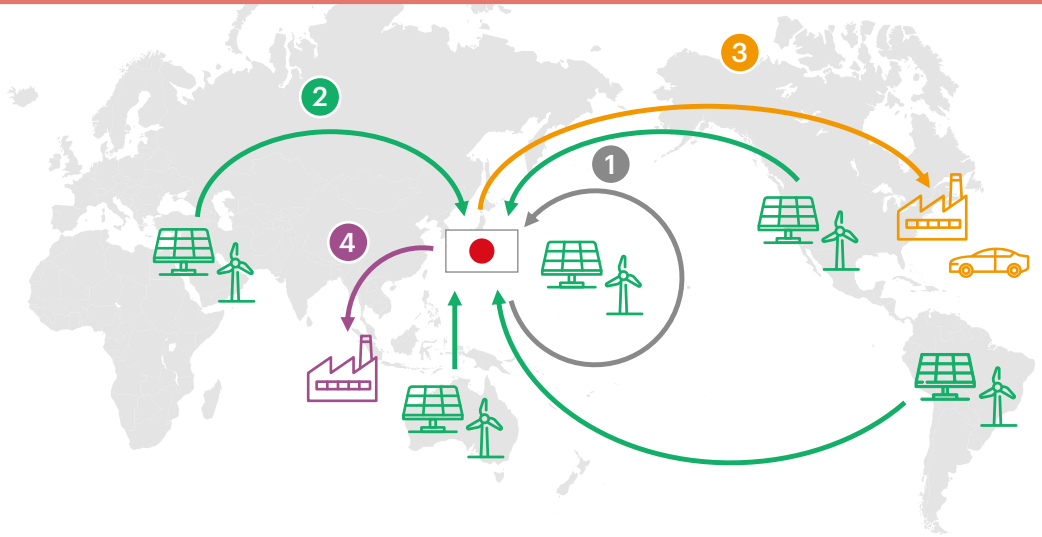
*1 Partner banks: Krungsri (Bank of Ayudhya) in Thailand, Bank Danamon in Indonesia, VietinBank in Vietnam, and Security Bank in the Philippines

# Financing support: GX value chain support

MUFG has identified supporting value chain in Green Transformation (GX) as a key strategy for 'Expand & Refine Growth Strategies' in the new medium-term business plan. We aim to accelerate our clients' GX investments by providing solutions for management that go beyond financing, such as GX project co-creation and transition support. The four strategic pillars for achieving this are 1 support for domestic GX investment, 2 development and import of overseas clean energy and resources, 3 support for Japanese companies entering overseas GX markets, and 4 support for transitions in emerging markets through public-private partnerships. Through research, advocacy, and engagement activities, we will support our clients' business development and originate value-chain based projects to deliver our financing solutions.

## Overview of GX value chain support

1. Support for domestic GX investment
2. Development and import of overseas clean energy and resources
3. Support for Japanese companies entering overseas GX markets
4. Support for transitions in emerging markets through public-private partnerships




**Research and advocacy**
- Transition Whitepaper
- Asia Transition White Paper

**Engagement**
- Strengthening transition support (Expanding engagement through the Transition Whitepaper)

**Business conceptualization × Origination (value chain orientation)**
- Partnering with government agencies (involvement in national projects, support for emerging markets through public-private partnerships, etc.)
- Value chain approach (batteries, hydrogen/ammonia)

**Financing projects**
- Sustainability-related projects

**Strengthening our foundations: Building employee knowledge on GX and sustainability**

# Financing support: New sustainable finance target and impacts

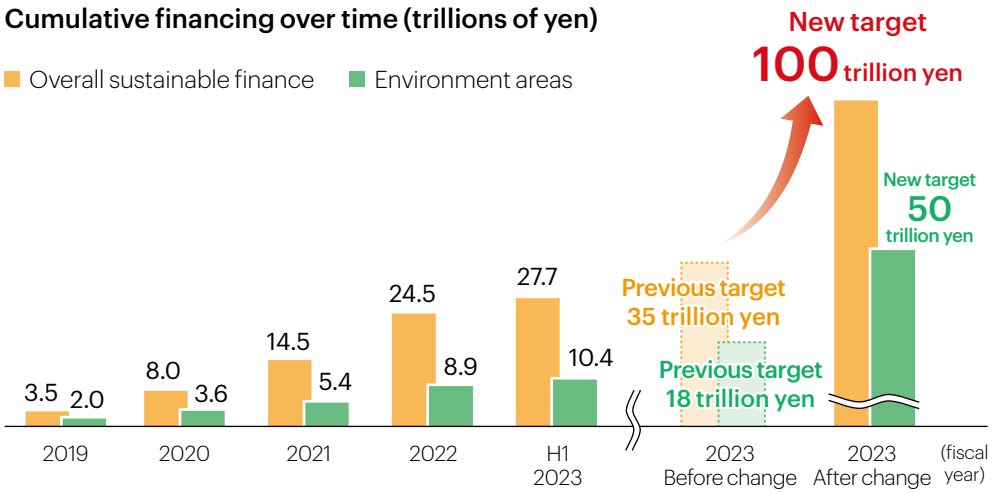
MUFG has raised its sustainable finance target from 35 trillion yen to 100 trillion yen by 2030, given strong progress that MUFG has made to date along with the growing demand for funds. Through the expansion of sustainable financing, we will not only generate positive environmental impacts, such as $CO_2$ reduction, by renewable energy project financing, but also create various environmental and social impacts.

## Background for raising target level

- Strong progress against the existing target of 35 trillion yen, reaching 27.7 trillion yen (79.2% achievement) as of H1 FY2023
- Raised the target level in anticipation of even broader support for green bonds and renewable energy project financing in response to growing demand for funds for carbon neutral initiatives*1

**New target**
**100 trillion yen**
**(including 50 trillion yen for environment areas)**

**Cumulative financing over time (trillions of yen)**




*1 Estimated required capital investment of 150 trillion yen over the 10 years starting in 2023 in Japan (per the Basic Policy for Realization of GX by the Japanese government), and 5 trillion U.S. dollars per year globally (per net zero scenarios by the Network for Greening the Financial System (NGFS))
*2 International Capital Market Association

### Clear definition of the target financing

- Type of finance included in the target (must satisfy any of the following criteria)
  (1) Finance compliant with international standards (e.g., ICMA*2 principles)
  (2) Finance aimed at resolving environmental and social issues
  (3) Sustainability-related products by MUFG

  For specific types of the target financing and their definitions, see page 93.
- Progress for each type of target financing is to be disclosed biannually

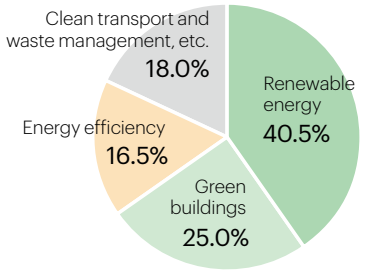
### Impact of sustainable finance

- Reduction of $CO_2$ through renewable energy project finance (positive environmental impact)

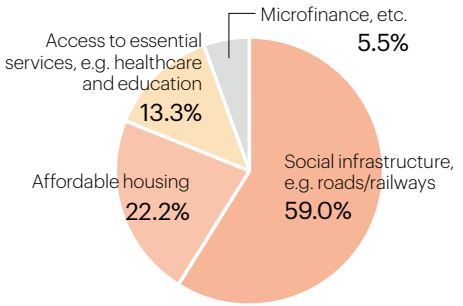
MUFG has reduced $CO_2$ emissions by a cumulative 36 million tons (from FY2019 to FY2022)
→ Equivalent to annual $CO_2$ emissions by approximately 25% of Japanese households

- Projects that have generated a positive impact on the environment and society through financing (based on data available from client disclosures and compiled for FY2022)

**Green loans and bonds**




**Social loans and bonds**



# Investment and innovation projects

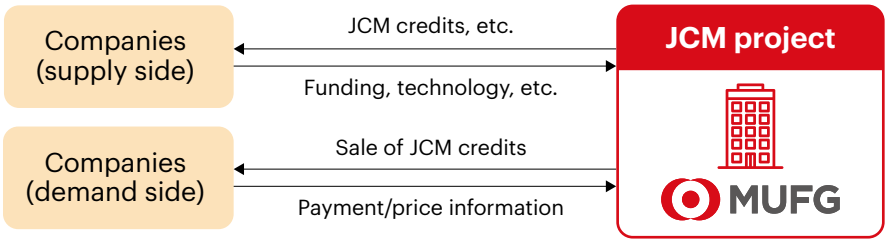
MUFG expands investment in renewable energy and invests in projects to generate and promote the adoption of carbon credits. We also invest in growing companies engaged in businesses that contribute to decarbonization and funds investing in this field. Through these activities, we aim to enhance the corporate value of our portfolio companies while contributing to realize a carbon neutral society.

## Investment commitment to Z Energy's Carbon Neutral Funds

- Total investment commitment of 10 billion yen to Z Energy Co., Ltd.'s Carbon Neutral Fund 1 and 2 (renewable energy funds)
- Fund 1 has been nearly fully invested, Z Energy plans to invest in wind power generation and corporate power purchase agreements (PPAs) in Fund 2
- Aiming for greater fund scale with partners by providing bridge functions, etc.

## Investment in SDG Impact Japan

**Investing in SDG Impact Japan Inc., operator of JCM projects*1**




## Investment in Decarbonization Partners

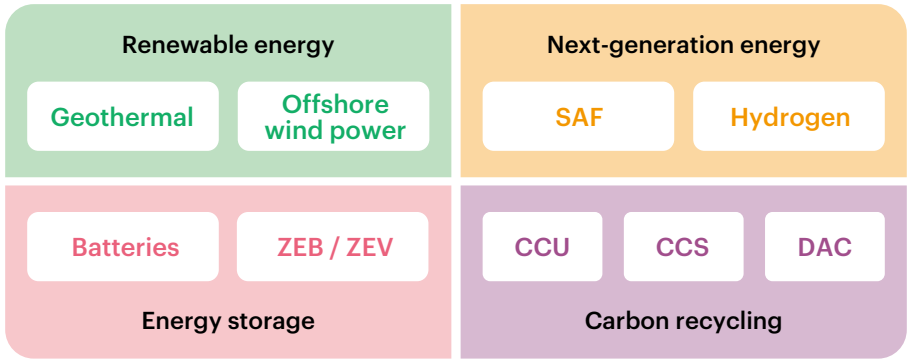
- Fund jointly operated by BlackRock, Inc. and Temasek
- Investing in growth companies engaged in decarbonization technologies, carbon management, etc.

## Investment in 1GT Fund (Lux) SCSp

- First full-scale global impact investment fund by Morgan Stanley Investment Management Inc.
- Aiming to reduce $CO_2e$ emissions by 1 gigaton by 2050 by investing in growth-stage private companies aiding the fight against climate change

## Established Marunouchi Climate Tech Growth Fund L.P.

**Establishment of a fund with a primary investment focus on climate tech-related companies**




### Utilization as a client engagement tool

- Introduction to fund portfolio companies for potential collaboration
- Exploring investment through the fund in climate tech companies receiving client investment and that have additional capital needs
- Making introductions to fund managers to address limited partnership investment needs

**Investees** | **Amogy Inc.**

- A U.S. company that focuses on the advantages of ammonia as a hydrogen energy carrier and has technologies and systems to convert liquid ammonia into hydrogen at low temperatures and high speeds for input into hydrogen fuel cells
- Targets utilization for transport vessels, large trucks, etc.

*1 JCM: Joint Crediting Mechanism, a system whereby partner countries work together to reduce greenhouse gas emissions and both countries share in the results of the reductions

# 2 Engagement and support

## 2.2 Supporting transition

# Our approach to support transition

## Main initiatives to support transition

1. **Building frameworks for transition finance**
2. **Facilitating a whole-of-economy transition based on regional characteristics of Japan and Asia**
3. **Policy engagement**

## How we define our role in achieving carbon neutrality

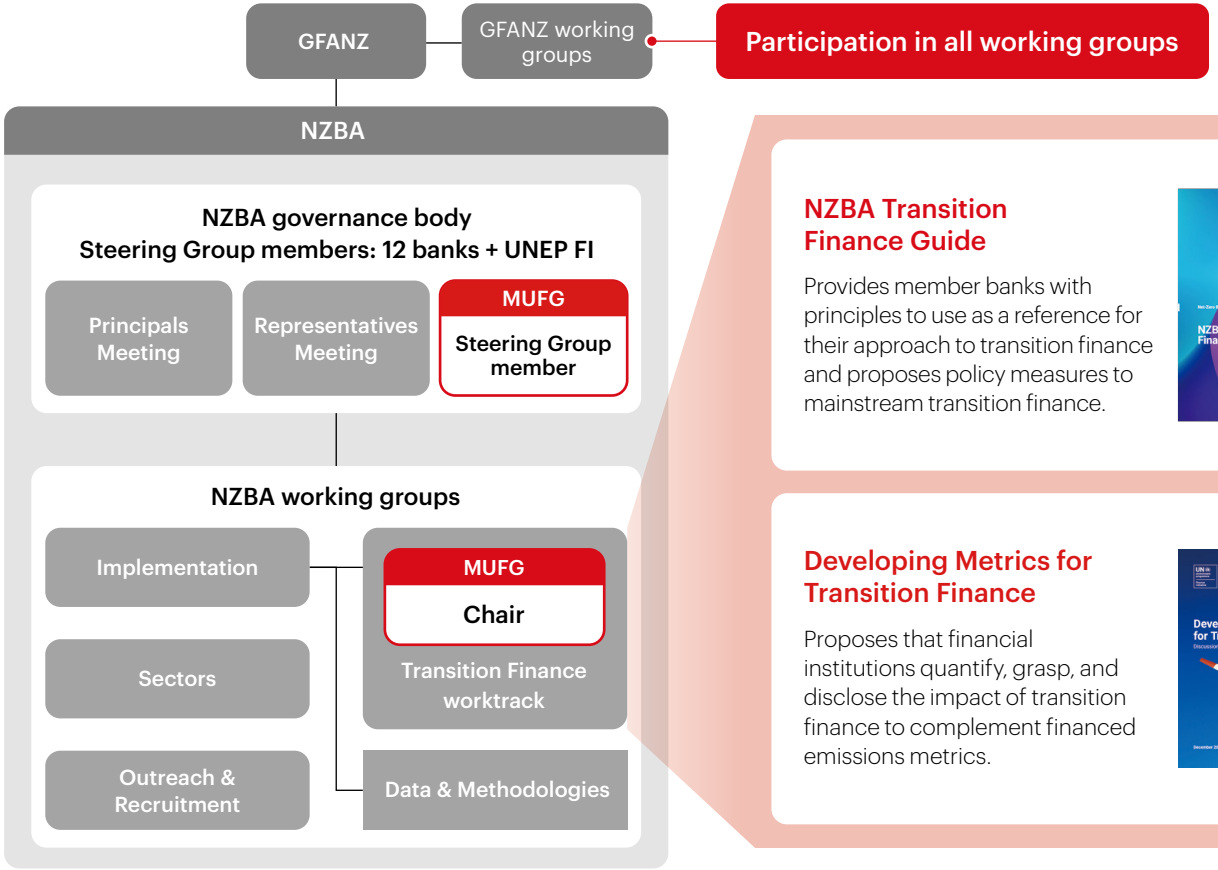
- To achieve sustainability in a meaningful way, **it is more important for financial institutions to support decarbonization of the real economy including carbon intensive sectors rather than focusing on greening their balance sheets (also the so-called "paper decarbonization").**
- The decarbonization of the real-economy requires development and implementation of transition strategy which reflects regional characteristics, industry structure and relative strength, inter-dependency among industries, and differences in energy mix. Japan and Asia's unique challenges include transition timelines and pathways being different from those of Europe and the United States because Japan and Asia are still highly dependent on fossil fuels, coal-fired plants in this region are relatively young, and potential to scale up renewable energy is limited at this moment. Also, it is crucial to balance the economic growth and decarbonization in Asia where energy demand is expected to continue to increase in the coming years. **As a global leading financial institution with an extensive footprint across Asia and Japan, we believe it is important to facilitate a whole-of-economy transition in a responsible way** by engaging with broad stakeholders, and acknowledge as well as respect regional, sectoral or individual client's pathways.
- A transition implies a major overhaul of the whole-of-economy, and therefore requires significant amount of capital mobilization and risk-taking. In doing so, **public finance plays a critical role in crowding-in private finance.** MUFG is committed to creating an enabling environment where both real-economy and financial institutions can proactively promote transition.

# Building frameworks for transition finance

MUFG has been actively involved in discussions to develop frameworks for transition finance through participation in international climate change-related initiatives.

## NZBA initiatives

- The Net-Zero Banking Alliance (NZBA) is an international private-led initiative established by the United Nations Environment Programme Finance Initiative (UNEP FI) to achieve net zero GHG emissions from lending and investment portfolios by 2050 or sooner.
- MUFG became the first Japanese financial institution to participate in the NZBA in June 2021, and became one of the Steering Group members representing Asia region, and chairs its Transition Finance worktrack tasked to develop frameworks to promote transition finance.




### NZBA Transition Finance Guide

Provides member banks with principles to use as a reference for their approach to transition finance and proposes policy measures to mainstream transition finance.


### Developing Metrics for Transition Finance

Proposes that financial institutions quantify, grasp, and disclose the impact of transition finance to complement financed emissions metrics.


## GFANZ initiatives

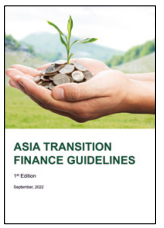
- The Glasgow Financial Alliance for Net Zero (GFANZ) is the world's largest pan-financial sector initiative to achieve net-zero emissions.
- MUFG participates in all working groups of both GFANZ Global and its APAC Network.
- Masamichi Kono, Senior Advisor of the Bank, has assumed GFANZ Japan Advisor since establishment of GFANZ Japan in 2023, and Group CEO Hironori Kamezawa will assume Chair of GFANZ Japan from July 2024.

## ATFSG initiatives

- The Asia Transition Finance Study Group (ATFSG) is a private initiative led by financial institutions actively operating in ASEAN countries. The study group discusses the importance of transition finance, issues to be addressed and potential solutions, and provide suggestions to policymakers to achieve a realistic and orderly energy transition to reflect the reality in Asia.

### Asia Transition Finance Guideline (2022)

Outlines practical process guidelines for financial institutions to execute transition finance, based on MUFG-led discussions



# Transition Whitepaper projects: Overview

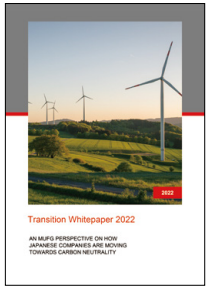
The path towards achieving carbon neutrality differs between the West and Japan due to differences in industrial structures and energy compositions in addition to geographical characteristics. With the understanding that it is crucial to advance a responsible transition while gaining understanding from the international community, MUFG has been working on the Transition White Paper Project for about two years.
Furthermore, this project has evolved, leading to initiatives focused on Asia and Hokkaido.

## Recommendations on Japan's transition

### Transition Whitepaper 2022

- Explores initiatives to achieve carbon neutrality in Japan through client engagement and analysis of carbon neutral strategies in other countries

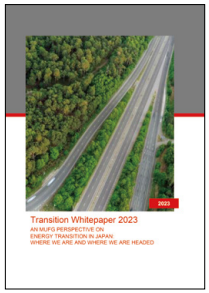
See page 33




### Transition Whitepaper 2023

- Compares policies against those in Europe and the United States focused on carbon neutrality for electricity and heat
- Provides a list of technologies Japan is exploring for the carbon neutrality of electricity and heat

See pages 34 and 35




## Initiatives arising from the Transition Whitepapers 2022 and 2023

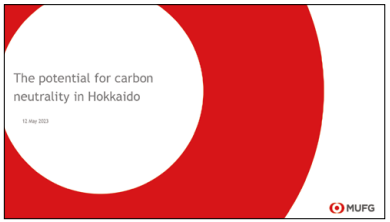
### Asia Transition White Paper 2023

- Provides a deep dive into the power sector in Thailand and Indonesia, analyzing the bankability and challenges of each decarbonization lever, then offers examples of support measures from a financial institution perspective

See pages 36 and 37


### Hokkaido Carbon Neutrality Report

- Highlights Hokkaido's potential for carbon neutrality to stakeholders in Japan and abroad to motivate investment in Hokkaido
- Building Hokkaido into a model case for achieving both carbon neutrality and local economic revitalization



# Transition Whitepaper projects: Transition Whitepaper 2022

In October 2022, after in-depth discussion with clients representing various sectors in Japan, MUFG released its MUFG Transition Whitepaper 2022, which summarizes Japan's efforts toward carbon neutrality, and was communicated to policy makers in Japan and abroad.

## Whitepaper context and objectives

- Transitioning from a brown economy to a greener one requires not only green finance, but also transition finance. MUFG has been taking the lead in the discussion of transition finance as chair of the respective NZBA working group and the lead bank of the ATFSG.
- In the pursuit of decarbonization, there are two approaches: utilizing existing technologies for low-carbon measures in the short term, and implementing carbon-neutral technologies through new innovations in society in the long term.
- No single climate strategy exists for decarbonization; each one is a unique combination of initiatives that must be tailored to each country's regional characteristics and timeline.
- In the Transition White Paper 2022, we analyzed each country's carbon neutrality strategy in terms of ❶ energy sources, ❷ connectivity, ❸ energy security, and ❹ sociopolitical factors, addressing the importance of pathways that take into account regional characteristics.
- In promoting carbon neutrality, it is necessary to identify the most impactful factors and measures toward carbon neutrality that take into account the vertical and horizontal linkages of industries. In Japan, approximately 70% of $CO_2$ emissions come from electricity, heat, and industry (materials), which means tackling these sectors are crucial for carbon neutrality. Therefore, together with our clients in materials sectors (steel, cement, chemicals, paper, and glass), as well as those in the power sector, we summarized Japan's efforts toward carbon neutrality, and shared our findings to policy makers in Japan and abroad.

**Japan promotes a multi-faceted, step-by-step approach amid an environment differing from that of Europe and the United States**

**❶ Energy sources**

Electricity and heat + Industry (materials) = 70% of $CO_2$ emissions in Japan
Vs. 20%–30% in the U.K. and France

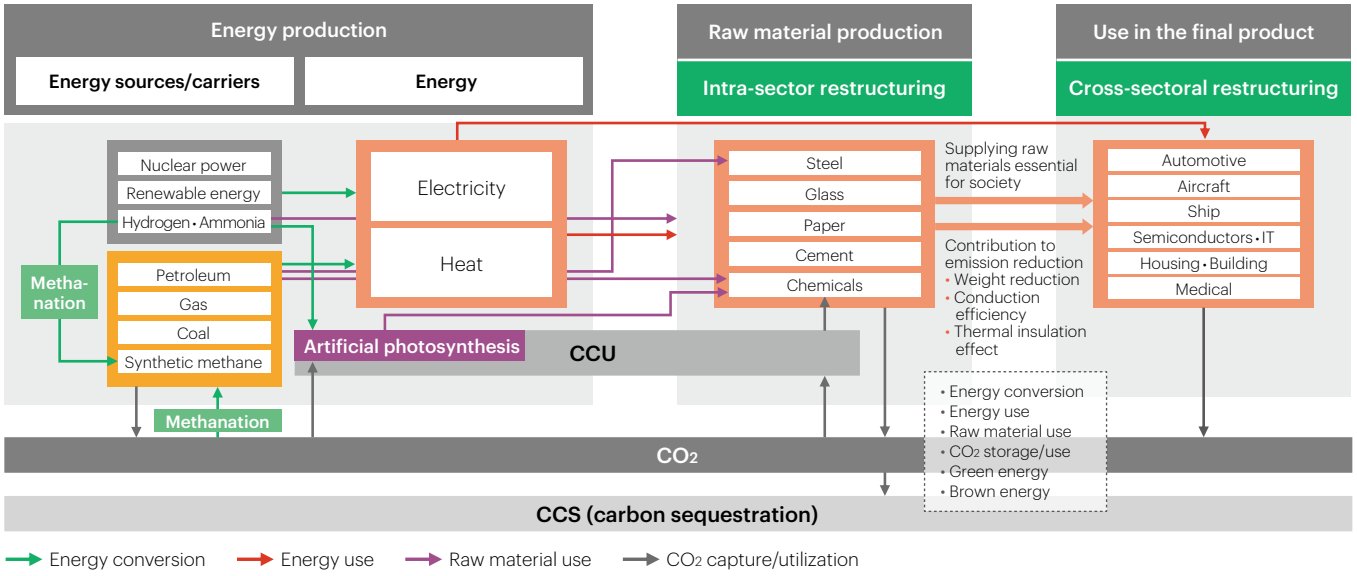
Note: Focus area will differ by country. For instance, in the United States, United Kingdom, and France, the transportation sector accounts for a large share of emissions, making it important to shift to EVs.

**❷ Connectivity**

1) Power transmission network with no international connectivity
2) Different frequencies between east and west Japan

Vs. Meshed interconnectivity between nations and regions in Europe and the United States

**Carbon neutrality is difficult to achieve in a single sector and requires an understanding of the interdependency between electricity, heat, and the closely interconnected sectors of the carbon cycle**



# Transition Whitepaper projects: Transition Whitepaper 2023 (1)

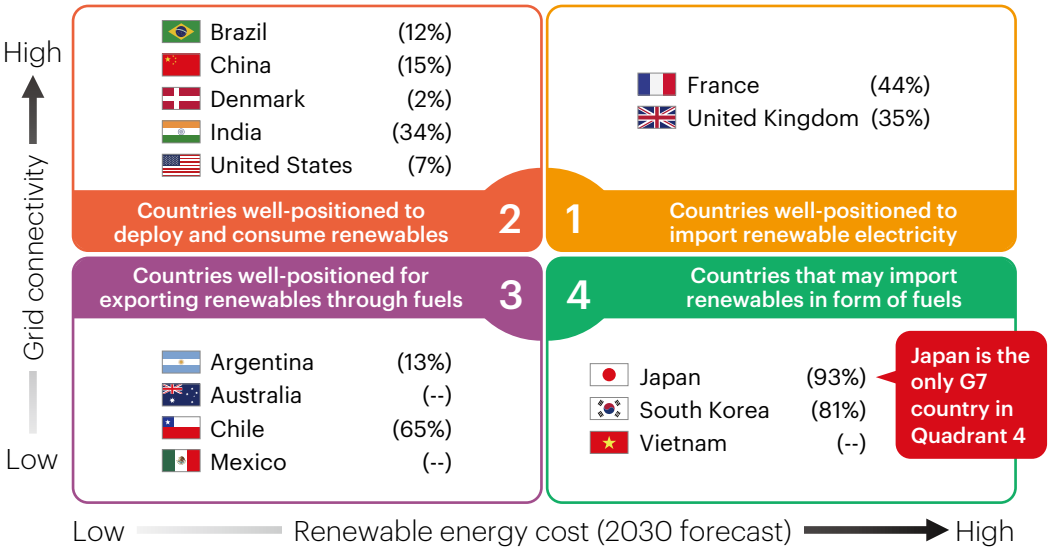
In September 2023, MUFG announced the Transition Whitepaper 2023, which is based on the findings and various feedback obtained from the Transition Whitepaper 2022, and was communicated to policy makers in Japan and abroad.

## Whitepaper context and objectives

- MUFG is committed to support the transition for a wide-range of clients as possible through engagement, rather than divestment, based on the idea of realizing carbon neutrality by achieving net zero in the real economy.
- To this end, it is essential to ensure that businesses contributing to carbon neutrality generate stable cash flows from transition investments and financing. Monitoring relevant policies across countries and the progress of companies is also important.
- In the Transition Whitepaper 2023, we compare policies with Europe and the United States, focusing on carbon neutrality in electricity and heat, and outline technologies Japan is considering for carbon neutrality in these sectors.

**Japan faces high production costs for renewable energy and low grid connectivity. Therefore, in addition to maximizing domestic renewable energy, Japan's options for carbon neutrality include overseas collaboration (importing) and next-generation technology development (floating offshore wind, next-gen reactors, etc.)**

### Four pathways based on grid connectivity and costs




Numbers in ( ) are the share of foreign fossil fuel imports in the energy mix.

**Achieve carbon neutrality for electricity and heat in Japan requires study of domestic renewables (Pillar 1) and importing foreign renewables (Pillar 2)**

**Pillar 1 Domestic renewables**

### Maximizing domestic renewable energy deployment

- The Japanese government aims to maximize renewable and clean energy
- **Existing technologies:** Installation of solar power/fixed-bottom offshore wind power systems, restart of existing nuclear power plants
- **Next-generation technologies:** Development of next-generation technologies (perovskite, floating offshore wind power, next-generation nuclear reactors, etc.)

**Pillar 2 Importing foreign renewables**

### Importing foreign renewables

- Overseas development of renewable energy sources and conversion to hydrogen carriers
- Establishment of a means of long-distance marine transportation via hydrogen carriers
- Development and introduction of hydrogen utilization technologies (ammonia/hydrogen co-firing, mono-firing, and e-methane) on the demand side

# Transition Whitepaper projects: Transition Whitepaper 2023 (2)

In this whitepaper, MUFG has developed a list of technologies being explored for implementation to achieve carbon neutrality for electricity and heat in Japan, based on the knowledge gained from engagement activities with clients and the government.
In addition, we have clarified the three components (legitimization, incentivization, evidence with integrity) that must be confirmed when assessing financial feasibility.

## Seven key technologies being explored for implementation to achieve carbon neutrality of electricity and heat in Japan ("Positive Technology List")

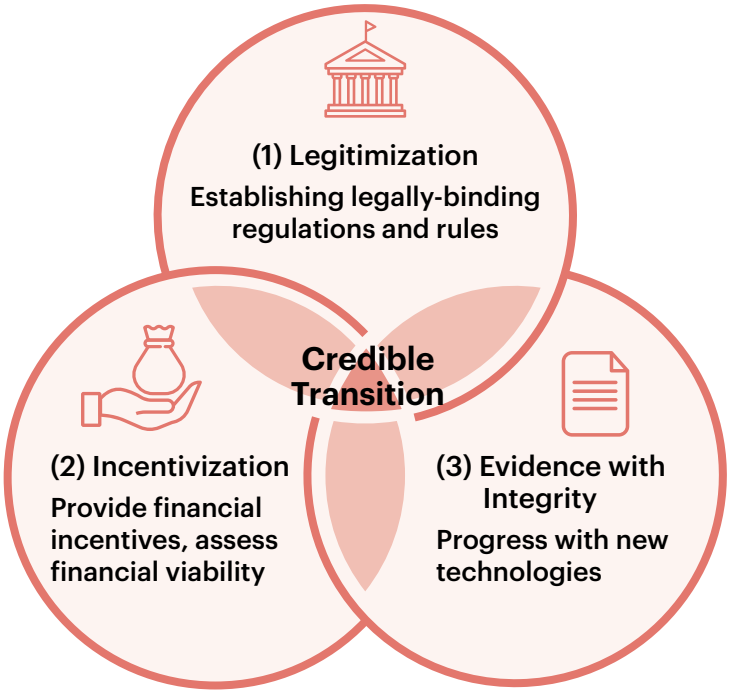
**Pillar 1**
Domestic renewables

1. Wind power
2. Solar power
3. Power transmission and distribution
4. Nuclear energy
5. Industrial electrification (e.g., heat pumps)

**Pillar 2**
Importing foreign renewables

6. Hydrogen-based and biogenic fuels
7. CCUS

## When financing a project, MUFG will examine "business viability" by confirming how well it fulfills the following three components of a credible transition




## Importance of circular economy

- We are working to build a recycling-oriented society that minimizes energy requirements through rigorous energy conservation and careful utilization of resources without disposal, and then supplying green/clean energy to cover shortfalls
- At the same time, it is necessary to increase personal income through productivity improvement in order to pass on the increased costs that are expected to be incurred in the future due to the implementation of carbon neutral technologies

# Transition Whitepaper projects: Asia Transition White Paper 2023 (1)

In November 2023, MUFG announced the Asia Transition White Paper 2023, designed to contribute to decarbonization in Asia. In this document, we took a deep dive into the power sector in Thailand and Indonesia, offering examples of support measures from a financial institution perspective.
We will continue our dialogue with each stakeholder to realize the support measures.

## Whitepaper context and objectives

- MUFG has been actively involved in the field of energy transition in Asia, including participation as lead bank in discussions at the Asia Transition Finance Study Group (ATFSG), which was launched by major financial institutions from ASEAN countries, to support decarbonization in Asia.
- However, capital mobilization is falling far short of the 3.1 trillion U.S. dollars per year which is needed to achieve net-zero emissions in Asia.
- The Asia Transition White Paper 2023 was created to contribute to the acceleration of energy transitions in Asian countries.
- Focusing particularly on Thailand and Indonesia, where MUFG has strategic investments, the report provides a deep dive into the power sector in these two countries, analyzing the bankability and challenges of each decarbonization lever, and offers examples of support measures from a financial institution perspective (see details on the following page).

## Main challenges for the energy transition in Thailand

- Investment is required in power grid infrastructure to integrate more variable of renewable energy
- However, while affordability is important, the cost could be difficult to pass on through electricity tariff, resulting in lower investment returns

- Technical advancement are required to decarbonize the “last mile”
- Public finance is needed to support the massive necessary investment

## Main challenges for the energy transition in Indonesia

- Overcapacity with young fleet of coal assets
- Therefore limits production opportunity of new / additional renewable energy

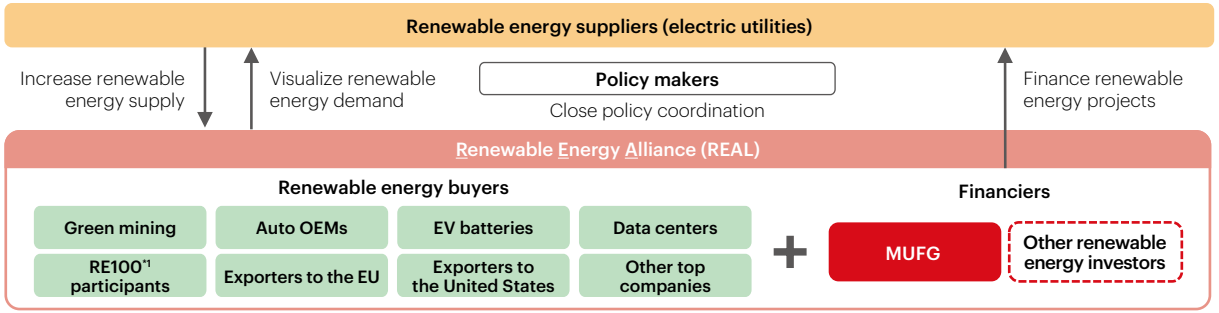
- Large new / upgraded grid infrastructure is required to implement renewable energy
- However, while affordability is important, the cost could be difficult to pass on through electricity tariff, resulting in lower investment returns

- Limited incentives for expansion of energy transition
- Limited public finance incentives to support adoption of new technologies

# Transition Whitepaper projects: Asia Transition White Paper 2023 (2)

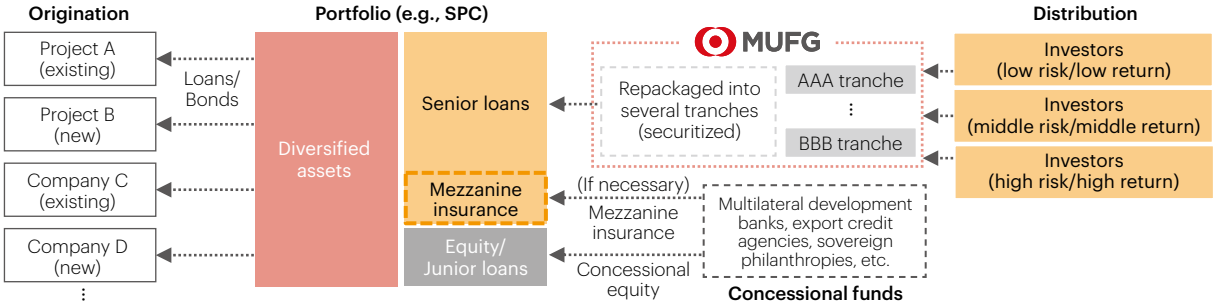
## (1) Stimulate the Green Economy through demand orchestration

- Aim to stimulate the renewable energy economy through aggregation and visualization of renewable energy demand of global companies with net-zero targets
- Enabling investment with improved predictability for renewable energy needs
- Also enables reduction of Scope 2 and 3 emissions of global companies in Thailand / Indonesia, and adoption of measures to comply with carbon taxes in Europe and the United States



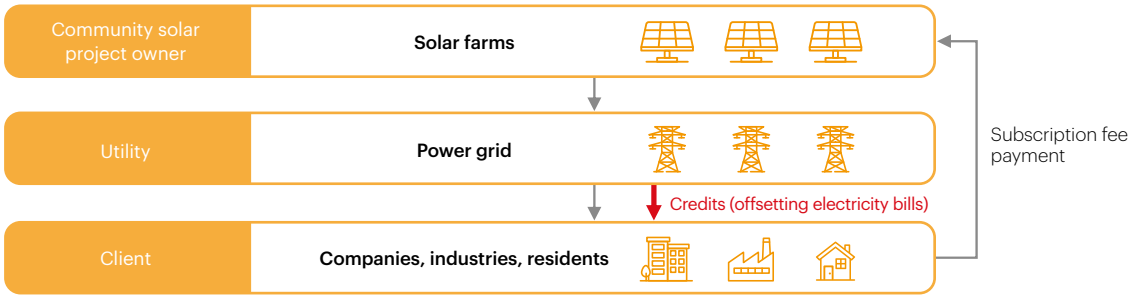

## (2) Mobilizing capital at scale through blended finance

- Blended finance fund platform utilizing concessional finance
- Enabling greater mobilization of finance by providing finance to a portfolio of projects that meet certain conditions, compared to providing finance to individual projects which would require coordination among stakeholders on a deal-by-deal basis
- Senior loans can be designed according to risk tolerance by carving them into multiple tranches and securitization, also providing investment opportunities for secondary market investors




## (3) Introduction of case study in U.S. - Community solar

- Community solar in the United States: Community solar programs*2 enable a wide range of clients to participate in solar power projects
- Providing clients who cannot afford the cost of solar panel installation or who lack land for solar panel installation with the opportunity to participate in solar power generation
- Solar power costs are less than market-based electricity rates, allowing clients to reduce costs




*1 RE100 stands for 100% Renewable Energy and is an international initiative in which companies aim to cover 100% of the electricity used by their own operations with renewable energy.
*2 A system under which specific communities (local communities, organizations, etc.) jointly install and operate solar power generation systems and share the generated power.

# Policy engagement: Partnership with governments and public institutions

MUFG works with governments and public institutions to promote blended financing. We also participate in various domestic and international initiatives and activities to contribute to developing enabling environment where financial institutions can actively support a whole economy transition.

## Promoting blended financing

### JETPs

MUFG is the only Japanese bank participating in both Indonesia and Vietnam Just Energy Transition Partnerships (JETPs) led by G7.
In Asia, emissions from the energy sector accounts for larger part of total emissions compared to Europe and the United States. Therefore, energy transition is inevitable to achieving net-zero emissions in Asia. MUFG, in collaboration with public financial institutions including the Asian Development Bank, will contribute to accelerating energy transition of Asia through various frameworks, including blended finance.

### Participating in the World Bank Private Sector Investment Lab

As the only Japanese bank participating in the World Bank Private Sector Investment Lab(the Lab), MUFG has engaged with senior executives of the World Bank to scale up renewable energy and related infrastructure. Based on the recommendation from the Lab, in February 2024, the World Bank announced a major overhaul to its guarantee business.

### Exploring debt fund framework with NEXI

MUFG has signed an agreement on blended financing with Nippon Export and Investment Insurance (NEXI) for the purpose of supporting decarbonization in Asia.

## Participating in initiatives in Japan and overseas*1

| Initiative | MUFG's role | Operating body |
|---|---|---|
| TCFD Consortium Planning Committee | Committee member | Ministry of Economy, Trade and Industry, Japan; Financial Services Agency, Japan; Ministry of the Environment, Japan; etc. (observers) |
| Taskforce on Preparation of the Environment for Transition Finance | Committee member | Ministry of Economy, Trade and Industry, Japan; Ministry of the Environment, Japan; Financial Services Agency, Japan |
| Study Group on Preparation of Operational Environment to Ensure Proper Use of Carbon Credits toward Achieving Carbon Neutrality | Committee member | Ministry of Economy, Trade and Industry, Japan |
| GX League | Member | Ministry of Economy, Trade and Industry, Japan |
| Asia GX Consortium | Participating member | Financial Services Agency, Japan |
| Working Group on Financial Institutions' Efforts towards the Decarbonization of the Economy | Member | Financial Services Agency, Japan |
| Green Infrastructure Public-Private Partnership Platform Finance Subcommittee | Secretariat | Ministry of Land, Infrastructure, Transport and Tourism, Japan |
| Sustainability Standards Board of Japan | Committee member | Financial Accounting Standards Foundation, Japan |
| Clean Fuel Ammonia Association | Committee member | Clean Fuel Ammonia Association |
| Japan Hydrogen Association (JH2A) | Director | JH2A |
| ASEAN Taxonomy Board Working Group on Taxonomy and Transition | Chair | ASEAN Capital Markets Forum and others |
| Monetary Authority of Singapore (MAS) Sustainable Finance Advisory Panel | Committee member | MAS |
| UNEP FI APAC Advisory Board | Committee member | UNEP FI |
| PRB2030 Core Group | Member | UNEP FI |
| PRB Adaptation Working Group | Member | UNEP FI |

*1 Only includes select initiatives including past activities

# Policy engagement: Activities at COP28

MUFG participated in 26 side-events as a speaker at COP28, including the Japan Pavilion, other Asian countries' pavilions, and other side-events hosted by initiatives such as the Glasgow Financial Alliance for Net Zero (GFANZ) and Net-Zero Banking Alliance (NZBA). Based on our lessons learned from developing the Transition Whitepaper 2023, the Asia Transition White Paper 2023, and client engagements, we articulated the role that financial institutions play in facilitating real economy transitions and the importance of accelerating energy transition in Asia.

## Messages from MUFG

**The role of financial institutions in facilitating real economy transitions**

**Importance of accelerating energy transition in Asia**

| Major speaking events | Host |
|---|---|
| Climate Leaders Assembly | Government of Singapore |
| VietinBank – MUFG MoU Signing | Government of Vietnam |
| President / Prime Minister Event: Japan – UAE MoU Signing | Government of Japan |
| JETP Vietnam Roundtable | Government of Vietnam |
| FSB / GFANZ Roundtable on Net-Zero Transition Planning | GFANZ |
| **Navigating the Energy Transition in Asia** | **Government of Thailand** |
| **Taking action together with ASEAN** | **Government of Japan / Ministry of Economy, Trade and Industry** |
| GFANZ Roundtable on Unlocking Transition Finance | GFANZ, Government of UAE, COP28 Presidency |
| Financing the Transition of High-Emitting Industries | Government of Japan, GFANZ Japan Chapter |
| Decarbonizing Southeast Asia: The Role of Business Sector and Developing Financing Institutions in Materializing Net Zero Ambitions | International Development Finance Club, JICA |

Presented the current status, challenges and MUFG's approach in addressing energy transition of the APAC region to foster understanding of Asia's transitions among global stakeholders


Presentation by Chairman Kanetsugu Mike

Introduced MUFG's transition finance initiatives and emphasized the need for government support, including policy developments and incentives to accelerate public-private partnerships for energy transition in Asia

Presentation by Group Head of GCIB Fumitaka Nakahama

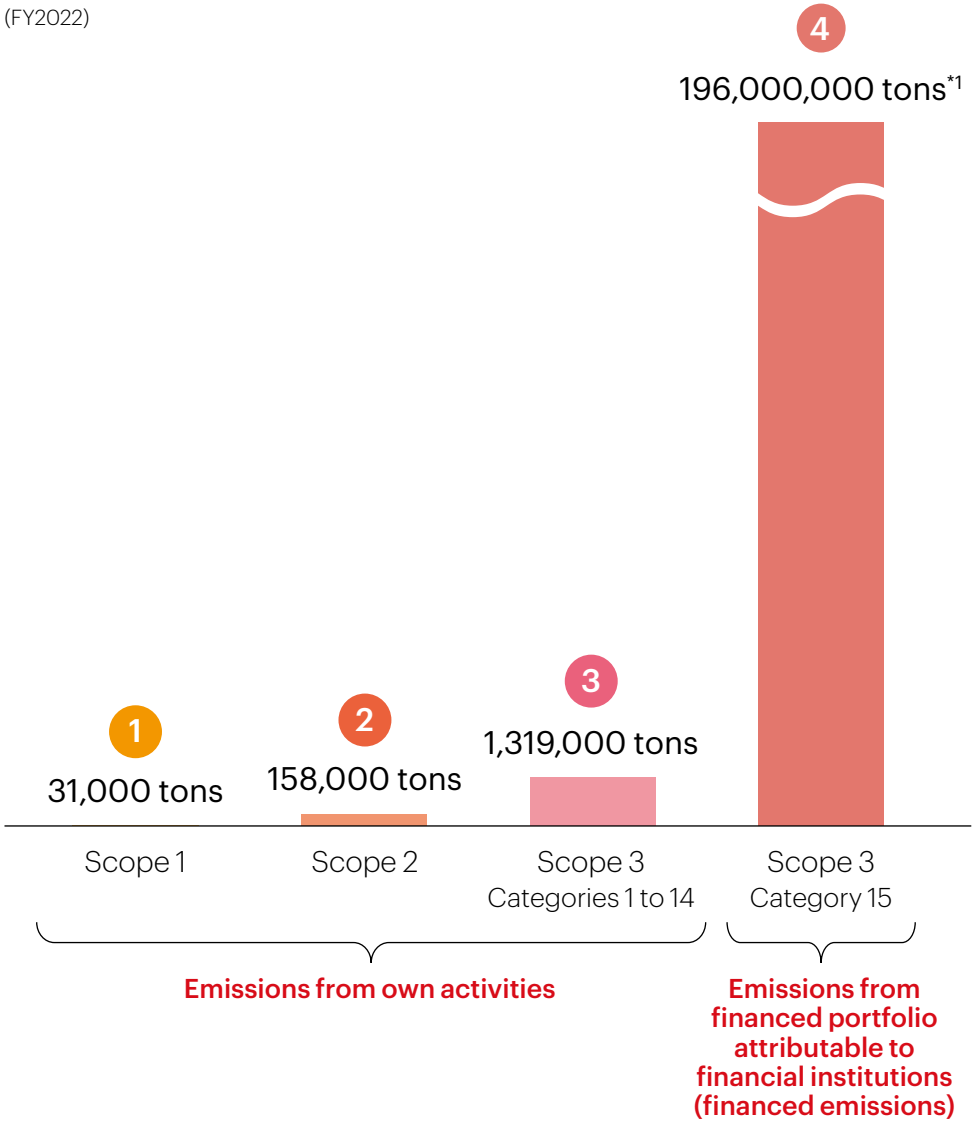
# 3 Reducing emissions from our financed portfolio

## 3.1 Overview of reducing our financed portfolio emissions

# Emissions overview: MUFG's Scope 1, 2, and 3 emissions

The main source of emissions for MUFG is Scope 3, Category 15, reported as financed emissions (FE), which refers to the emissions of portfolio companies attributable to financial institutions. Reducing these emissions is key to achieving carbon neutrality by 2050.

(FY2022)




*1 Total of financed emissions from Scopes 1 and 2 for the Bank's clients/projects. Details on page 42

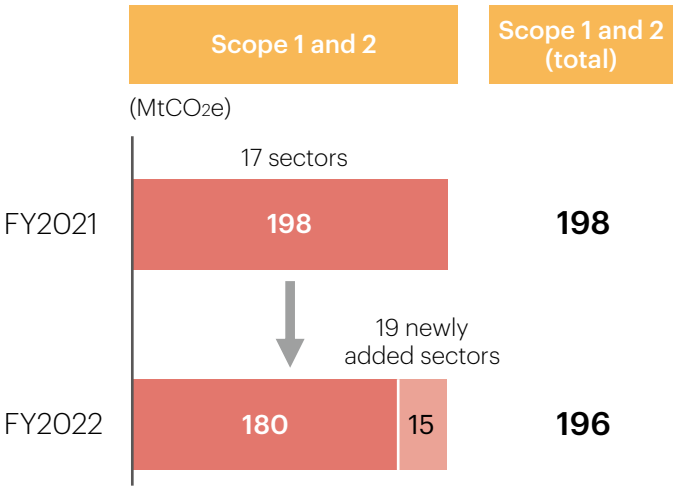
| | | |
|---|---|---|
| 1 **Scope 1** | **Target: Net zero by 2030** | • Emissions from the use of business vehicles, etc.<br>• Main initiatives: Conversion to EVs, etc. |
| 2 **Scope 2** | **Target: Net zero by 2030** | • Emissions from the use of electricity in offices<br>• Main initiatives: Shifting to renewable energy, energy conservation, etc. |
| 3 **Scope 3 Categories 1 to 14** | **Specific initiatives to be considered** | • Emissions from purchased goods, business travel, etc.<br>• Measuring actual emissions in Japan from FY2023 |
| 4 **Scope 3 Category 15** | **Target: Net zero by 2050**<br>**Target: Interim targets by sector** | • Emissions from financed portfolio attributable to financial institutions (financed emissions)<br>• Main initiatives: Engagement, financing, etc. |

# Emissions overview: Financed emissions across the portfolio

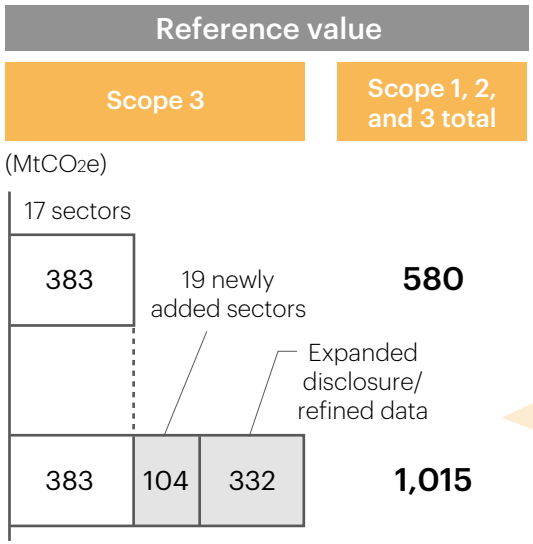
Financed emissions (Scope 1 and 2 emissions by clients/projects) across MUFG's portfolio in FY2022 was 196 $MtCO_2$. Though these emissions were measured for 17 sectors in FY2021, we have expanded to cover all sectors[*1] by adding 19 other sectors in FY2022.
When excluding emissions from the newly added sectors (15 $MtCO_2e$), financed emissions decreased by 18 $MtCO_2e$ year on year.

## Financed emissions of our portfolio by scope

### Year-on-year




### Reference value




Scope 3 increases as companies expand disclosure and refine data. Also, there are many overlaps of emissions across the value chain. (E.g., Scope 3 for oil & gas overlaps with Scope 1 for other industries and Scope 3 for automobiles; Scope 1 for power overlaps with Scope 2 for other industries)

**Increase factors among oil & gas and capital goods**

- Oil & gas: Financed emission calculations for midstream and downstream companies were refined by switching from estimates to company-disclosed values.
- Capital goods: Corporate disclosure was expanded (expansion of calculation scope), and emission calculations were refined by switching from estimates to company-disclosed values. Scope 3 becomes particularly large because it includes lifetime emissions from facilities such as thermal power plants manufactured and sold by heavy electric machinery manufacturers.

### Details by sector

| | $MtCO_2e$ | Oil & gas | Coal | Electric utilities | Aviation | Maritime transportation | Rail transportation | Trucking services | Automobiles & components | Metals & mining | Chemicals | Construction materials | Capital goods | Real estate management & development | Beverages | Agriculture | Packaged foods & meats | Paper & forest products | Others | TCFD total | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FY2021 | Scope 1 and 2 | 35[*2] | 0.2 | 85 | 13[*3] | 12[*3] | 0.4 | 0.5 | 3 | 23 | 9 | 3 | 2 | 1 | 0.3 | 2 | 5 | 2 | | 198 | |
| | (Reference value) Scope 3 | 99[*2] | 0.4 | 29 | 4[*3] | 6[*3] | 0.5 | 4 | 73 | 27 | 25 | 2 | 93 | 2[*3] | 2 | 1 | 11 | 3 | | 383 | |
| FY2022 | Scope 1 and 2 | 36 | 0.2 | 73 | 13 | 10 | 0.5 | 1 | 3 | 20 | 11 | 5 | 2 | 0.4 | 0.3 | 1 | 4 | 2 | 15 | 180 | 196 |
| | (Reference value) Scope 3 | 135 | 0.3 | 32 | 4 | 5 | 0.9 | 4 | 75 | 28 | 26 | 2 | 380 | 2 | 2 | 1 | 17 | 2 | 104 | 716 | 819 |

*1 Financed emissions are calculated across the portfolio for the Bank's corporate finance, project finance, aviation finance, ship finance, and real estate non-recourse loans using methodology provided by the Partnership for Carbon Accounting Financials (PCAF). Data excludes sovereign issuers and clients with unknown industry classification. Industry classifications are based on GICS and organized by TCFD sector, which differs from how interim target clients are organized.
*2 Due to partial revision to emission data, the disclosed data for the previous fiscal year has been revised (Scope 1 and 2: 34 → 35; Scope 3: 97 → 99).
*3 FE for aviation finance, ship finance, and real estate non-recourse loans, which were not included in the scope of measurement in the previous fiscal year, were measured this fiscal year. Therefore, data for FY2021 disclosed in the previous fiscal year were revised retroactively. ([Aviation] Scope 1 and 2: 4 → 13; Scope 3: 2 → 4; [Marine transportation] Scope 1 and 2: 8 → 12; Scope 3: 4 → 6; [Real estate] Scope 3: 1 → 2)

# The MUFG Carbon Neutrality Declaration and the NZBA

In May 2021, we announced the MUFG Carbon Neutrality Declaration, committing to achieving net zero GHG emissions from our financed portfolio by 2050. Additionally, MUFG joined the NZBA in June 2021. Based on the guidelines established by the NZBA, we have been using four approaches to set interim targets by sector.

## May 2021 MUFG Carbon Neutrality Declaration

- **Achieving net zero GHG emissions from our financed portfolio by 2050**
- Achieving net zero GHG emissions from our own operations by 2030

## June 2021 Joined the NZBA

- NZBA members share a common goal: net zero financed portfolios by 2050. Members are also required to set interim targets for 2030 or earlier using a science-based approach.
- In addition, interim targets must be set for several major carbon intensive sectors within 18 months from joining, and for most carbon intensive sectors within 36 months. Furthermore, members are required to disclose progress toward target achievement on an annual basis.
- In April 2024, MUFG completed setting interim targets for nine carbon intensive sectors, including subsectors, and discloses the progress annually.

## Four approaches for setting interim targets

### Science-based approach

Following the NZBA guidelines and comparing with science-based scenarios, MUFG ensures that interim targets for 2030 are at levels aligned with the Paris Agreement.

### Standardized and highly transparent approach

MUFG believes that targets should be set from a **global perspective using widely accepted and transparent methods.** We participate in various initiatives and refer to guidelines as we set targets.

### Data quality approach

**We use the best available data to set targets.** However, there are limits to the amount and quality of data currently available, so the Partnership for Carbon Accounting Financials (PCAF) Data Quality Score is used to check the data quality.

### Sector-specific approach

Pathways and processes to achieve carbon neutrality vary by sector, so **for each sector we take into consideration the characteristics of the business, the guidelines, and the targets set by each client.**

# Measures to reduce emissions from our financed portfolio

To achieve carbon neutrality by 2050, it is essential to reduce emissions from the financed portfolio, which is the main overall source of emissions for MUFG. In order to reduce such emissions, MUFG is focusing on: (1) setting interim targets by sector, (2) controls to achieve interim targets, and (3) sector-specific approaches to achieve interim targets.

## Measures to reduce emissions from our financed portfolio

**1** Setting interim targets

▶ Chapter 3.2

**MUFG checks business characteristics and guidelines for each individual sector, as well as clients' target-setting status, and sets targets accordingly**

- Select sectors in scope
- Determine methods (value chain, emission scope, indicators)
- Set 2030 interim targets

**2** Controls to achieve interim targets

▶ Chapter 3.3

**MUFG evaluates clients' transition status and monitors their progress**

- Client transition assessment and transaction screening process
- Monitor progress against targets

**3** Sector-specific approaches to achieve interim targets

▶ Chapter 3.4

**MUFG develops and executes action plans to achieve targets**

- Understand the current status of each sector, sort out approaches toward FY2030, and provide financing and other support

# 3 Reducing emissions from our financed portfolio

## 3.2 Setting interim targets

# Interim targets by sector

MUFG has set interim targets in the following sectors in accordance with NZBA guidelines.

| Sector | Targets | Emissions scope | Target financing | Indicators | Baseline | | FY2022 results | | | Targets*3 (FY2030) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Baseline year | Baseline emissions | Emissions | Coverage of emissions in scope*1 | PCAF score*2 | |
| Power | Power generation companies | Scope 1 | Corporate loans*4 and Project finance | Emission intensity | 2019 | 328g $CO_2e$/kWh | 313g $CO_2e$/kWh | 87% | 1.8 | 156g–192g $CO_2e$/kWh |
| Oil & gas | Upstream producers | Scope 1, 2, and 3 | Corporate loans and Project finance | Absolute emissions | 2019 | 84Mt$CO_2e$ | 81Mt$CO_2e$ (-5%) | 86% | 1.7 | -15%–-28% |
| Commercial real estate | Developers/REITs/ SPVs*5 | Scope 1, 2, and 3 (Category 13) | Corporate loans and non-recourse loans | Emission intensity | 2020 | 65kg $CO_2e/m^2$ | 56kg $CO_2e/m^2$ | 73% | 2.3 | 44kg–47kg $CO_2e/m^2$ |
| Residential real estate | Mortgage debtors | Scope 1 and 2 | Mortgages | Emission intensity | 2020 | 27kg $CO_2e/m^2$ | 25kg $CO_2e/m^2$ | | 5.0 | 23kg $CO_2e/m^2$ |
| Steel | Steel manufacturers | Scope 1 and 2 | Corporate loans | Absolute emissions | 2019 | 22Mt$CO_2e$ | 16Mt$CO_2e$ (-25%) | 86% | 1.3 | -22% |
| Shipping | Maritime operators | Scope 1 | Ship finance | Portfolio climate alignment (PCA) score*6 | 2021 | Former standard: PCA 0.6% | New standard: PCA 26.2% (Minimum) New standard: PCA 30.9% (Striving) | 85% | - | PCA≤0 |
| New Automotive | Automotive manufacturers | Scope 3 (Category 11) | Corporate loans | Emission intensity | 2021 | 169g $CO_2$/vkm | - | - | - | -23%–-46% |
| New Aviation | Airline companies | Scope 1 | Corporate loans and aviation finance | Emission intensity | 2021 | 130g $CO_2$/RPK | - | - | - | 71g $CO_2$/RPK |
| | Aircraft lessors | Scope 3 (Category 13) | | | | | | | | |
| New Coal | Mining operators*7 | Scope 1, 2, and 3 | Corporate loans | Credit balance | 2022 | Approx. 3 billion yen (Approx. 12 billion yen for non-OECD countries) | - | - | - | Zero (2040 for non-OECD countries) |

*1 Ratio of financing amounts for which actual results are measured to total financing amounts subject to measurement
*2 PCAF's own five-point scale scoring system that indicates the quality of the disclosed data. Scores are determined according to the degree of estimation, with Score 1 as the highest rank.
*3 Referenced scenarios are listed on each sector's respective page. *4 Including undrawn-committed amounts *5 Special purpose vehicles for real estate securitization
*6 PCA score based on the emissions intensity of vessels in scope of ship finance *7 Business operators primarily engaged in mining thermal coal for power generation

# Target-setting process

MUFG has set 2030 interim targets by sector through a process of ❶ selecting methodology, ❷ calculating baseline year results (baseline), ❸ estimating reduction trajectory (forecast), and ❹ setting 2030 interim targets.

## ❶ Selecting methodology

Determining scope of target-setting with reference to clients' disclosures and guidelines (from NZBA, PACTA, and SBTi), etc.

- Value chain, emissions scope (Upstream and downstream, Scope 1, 2, and 3)
- Target indicator (absolute emissions or emission intensity)

## ❷ Calculating baseline year results (baseline)

Collecting emissions data from clients and calculating baseline year results for the entire portfolio to serve as a baseline for targets

## ❸ Estimating reduction trajectory (forecast)

Forecasting emission reduction trajectory for the entire portfolio, based on clients' reduction targets, etc.

## ❹ Setting 2030 interim targets

Finalizing reduction targets for the portfolio by selecting reference scenarios after taking into account reduction forecast

### Main target indicators

**Absolute emissions ($tCO_2e$)**
= Financed emission

Calculated by multiplying the client's absolute emissions by MUFG's share of credit to the client (Attribution factor)

**Emission intensity ($tCO_2e$/activity volume)**

Absolute emissions divided by activity volume*1

### Calculation method

$$\text{Absolute emissions for Company A} \times \frac{\text{Credit balance for Company A}}{\text{Debt + equity for Company A}}$$

Attribution factor

$$\frac{\text{Absolute emissions for Company A}}{\text{Activity volume for Company A}}$$

*1 The unit for activity volume differs by sector (e.g., electricity generation in the power sector, distance traveled in the automotive sector and the aviation sector, and floor area in the real estate sector).

# Selecting sectors in scope: Approach

MUFG has selected target setting sectors from carbon intensive sectors as defined by the NZBA based on three criteria: transition risk, materiality in the portfolio, and feasibility of setting targets (targets were not set for cement, aluminum, or agriculture). This has enabled us to meet our commitment to set interim targets based on NZBA guidelines in April 2024.

| NZBA carbon intensive sectors | Transition risk: High/ Mid-High | Materiality in the portfolio: MUFG's FE*1 FY2022, $MtCO_2e$ | Materiality in the portfolio: MUFG's total loan amount*4 FY2022, Bn$ | Feasibility of target setting: Maturity of methodology | Feasibility of target setting: Status of clients' target setting | Sectors with interim targets |
|---|---|---|---|---|---|---|
| 1 Power | ✓ | 104 | 58 | Mature | High | ✓ |
| 2 Oil & gas | ✓ | 171 | 48 | Mature | Middle | ✓ |
| 3 Steel | | 21 | 12 | Mature | High | ✓ |
| 4 Real estate*2 | | 3 | 74 | Mature | High | ✓ |
| 5-1 Automotive | | 77 | 59 | Mature | High | ✓ |
| 5-2 Shipping*3 | | 14 | 14 | Mature | High | ✓ |
| 5-3 Aviation | | 17 | 18 | Limited | High | ✓ |
| 6 Coal | ✓ | 0.6 | 0.4 | Mature | Middle | ✓ |
| 7 Cement | | 4 | 2 | Mature | Middle | |
| 8 Aluminum | | 0.4 | 0.4 | Under development | Low | |
| 9 Agriculture | | 2 | 1 | Under development | Low | |

*1 Total financed emissions (FE) by portfolio companies for Scope 1, 2, and 3 *2 Excludes mortgages *3 Includes maritime transportation companies *4 Outstanding loan balance as of March 31, 2023 (including undrawn-committed amounts)

# Selecting sectors in scope: Approach to the value chain (1)

: Scope for target setting

| Sector | Target scope in the value chain | | | | |
|---|---|---|---|---|---|
| Power | | Generation | Transmission | Use | Total |
| | Share of emissions | 96% | 4% | —*1 | 100% |
| | Key players | Power generation companies*2 | Power transmission companies | Users | |
| | Emissions scope from power utilities | Scope 1 | Scope 3 | Scope 1 | |
| Oil & gas | | Production & refining | Transport & processing | Use | Total |
| | Share of emissions | 18% | | 82% | 100% |
| | Key players | Oil companies | Transport companies | Users | |
| | Emissions scope from oil companies | Scope 1 and 2 | Scope 3 | Scope 3 | |
| Steel | | Raw material procurement | Steel production | Use | Total |
| | Share of emissions | 11% | 77% | 12% | 100% |
| | Key players | Raw materials companies | Steel companies | Users | |
| | Emissions scope from steel companies | Scope 3 | Scope 1 and 2 | Scope 3 | |
| Real estate | | Materials & construction | Residence/use | Reconstruction & refurbishment | Demolition | Total |
| | Share of emissions | 22% | 75% | 2% | 1% | 100% |
| | Key players | Construction companies | Real estate owners | Construction companies | Demolition companies | |
| | Emissions scope from real estate owners: Properties owned | Scope 3 | Scope 1 and 2 | Scope 3 | Scope 3 | |
| | Emissions scope from real estate owners: Leased assets | | Scope 3 Category 13 | | | |

*1 No new emissions from electricity use, same as Scope 1
*2 Scope 2 is excluded from scope due to low emissions share and immaterial impact.

Sources: CDP; Japan Iron and Steel Federation; White Paper on Land, Infrastructure, Transport and Tourism in Japan; National Maritime Research Institute, Japan

# Selecting sectors in scope: Approach to the value chain (2)

: Scope for target setting

| Sector | Target scope in the value chain | | | | |
|---|---|---|---|---|---|
| Automotive*1 | | Parts manufacturing | Complete vehicle manufacturing | Driving & use | Total |
| | Share of emissions | 20% | 1% | 79% | 100% |
| | Key players | Auto parts companies | **Auto OEMs** | Auto owners | |
| | Emissions scope from OEMs | Scope 3 | Scope 1 and 2 | Scope 3 | |
| Shipping | | Parts manufacturing | Shipbuilding | Operation & use | Total |
| | Share of emissions | Less than 1% | 2% | 98% | 100% |
| | Key players | Shipping parts companies | Shipbuilders | **Operators*2** | |
| | Emissions scope from operators | Scope 3 | Scope 3 | Scope 1 | |
| Aviation | | Parts manufacturing | Aircraft manufacturing | Operation & use | Total |
| | Share of emissions | 2% | Less than 1% | 98% | 100% |
| | Key players | Aircraft parts companies | Aircraft manufacturers | **Operators*2** | |
| | Emissions scope from operators | Scope 3 | Scope 3 | Scope 1 | |

*1 Though OEMs are the scope for target setting with regard to automotive sector, Scope 3 (emissions from fuel use and driving) is the target scope
*2 Scope 2 is excluded from the target scope due to low emissions share and immaterial impact.

Sources: CDP, Greenhouse Gas Protocol

# 3 Reducing emissions from our financed portfolio

## 3.3 Controls to achieve interim targets

# Operating framework for effective management

MUFG has implemented a transition assessment framework, which evaluates our clients' transition status, and a transaction screening process in order to provide managed transition support. We monitor the progress toward achieving our 2030 interim targets as we strengthen our client engagement activities through these activities, and we are implementing an escalation process that will apply to clients with whom we are unable to confirm any specific plans or directions for transition.
The Transition Plan Monitoring Meeting, jointly chaired by the CSO and CRO, will verify the effectiveness of these frameworks and the progress of our transition plan.

## Operating framework for effective management

### Managing transition support

**Transition assessment framework**

Based on targets, governance, and emissions performance of carbon intensive sector clients who have 2030 interim targets

**Transaction screening process**

- Environmental and Social Policy Framework
- Transition screening to conduct deeply scrutinized transition assessments
- Following the Equator Principles
- Assessment of climate change risk

### Monitoring process to achieve 2030 interim targets

**FE monitoring**

**Progress towards 2030 interim targets**

Using available data and information, dynamically checking progress toward achieving the 2030 interim targets while taking into account market trends, and discussing appropriate actions

**FE of entire portfolio**

Regularly monitoring FE for the entire financed portfolio (including all of clients' Scope 1, 2, and 3 emissions)

**Sustainability Risk Management Office (New)**

Under our Group CRO, this second-line organization manages sustainability risk, including climate change, across the organization

**Strengthening engagement by communicating MUFG's commitment to net zero**

**Escalation process**

Review credit terms & conditions for clients with no specific plans or directions for transition despite our engagement

## Monitoring the transition plan

The Transition Plan Monitoring Meeting, jointly chaired by the CSO and CRO, will be held biannually to verify the effectiveness of the operating framework and the progress of our transition plan. The operating framework will be updated as appropriate to ensure effectiveness

# Transition assessment framework: Overview

MUFG assesses the transition status of clients in carbon intensive sectors, looking at areas such as 1.5°C alignment with interim targets, transition plans, climate-related governance structure, and past emission reduction records. In addition to this assessment, other information obtained through engagement activities are reflected in the six-tier category to evaluate our clients' transition progress.

## Transition Assessment scope: Clients in sectors subject to MUFG 2030 interim targets

**Assessment of transition status based on external information**

| Assessment categories | Key points |
|---|---|
| **Targets** | **Net zero targets, interim targets (e.g., science-based 1.5°C alignment), transition plans, etc.** |
| **Governance** | **Climate change-related oversight body, climate-related risk management processes, etc.** |
| **Emissions** | **Reductions from the baseline year to the reporting year, etc.** |

+

Evaluations also incorporate information gained through engagement activities. In particular, for the power and upstream oil & gas sectors, where transition risks are high, plans for decarbonization and key technologies supporting this target are confirmed in greater detail.

### Six-tier category for transition assessment

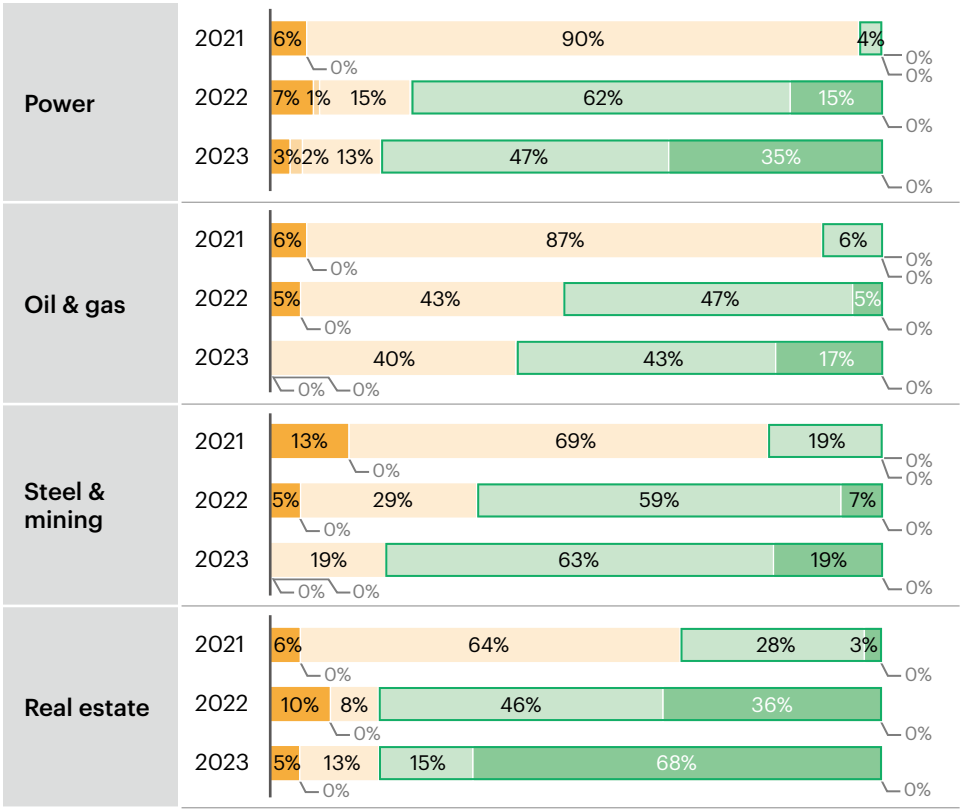
High potential ↑ Low potential

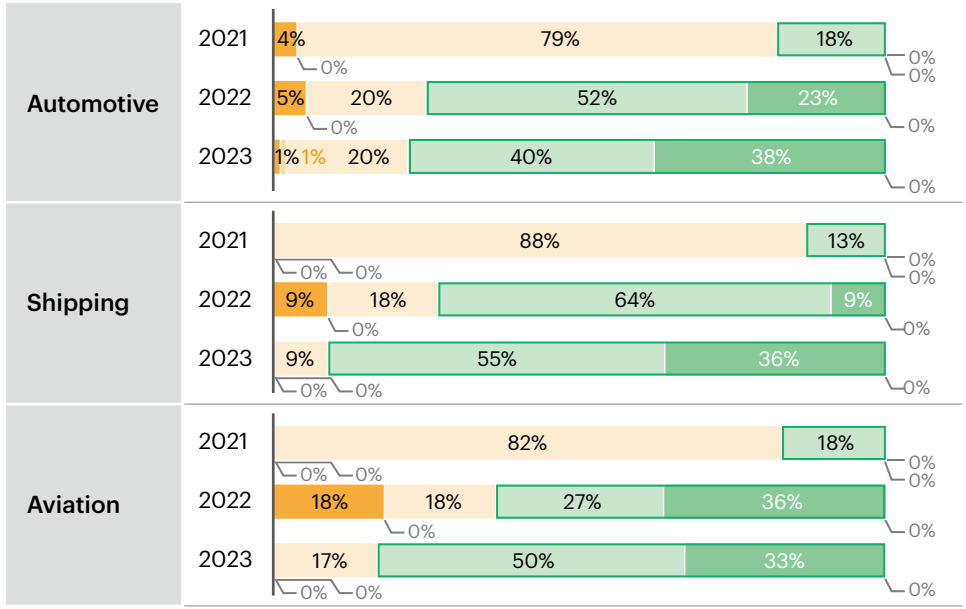
| | |
|---|---|
| 1 | Reliable pathway to net zero by 2050 |
| 2 | Interim targets consistent with the Paris Agreement and based on scientific evidence are in place, and progress is being made toward net zero |
| 3 | Interim targets are in place and efforts are underway toward reaching net zero |
| 4 | There is a 2050 net zero target (but no interim target) |
| 5 | There is a net zero target (but not for 2050) |
| 6 | No net zero target |

# Transition assessment framework: Assessment results

Through engagement activities, MUFG checks on clients' transition status and provides support to accelerate towards net zero. With regard to carbon intensive sectors for which 2030 interim targets have been set by MUFG, the percentage of clients who are working toward transitions increased from 2022 to 2023.

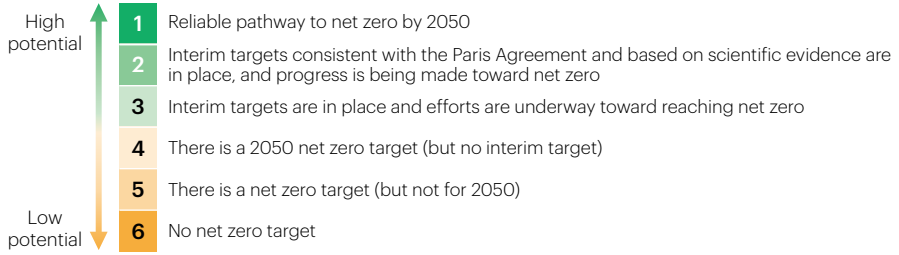
## Transition Assessment*1




*1 Among clients subject to 2030 interim targets, MUFG conducted transition evaluations based on CDP data for each year with confirmation via client division representatives

### Six-tier category for transition assessment



# Transaction screening process: Environmental and Social Policy Framework / Transition Screening

When considering an individual project, we apply the Environmental and Social Policy Framework to appropriately identify and manage environmental and social risks. For the fossil fuel sector, which is particularly important for the transition, we have set policies to prohibit financing new projects or expansion of existing projects and to reduce GHG emissions. Furthermore, we have implemented a transition screening mechanism for projects that require specialized transition assessments where several expert departments collaborate to determine how to handle such project.

## Environmental and Social Policy Framework

### Prohibited transactions

- Illegal transactions and transactions for illegal purposes
- Transactions which violate public order and good morals
- Transactions that negatively impact wetlands designated under the Ramsar Convention
- Transactions that negatively impact UNESCO designated World Heritage Sites
- Transactions violating the Washington Convention
- Transactions involving the use of child labor, forced labor, or human trafficking
- Cluster munitions and inhumane weapons manufacturing

### Transactions of High Caution

| | | |
|---|---|---|
| **Cross-sector guidelines** | • Transactions that negatively impact indigenous communities<br>• Land expropriation leading to involuntary resettlement<br>• Transactions that negatively impact high conservation value areas<br>• Transactions that cause or contribute to, or directly link with, violation of human rights in conflict areas | |
| **Sector-specific guidelines** | • Coal-fired power generation<br>• Mining<br>• Oil & gas (oil sand, development of the Arctic, shale oil & gas, oil & gas pipelines) | • Large hydropower generation<br>• Biomass power generation<br>• Forestry<br>• Palm oil |

For “Transactions of High Caution”, if a client’s environmental and social management approach is not considered sufficient relative to the level of the potential risks or impacts, financing will not be provided.

### Policy for fossil fuel-related sectors

**Coal-fired power generation**

**MUFG does not provide financing to new coal-fired power generation projects or expansion of existing facilities.** However, coal-fired power generation equipped with CCUS, mixed combustion, and other technologies necessary to achieve the Paris Agreement target may be considered on an individual basis.

**Mining (coal)**

**We do not provide any financing for new thermal coal mining projects for power generation** since we recognize that the development of new coal mines to supply thermal coal for power generation projects could result in an increase in GHG emissions in the future.

**Oil & gas**

Oil & gas are essential to our society and daily lives as energy sources, but **we must be aware of their effect on climate change through GHG emissions. We assess clients for development related to oil sands, the Arctic, shale oil & gas, and oil & gas pipelines to check whether development is conducted in an environmentally and socially responsible manner.**

+

### Transition screening

**Screening is conducted by several expert departments for transactions that require deeply scrutinized transition assessments.**

# Transaction screening process: Handling conventional oil & gas projects

The Environmental and Social Policy Framework identifies oil & gas sector as a sector that requires consideration of climate change impacts caused by GHG emissions. This framework defines unconventional projects such as oil sands, oil and gas development in the Arctic, and shale oil and gas as "Transactions of High Caution". Transition risks and estimated GHG emissions amount of conventional oil and gas projects are confirmed through compliance with the Equator Principles, if applicable.
Furthermore, through assessment of climate change risks, MUFG confirms the projects' alignment with regional/national transition strategy, sponsor transition strategies, and technology-specific environmental impacts.

## Requirements under the Equator Principles

**For projects with GHG emissions (Scope 1 and Scope 2) expected to be more than 100,000 $tCO_2e$ annually, the following are required:**

| | |
|---|---|
| **Consideration of transition risk** | It must be assessed at a high level on what are the current and anticipated transition risks of the project's operations , and how to manage these risks (mitigate, transfer, accept, or control) |
| **Alternative analysis** | • Evaluation of technically and financially feasible and cost-effective options available to reduce project-related GHG emissions during the design, construction, and operation of the project is required<br>• Based on the analysis justifications on why the technology (or fuel or energy sources) has been selected must be provided |
| **Disclosure of GHG emission levels** | Publicly reporting on annual GHG emissions levels (Scope 1 and Scope 2) and GHG efficiency ratio for energy-intensive industries, as appropriate, throughout the operational phase of the project |

## Assessment of climate change risk

**We established check points and criteria for upstream oil & gas development and pipelines**

**Key points to check**

**Alignment with regional/national transition strategies**
Checking that the target project is aligned with the respective region's transition strategy, taxonomy, NDC, etc.

**Sponsor transition strategies**
Checking major sponsors' transition strategies and sustainability strategies

**Technology specific environmental impact**
Checking that technologies applied in the project are not obsolete technologies with high environmental impact

# 3 Reducing emissions from our financed portfolio

## 3.4 Sector-specific approaches to achieve interim targets

# Interim target by sector: Power

## Sector characteristics

During the transition towards a decarbonized society, the demand for electricity is expected to increase. Therefore, the power sector will need to shift to renewable energy and low-carbon fuels, while ensuring a stable supply of energy. The policies and initiatives of each country are important because it is a "locally produced and consumed" business model and it is an industry which has strong regional characteristics.

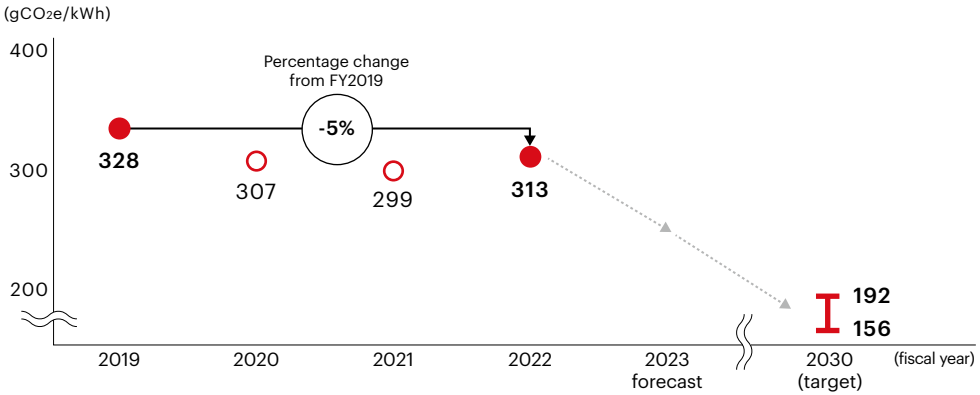
## Interim target

- Emission intensity, which indicates GHG emission efficiency, is used as the target metric due to the necessity to support both increasing electricity demand and promote the use of clean energy.
- Assuming that each company will achieve NDCs for the respective countries, which is essential to achieve the goals of the Paris Agreement, we will reach 192 $gCO_2e$/kWh by supporting the decarbonization of our clients.
- In addition to decarbonizing our clients, we aim to achieve 156 $gCO_2e$/kWh, aligned with the 1.5°C scenario, through active support for renewable energy on a global basis.

| Baseline emissions (FY2019) | 2030 interim target |
|---|---|
| 328 $gCO_2e$/kWh | 156-192 $gCO_2e$/kWh |

Aim for IEA 1.5°C alignment and stay well below IEA 2°C

## Progress




- In FY2022, the emission intensity of the power sector was 313 $gCO_2e$/kWh. Steady progress has been made by our clients, with an approximately 5% decrease compared to the FY2019 baseline level of 328 $gCO_2e$/kWh. Compared to FY2021, emissions rose by roughly 5%, due to one-time factors such as the sale of MUFG Union Bank shares and a temporary increase in credit to companies with high emissions intensity.
- Most recently, progress in emission reduction has been made by our clients' lower emission intensity and increased renewables support. Toward FY2030, we aim to achieve our targets by supporting clients achieve NDCs for each country and project financing for renewables.

## Approach to achieve interim target

### Financing support through engagement

- We provide financing support through discussions with our clients' transition strategy, and by considering each country's decarbonization policies and available technologies.
- We drafted the Transition Whitepapers and the Asia Transition White Papers through dialogue with major power utilities in Japan and Asia. Also, we have made policy suggestions through participation in government study groups. Through these activities, we have supported our clients' decarbonization activites by engaging with the power sector on issues such as the introduction of renewable energy and zero-emission thermal power generation.

### Promoting renewable energy projects

- Leveraging our track record and expertise as a leading company for supporting renewable energy projects, we will promote financing support for the target of tripling the amount of renewable energy introduced globally by 2030, adopted in COP28.

### Progress management and monitoring

- Limiting growth of portfolio emissions intensity through policy prohibiting transactions for new construction or expansion related to coal-fired power plants
- Assessing the transition status of each company based on the transition assessment framework and regularly managing progress on targets at monitoring meetings

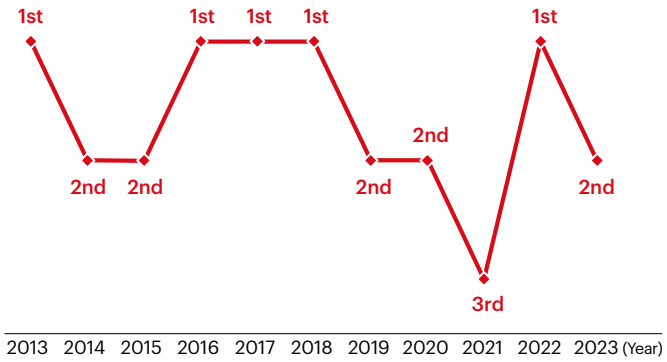
# Interim target by sector: Power (key measures)

## Financing support through engagement

| | |
|---|---|
| **Company A (Japan)** | **Support with transition-linked loans**<br>We have deepened our understanding of the company's strategy to decarbonize by accelerated development of renewable energy and transition to hydrogen power generation through engagements such as continuous discussions with senior management, and site-visits to power plant facilities. Furthermore, by leveraging the knowledge gained through the preparation of the Transition Whitepaper, we have originated transition-linked loans which sets power generation emission reductions as the sustainability performance target (SPT)*1. |
| **Company B (APAC)** | **Support with sustainability-linked loans and green loans for renewable energy project**<br>The company's group has set a goal of becoming net zero by 2050 and has established mid- to long-term emission reduction targets in key businesses and growth areas toward achieving its goals. MUFG established a mixed team of sales, product offices, and sector coverage to engage in continuous dialogue with the group's parent and subsidiary power and telecommunications companies, and has originated green loans for the parent's first sustainability-linked loans (SLL) and for overseas renewable energy projects. |

## Promoting project finance for renewable energy projects

### League table for renewable energy project finance arranger




Source: BloombergNEF ASSET FINANCE /Lead Arrangers LEAGUE TABLE

### Renewable energy projects (example)

| Country | Project type | Overview |
|---|---|---|
| Japan | Offshore wind | Supported all the offshore wind power projects in Japan, including the Akita Offshore Wind project. |
| | Solar | Arranged project finance for the first distributed solar power plant project based on a corporate purchase power agreement (PPA) in Japan. |
| United States | Transmission lines | Provided project finance for underground and underwater transmission line projects, increasing renewable energy transmission capacity in the New York metropolitan area. |
| Portugal and Spain | Solar and wind | Supported the largest onshore wind and solar power plant in the Iberian Peninsula via refinancing. |
| India | Solar, wind and energy storage | Supported a round-the-clock scheme of hybrid wind and solar power renewables including energy storage technology in India, enabling stable supply of electricity 24 hours a day. |
| Australia | Wind | Originated project finance to support the acquisition of wind farm portfolio for one of the largest renewable energy developers in Australia. |

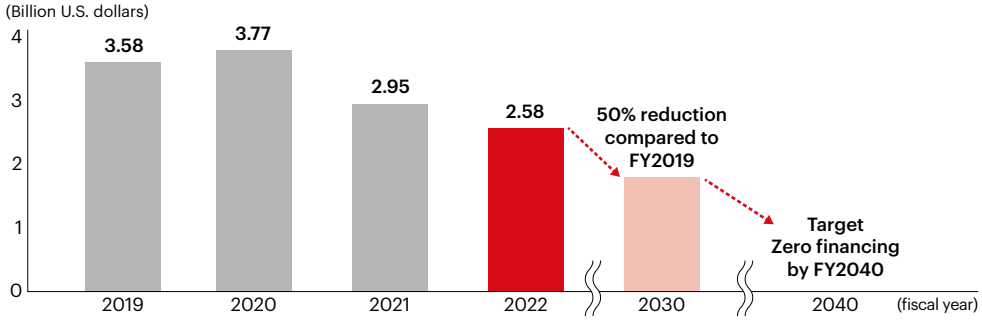
*1 Sustainability targets over a time horizon set in advance by the bond issuer or loan borrower.

# Interim target by sector: Power (key measures)

## Promote reducing the emissions intensity of our portfolio by setting reduction targets for credit exposure of coal-fired power plants and monitoring the progress

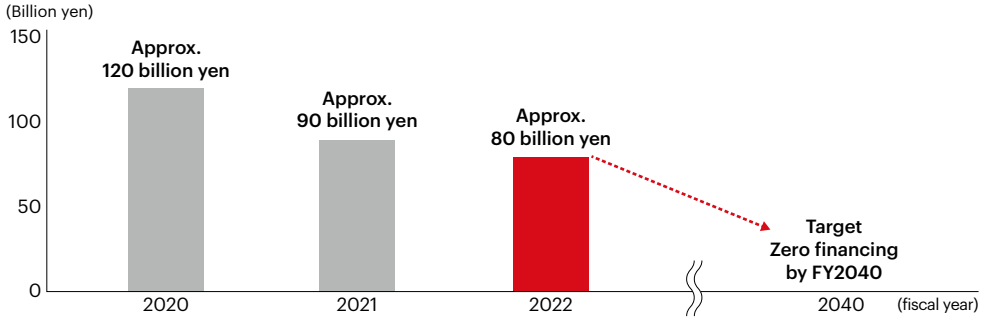
### Project financing for coal-fired power plants

**Target: 50% reduction by FY2030 compared to FY2019, zero financing by FY2040**




### Corporate financing for coal-fired power plants

**Target: Zero financing by FY2040**



# Interim target by sector: Oil & gas

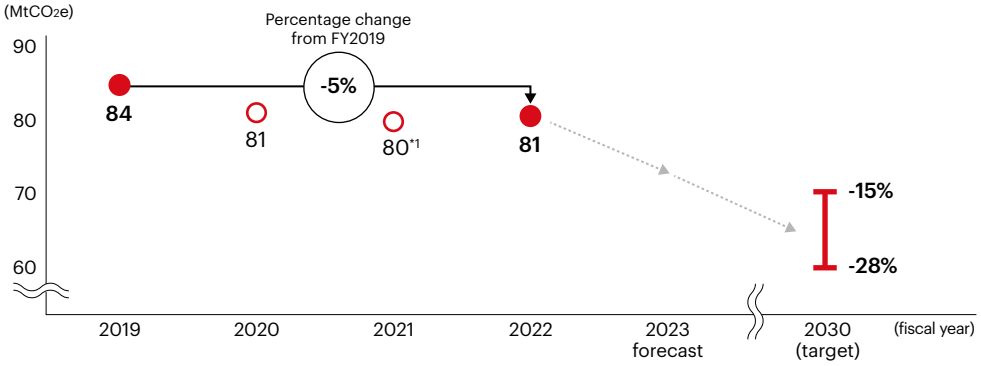
## Sector characteristics

To decarbonize the oil & gas sector, electrification in the production process for the upstream production business and CCUS are considered emission reductions options. On the other hand, a large amount of this sector's GHG emissions is due to demand side cross-industrial consumption, indicating that emission reductions in the oil & gas sector cannot be achieved without industries and households transitioning away or reducing use of fossil fuels.

## Interim target

- Focusing on directly capturing the volume of GHG emissions, absolute emissions are used as the target metric.
- We will achieve a 15% reduction rate by decarbonizing clients and supporting them through engagement.
- To achieve a 28% reduction rate, progress must be made on two fronts: ambitious targets setting and initiatives for achievement from the supply-side clients in the oil & gas sector, and decarbonization of the industries from the demand-side.


## Progress




*1 Due to some discrepancies in emission data, 76 was revised to 80.

- Absolute emissions in the oil & gas sector as of FY2022 were 81 $MtCO_2e$. Decarbonization progress by clients and repayments at maturity led to this decrease of about 5% from 84 $MtCO_2e$ in the baseline year of FY2019. However, due to the completion of several projects signed before the interim target was set, emissions were slightly higher year on year.
- Most recently, emission reductions have made progress, partly due to a decrease in the exposure of project financing. Toward FY2030, we aim to achieve targets by helping clients shift to decarbonized businesses and supporting decarbonization on the demand side.

## Approach to achieve interim target

### Financing support through engagement

- Supporting the financing needed to transition to decarbonized businesses and investments in the development of hydrogen, ammonia, and other decarbonized fuels, taking into account energy policies in each region and technology developments
- Promote disclosure of emissions results, including scope 3, as well as emission reduction targets and activities through dialogue with clients

### Supporting demand-side decarbonization

- Setting emission reduction targets for oil & gas demand sectors such as power, automotive, aviation, shipping, and real estate. Supporting decarbonization efforts through engagement with key players in each sector to achieve targets

### Progress management and monitoring

- Use climate risk assessment tools to check consistency with regional and national transition strategies, sponsor transition strategies, and impact on the environment by technologies employed when providing project finance support
- Assessing the transition status of each company based on the transition assessment framework and regularly managing progress on targets at monitoring meetings

# Interim target by sector: Oil & gas (key measures)

## Financing support through engagement

| | |
|---|---|
| **Initiatives with Japanese companies** | MUFG works as a group to support each client in the oil & gas sector develop transition strategies, including the introduction of hydrogen, ammonia, biofuels, and synthetic fuels. In addition, we hold discussions with clients by providing analysis on the impact of sustainability measures on corporate value and insight on disclosure trends. Through these efforts, we support individual projects by tracking sector trends and business environment, and promoting initiatives to decarbonize industrial complexes through participation in discussions with local governments and councils. |
| **Company C (EMEA)** | MUFG has proactively been engaging with a number of stakeholders including the finance and sustainability team of a leading oil & gas company. MUFG provides long-term support for this client to realize carbon neutrality through discussions of financing plans by taking into account their transition strategy. |

## Demand-side decarbonization and financing support through engagement

| | |
|---|---|
| **Power** | Shifting from fossil fuels to renewable energy and other decarbonized power sources |
| **Real estate** | Encouraging use of renewable energy and promoting electrification of household heat sources |
| **Shipping** | Expansion of low-carbon emission vessels and the introduction of next-generation fuel vessels |
| **Aviation** | Increasing use of sustainable aviation fuel (SAF) and improving operations |
| **Automotive** | Shifting to EVs and other non-gasoline vehicles |

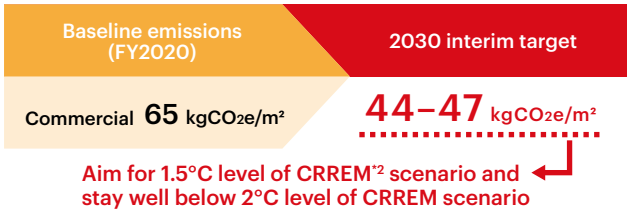
# Interim target by sector: Commercial real estate

## Sector characteristics

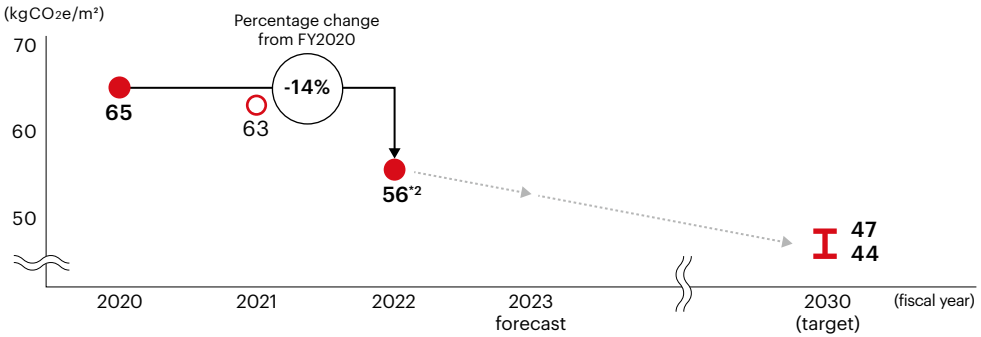
The real estate sector is a carbon intensive sector that accounts for 8% of global GHG emissions, and 75% of the emissions in this sector come from real estate use. Therefore, the key to decarbonizing the real estate sector is to improve the energy efficiency of real estate properties, introduce renewable energy, promote electrification, and improve the emission factor for electricity used in real estate properties. MUFG's portfolio is focused largely on Japan, thus it is important for MUFG to support the initiatives in the Japanese real estate sector and the policies of the Japanese government.

## Interim target

- Given the need for the real estate sector to accommodate the increasing demand from economic growth while also advancing decarbonization efforts, the target metric used is emission intensity ($kgCO_2e/m^2$).
- We will achieve 47 $kgCO_2e/m^2$ by engaging with our clients to meet their own emissions targets.
- In addition, by further contributing to the decarbonization of the emissions from tenants as well as the power sector, we aim to achieve 44 $kgCO_2e/m^2$.




## Progress




As of FY2022, the emission intensity of the commercial real estate sector was 56 $kgCO_2e/m^2$. This result is mainly due to the efforts of our clients, such as developers and REITs, that are switching to procurement of renewable energy and promoting energy conservation with their real estate properties. Most recently, there has been continued progress on reducing emissions, particularly among developers and REIT clients and we aim to achieve our target for FY2030 by providing financing support for green buildings and support for decarbonization of the power sector.

## Approach to achieve interim target

### Financing support through engagement

- Supporting client's decarbonization initiatives through financing such as green bonds for green building construction and sustainability-linked loans that use GHG emissions reduction as a KPI

### Supporting decarbonization in the power sector

- Improving the electricity emission factor of real estate such as office buildings and commercial facilities during use by promoting decarbonization in the power sector (power generation) through support for renewable energy and other measures

### Progress management and monitoring

- Assessing the transition status of each company based on the transition assessment framework and regularly managing progress on targets at monitoring meetings

*1 Carbon Risk Real Estate Monitor: A carbon reduction pathway consistent with the 2°C and 1.5°C targets as calculated and published for each real estate use in a total of 44 countries (as of November 2023) in Europe, North America, and APAC, including Japan

*2 Data on emission factors by building and fiscal year is from FY2021

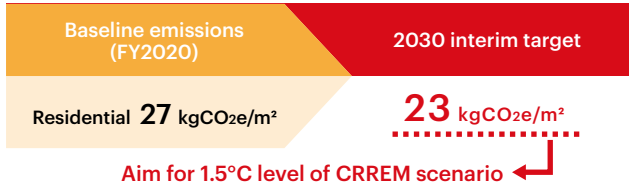
# Interim target by sector: Residential real estate

## Sector characteristics

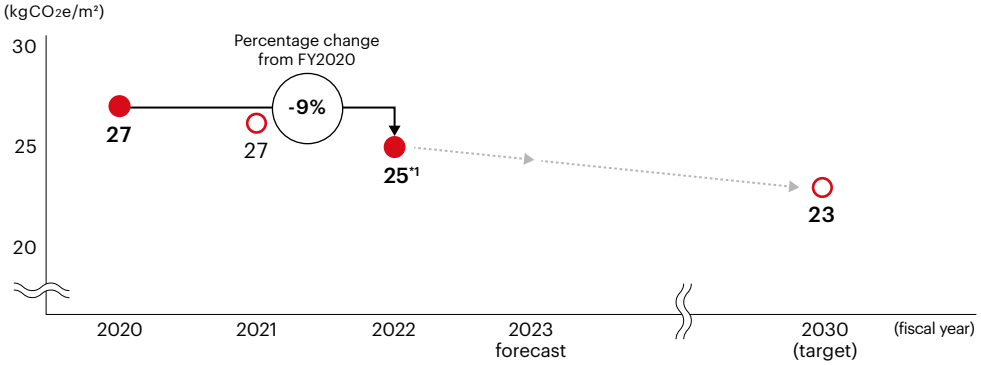
The key to decarbonizing residential real estate like commercial real estate, is to improve energy efficiency of real estate properties, introduce renewable energy, promote electrification, and improve the emission factor for electricity used in real estate properties. The target of these efforts is residential loans (including apartment loans) in Japan. This is a sector affected by location-specific factors such as climate, so the situation varies by region. MUFG's portfolio is focused largely on Japan; therefore, it is important for MUFG to support the initiatives that are in line with the policies of the Japanese government.

## Interim target

- Given the need for the real estate sector to accommodate the increasing demand from economic growth while also advancing decarbonization efforts, the target metric used is emission intensity ($kgCO_2e/m^2$).
- The 2030 interim target (emission intensity) is 23 $kgCO_2e/m^2$. In addition to providing support for energy efficiency and renewable energy solutions for existing properties while pursuing decarbonization of the power sector, we will improve our portfolio by increasing the number of energy-efficient homes such as net zero energy houses (ZEH). Through these measures, we aim to achieve 23 $kgCO_2e/m^2$.




## Progress




*1 Some data, excluding loan amount, is from FY2021.

As of FY2022, the emission intensity of the residential real estate sector was 25 $kgCO_2e/m^2$. This represents a roughly 9% reduction from FY2020 when the target was set. The primary factor behind this was the decrease in regional emission intensity as a result of advances in energy conservation during building use. Going forward, we aim to achieve our target by supporting the purchase of ZEH and other energy-efficient homes through home loans that will be chosen by clients.

## Approach to achieve interim target

### Financing support

- Supporting the purchase of ZEH and other energy-efficient homes through home loans that will be chosen by clients based on their improved marketability and convenience

### Supporting decarbonization in the power sector

- Improving the electricity emission factor of residential real estate by promoting decarbonization in the power sector (power generation) through support for renewable energy and other such measures

### Progress management and monitoring

- Continuing to monitor our portfolio for changes in the percentage of balances by region in Japan as this is a sector where the situation varies by region

# Interim target by sector: Real estate (key measures)

## Financing support through engagement

### Support for green bonds by Securities

- The issuance of green bonds for green buildings and others are actively supported by Securities to accelerate the decarbonization efforts of clients in the real estate sector. In FY2023, we supported the issuance of green bonds in the real estate sector totaling approximately 280.0 billion yen, including Tokyu Fudosan Holdings Corporation, serving as administrative lead manager and co-lead manager.

### Sustainability-linked bond/loan support for Mitsubishi Estate Co., Ltd.

- Securities has been supporting the issuance of sustainability-linked bonds with sustainability performance target (SPT)*1 of 100% electric power derived from renewable energy by FY2025, reducing total Scope 1 and Scope 2 GHG emissions by more than 70% by FY2030, and reducing Scope 3 emissions by at least 50% (compared to FY2019). On a Group basis, the Bank supports decarbonization initiatives such as by originating sustainability-linked loans with SPT of 100% electric power derived from renewable energy by FY2025.
- The SPT in our sustainability-linked finance framework (as of March 2023) is in line with the net zero standard announced by SBTi in October 2021.

### Sustainability-linked loan support for ORIX JREIT Inc.

- The Bank originated a sustainability-linked loan with a KPI of reducing $CO_2$ emissions*2 from the company's properties by 14% in FY2024 (compared to FY2021) to support the company's decarbonization initiatives.
- Based on the SBTi, the company has set a quantitative target for 2030 (42% reduction in emissions*2 compared to FY2021). In addition, a transition plan is currently being put together.

*1 Sustainability targets for a timeframe set in advance by the bond issuer or loan borrower.
*2 Those with management rights in Scope 1, 2, and 3 (Category 13)

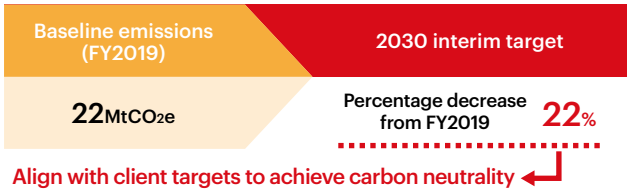
# Interim target by sector: Steel

## Sector characteristics

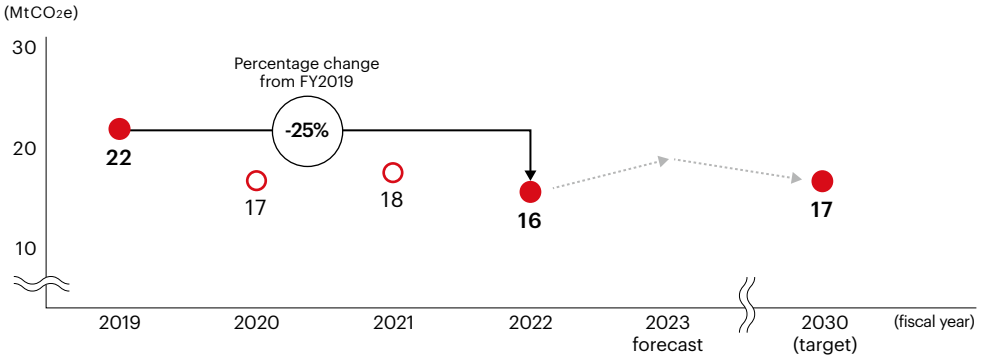
The steel sector is a carbon intensive sector that accounts for 7% of global $CO_2$ emissions, and 77% of the emissions in this sector come from steel production. Decarbonization of the steel sector will be driven by decrease in blast furnace production and increase in scrap reuse, the development of low-carbon manufacturing technologies, and the implementation of CCUS to collect the remaining emissions that could not be mitigated. With more than 80% of MUFG's steel sector portfolio being comprised of major Japanese companies, we are committed to supporting their efforts toward decarbonization.

## Interim target

- The chosen target metric is absolute emissions, which is used as a target metric by the majority of clients in MUFG's portfolio.
- We set the 2030 interim target (absolute emissions) at a reduction rate of 22% compared to FY2019 results. Because the IEA scenarios do not include country-specific scenarios, MUFG's interim target is in line with the reduction levels of clients who have set reduction targets for achieving carbon neutrality by 2050.




## Progress




As of FY2022, the steel sector's absolute emissions were 16 million tons (down 22% from FY2019), a level that meets the 2030 target. The main factors behind this were the decrease in the attribution factor and the steady progress made by clients in meeting their emission reduction targets, such as the shift to low-carbon steel production processes and the shutdown of blast furnaces. For the immediate future, absolute emissions are expected to temporarily increase in response to rising demand for steel, especially in emerging markets. However, we aim to achieve our target by supporting our clients' initiatives to reduce their emissions by 2030.

## Approach to achieve interim target

### Financing support through engagement

- Supporting the necessary financing for decarbonization through discussion of replacement and financial strategies based on retrofitting existing blast furnaces and implementation of new technologies
- Working closely with steel company clients to support decarbonization by engaging with them on their strategic challenges through the Transition Whitepaper

### Progress management and monitoring

- Assessing the transition status of each company based on the transition assessment framework and regularly managing progress on targets at monitoring meetings

# Interim target by sector: Steel (key measures)

## Financing support through engagement

MUFG regularly engages with clients in the steel sector to exchange views on the characteristics of the Japanese manufacturing and steel industries, challenges in developing innovative technologies, and industry trends. We also visit steel mills and review relevant technologies to gain a more holistic understanding of our clients' transition strategy and technologies. Through such engagement, we support our clients' efforts to become carbon neutral, which includes conversion to electric arc furnaces and establishment of hydrogen-based reduction steelmaking technologies.
In addition, we hold discussions with each company on their replacement strategy based on the timeline of retrofitting existing blast furnaces and implementing new technologies. We also engage with clients on their financial strategy that incorporates investments to achieve the 2030 interim target and the 2050 net zero target.

### Dialogue between MUFG and three leading Japanese steel companies

The Ministry of Economy, Trade and Industry, Japan organized a dialogue between MUFG and three steel companies, which was covered by a Japanese business magazine, to raise awareness on the transition in the steel sector

**Key takeaways**

- The steel sector is one of the primary "hard-to-abate" industries. While cooperating on the development of new technology, such as blast furnaces with hydrogen-based reduction, blast furnaces with carbon-recycling, and direct reduced iron, companies are also proposing and providing solutions with technologies and products available today.
- The commercial implementation of new technologies requires the establishment of a hydrogen supply chain and a stable supply of zero-carbon electricity.
- While the transition will require massive investment, understanding and cooperation not only from the supply side but also from the government and the demand side is essential to ensure economic feasibility.
- MUFG supports the steel sector's transition and puts effort to shape international public opinion by leveraging a neutral position, while also focusing on effectively communicating Japan's initiatives to the global audience.

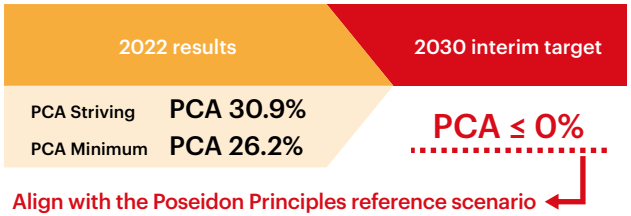
# Interim target by sector: Shipping

## Sector characteristics

The shipping sector is a carbon intensive sector that accounts for about 2% of global $CO_2$ emissions, and 98% of emissions in this sector come from shipping operations and use (i.e., fuel consumption), which fall within the scope of our target.
For that reason, in addition to energy conservation and operational efficiency, the key to decarbonization is to switch to transition fuel vessels (such as LNG- and LPG-fueled vessels) during the transition period and to introduce zero-emission fuel vessels (such as vessels running on hydrogen, ammonia, methanol, and biofuels) in the future.

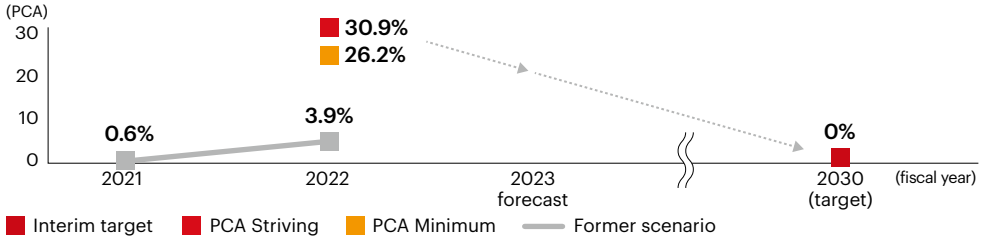
## Interim target

- In accordance with the Poseidon Principles*1, MUFG discloses its Portfolio Climate Alignment (PCA) score based on the intensity of its ship finance-tied vessels. We announced a target PCA of 0% or less for 2030 in April 2023.
- Subsequently, in July 2023, the International Maritime Organization (IMO) revised its scenario to achieve net-zero GHG emissions by around 2050, where the previous scenario was to achieve 50% emission reduction compared to 2008 levels by 2050. The scope of emissions reduction was also revised from only $CO_2$ emissions from shipping to life-cycle GHG emissions, which includes GHG emissions during the manufacturing and distribution process. To align with the new IMO scenario, the reference scenario in the Poseidon Principles was also revised.
- MUFG will continue to follow the IMO's net zero scenario for 2050 and aim for a PCA of 0% or less for 2030.




*1 The Poseidon Principles are a framework for calculating, assessing, and disclosing ship finance portfolios of financial institutions in order to achieve the IMO's GHG emission reduction targets. They define the role of financial institutions as promoting the decarbonization of the shipping sector from a financial perspective. The target for inclusion is ship finance tied to vessels under the purview of the IMO.

## Progress




- In 2022, the tight supply-demand balance from disruptions in logistics (the Russian invasion of Ukraine and the economic recovery from COVID-19) increased fuel consumption for some vessels. However, based on the former scenario, the PCA only worsened by 3.3% compared to 2021. With the IMO scenario change, under the new standards, the PCA Minimum*2 score is 26.2% and the PCA Striving*2 score is 30.9%.
- Most recently, progress has been made on reducing emissions with the operation of low-carbon emission vessels. We aim to achieve the target by supporting our clients in reducing their emissions toward 2030.

## Approach to achieve interim target

### Financing support through engagement

- Providing support for the financing necessary for clients to reduce emissions, including the expansion of low-carbon emission vessels and the introduction of next-generation fuel vessels, looking ahead to 2030

### Target management and monitoring

- Monitoring GHG emissions from ship finance-tied vessels through PCA disclosure based on the Poseidon Principles
- Assessing the transition status of each company based on the transition assessment framework and regularly managing progress on targets at monitoring meetings

*2 There are two new reference values in the Poseidon Principles, namely "minimum" and "striving" targets, both of which are consistent with achieving net-zero emissions by 2050, but with different reduction guidelines as of 2030 and 2040. The "minimum" target represents a minimum 20% reduction in emissions by 2030 and a minimum 70% reduction by 2040 compared to 2008 levels. The "striving" target represents a 30% reduction in emissions by 2030 and an 80% reduction by 2040 compared to 2008 levels.

# Interim target by sector: Shipping (key measures)

## Financing support through engagement

MUFG provides financing support for emission reduction initiatives in line with our clients' decarbonization transition plans, such as investments in equipment effective for improving fuel efficiency (wind-assisted propulsion systems, etc.) and expansion of low-carbon emission vessels (LNG- and LPG-fueled vessels, etc.). In the future, we will also support vessels utilizing biofuels and zero-emission fuels to meet the IMO's target of introducing 5–10% zero or near-zero GHG emission alternative fuels by 2030. We also support the activities of clients in the shipping sector for achieving net zero emissions by 2050 through transition finance.

### Transition syndicated loan support for NYK Line

- In January 2024, we originated a 300 million U.S. dollar transition syndicated loan to support investments (LNG- and LPG-fueled vessels, etc.) planned under the company's vessel fuel conversion scenario towards 2050.

Press release [in Japanese only]

### Transition-linked loan support for Mitsui O.S.K Lines

- In March 2023, we originated a 500 million U.S. dollar transition-linked loan for the company, which has set a target of achieving net zero emissions by 2050 by promoting investment in LNG-fueled vessels and vessels equipped with wind-propulsion systems.

Press release [in Japanese only]

# New interim target by sector: Automotive

## Characteristics of the automotive sector

The automotive sector is a carbon intensive sector, accounting for 16% of global $CO_2$ emissions. $CO_2$ emitted during vehicle use accounts for about 80% of automotive sector emissions. As such, technologies to reduce emissions from vehicle use, technologies to decarbonize the electricity and fuels that power the vehicles, and emissions reduction through improved mobility efficiency are key. The clients in MUFG's portfolio have business operations not only in Europe and the United States but also in Japan and Asia; therefore, it is important for us to support their strategies and technologies taking into account the fuel efficiency regulations and energy circumstances in each country.

## 2030 interim target for the automotive sector (new target set in April 2024)

- The target scope is tailpipe emissions (Scope 3, Category 11 for automobile manufacturers (OEMs)), which account for around 80% of the sector's emissions, with reference also to NZBA and PACTA. Tailpipe emissions are measured in terms of Well-to-Wheel (WtW), which covers all stages from fuel production to utilization, considering environmental impact throughout the life cycle.
- Because there is a need to promote decarbonization while meeting the growing global demand for automobiles associated with economic growth, emission intensity ($gCO_2$/vkm) was set as the target metric.


| | |
|---|---|
| Target scope | Value chain: vehicle use<br>Vehicle type: Passenger cars and commercial vans<br>Emissions scope: Scope 3, Category 11 for OEMs (WtW) |
| Asset scope | Corporate loans for OEMs (including sales finance subsidiaries)<br>* More than 95% of the exposure is included in the calculation |
| Target metric | Emission intensity ($gCO_2$/vkm) |
| Data source | Information disclosed by clients,<br>Transition Pathway Initiative (TPI)*2 |

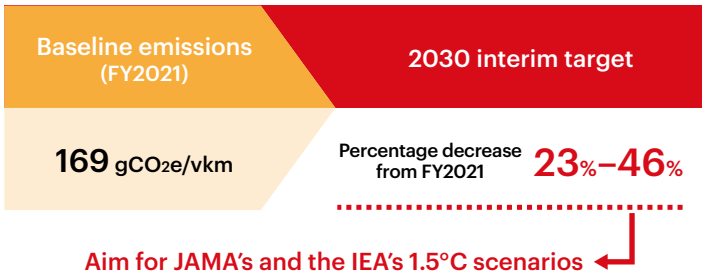
### Interim targets

- We set the 2030 interim target (emission intensity) at a reduction rate of 23%–46% compared to FY2021 results.
- The 23% reduction in emission intensity is a level that is consistent with the 1.5°C scenario (CNF*1 scenario) of the Japan Automobile Manufacturers Association (JAMA). This scenario also takes into account the decarbonization situation of power sources in each country and region, and assumes that the use of carbon neutral fuels (synthetic fuels, biofuels, etc.) will spread. In this scenario, the percentage of electric and fuel cell vehicles among new vehicle sales will not grow rapidly, while the percentage of hybrid and plug-in hybrid vehicles will only have a slight increase despite the moderate expansion of carbon neutral fuel supply.
- The 46% reduction in emission intensity is a level that is consistent with the IEA 1.5°C scenario. This scenario assumes the expansion of electrification. In this scenario, the percentage of electric and fuel cell vehicles among new vehicle sales will grow rapidly, while the percentage of hybrid and plug-in hybrid vehicles will only have a slight increase despite the moderate expansion of carbon neutral fuel supply.
- MUFG will aim to achieve the 1.5 °C target by supporting clients' decarbonization strategies considering both scenarios focused on carbon neutral fuels and electrification.

*1 Stands for "carbon neutral fuel."
*2 A global initiative led by asset owners and supported by asset management companies. The initiative assesses companies' readiness to transition to a low-carbon economy and supports efforts to address climate change.

**What is JAMA's 1.5°C (CNF) scenario?** Click here for refence

This scenario was published by JAMA, which consists of Japanese OEMs. It is a global scenario that assumes carbon neutral fuel penetration and is consistent with the 1.5°C reduction target of the Intergovernmental Panel on Climate Change (IPCC) for 2050.



# New interim target by sector: Aviation

## Characteristics of the aviation sector

The aviation sector accounts for roughly 2% of global $CO_2$ emissions, with 98% of aviation emissions coming from aircraft fuel use during operation. Increase in the use of sustainable aviation fuel (SAF) and improved fuel efficiency are essential ways to reduce emissions in this sector. On the other hand, emission reduction from electrification is a difficult decarbonization lever due to issues with aircraft weight and long-haul flights.
In the long term, there are limitations to emission reduction from improved fuel efficiency, making the growth of SAF use key to decarbonization. However, the availability of biomass that serves as feedstock for SAF varies by location, and the development of a stable and large-scale SAF supply chain is a major hurdle. This makes it important to continue to explore and develop new aircraft technologies.

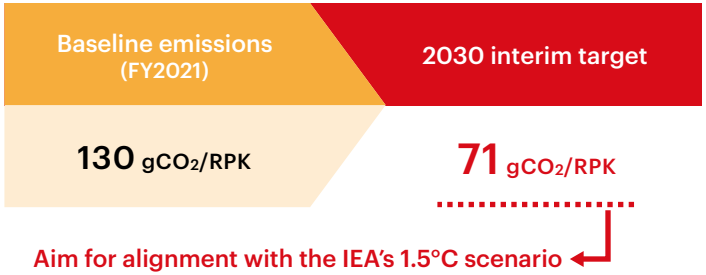
## 2030 interim target for the aviation sector (new target set in April 2024)

- Following SBTi, our scope of emissions includes operation of aircraft (i.e. Scope 1 of airlines and Scope 3, Category 13 of aircraft lessors), which accounts for almost 100% of emissions in this sector.
- We have chosen $CO_2$ emission intensity ($gCO_2/RPK$*1) as the target metric to account for aviation emissions while considering the expected rise in global aviation demand from economic growth.


| | |
|---|---|
| Target scope | Value chain: Operation<br>Emission scope: Scope 1 (airlines), Scope 3, Category 13* (aircraft lessors) in TtW*3<br>* Emissions from leased aircraft |
| Asset scope | Corporate loans to airlines* and aircraft lessors (including undrawn-committed amounts) and secured aircraft finance<br>* About 90% of MUFG's airline exposure is included in the calculation. |
| Target metric | Emission intensity ($gCO_2/RPK$) |
| Data source | Client disclosure, PACE*4, etc |

### Interim targets

- The 2030 interim target is set at 71$gCO_2/RPK$, which is in line with the NZE 1.5°C scenario*2 by the IEA.
- MUFG aims to achieve the 1.5°C target by financing activities such as increasing our clients' SAF use, introducing new fuel-efficient aircraft, and improving operations for clients' who have set emission reduction targets.




*1 RPK: Revenue Passenger Kilometers, which is calculated by multiplying the number of paid passengers by the traveled distance
*2 IEA Net Zero Emissions by 2050 (released September 2023)
*3 TtW: Aircraft flight emissions (Tank-to-Wake). The alternative concept is WtW (Well-to-Wake; the total emissions from fuel extraction to combustion during flight), and in the case of TtW, the emissions from fuel extraction to refueling are not included. MUFG set the scope to TtW to align with the target disclosure of airlines and the NZE1.5°C scenario
*4 PACE is a global software platform and customer success programme provided by Fexco that supports Aviation stakeholders committed to carbon reduction

# New interim target by sector: Coal

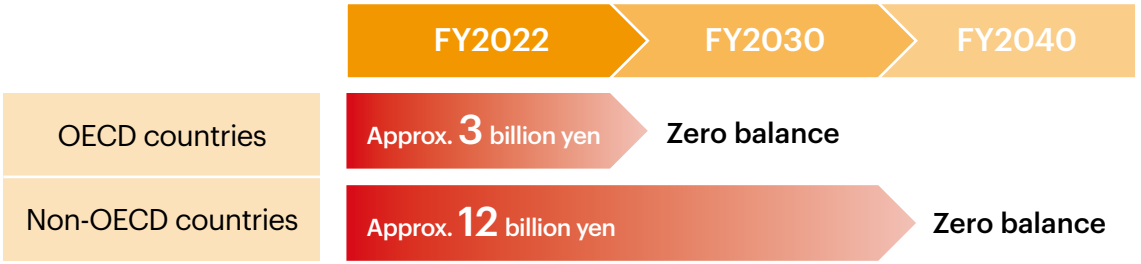
## Characteristics of the coal sector

Coal, when burned in thermal power plants, emits more GHGs than other energy sources. Therefore, the development of new coal mines to supply thermal coal for power generation projects and expansion of existing mines could result in an increase in GHG emissions in the future.

## 2030 interim target for the coal sector (new target set in April 2024)

Reduce loan amount in OECD countries to zero by FY2030 and in non-OECD countries to zero by FY2040

- While it is common international practice to set phase-out targets for financing coal-fired power generation, it is equally important to set a phase-out target for the mining of thermal coal that fuels coal-fired power generation.
- With respect to mining thermal coal for power generation, the Environmental and Social Policy Framework prohibits support for new mining projects or expansion of existing coal mines.




| | |
|---|---|
| Target scope | Companies/projects whose main business is mining thermal coal for power generation |
| Asset scope | Loan amounts (including undrawn-committed amounts)<br>Note: Projects that contribute to the transition to a decarbonized society are excluded from the scope of targets. |

# 4 Risk management and governance

# Risk management: Overview

MUFG has established a system to properly manage climate change-related risks based on the Risk Appetite Framework and the Top Risk Management.

## Risk Appetite Framework

- The Risk Appetite Framework is a framework for clarifying the risk appetite (the type and amount of risk to be undertaken) to achieve MUFG's business strategy and financial plan and for conducting business management and risk management.
- MUFG has established a system to properly manage climate change-related risks and has worked to clarify its risk appetite.

**Business plan**

**Financial plan**
- Net operating profit
- Net income
- ROE
- RORA
- Expense ratio
- Common Equity Tier 1 capital ratio, etc.

**Organic Correlation**

**Business strategy**
- Group business strategy

**Risk appetite**
- **Capital allocation and RWA plan**
  Capital strategy and distribution based on risk
- **Funding liquidity risk, etc.**
  Risk appetite for difficult-to-quantify risk

## Top Risk Management

- MUFG recognizes the importance of identifying and assessing climate change-related risks and information disclosure. We have positioned risks arising from climate change as top risk in our Top Risk Management.
- We implement effective countermeasures for the selected top risks based on shared risk recognition through discussions during supervision (Risk Management Committee), execution (Credit and Investment Management Committee and Risk Committee), and other processes.

### Example risk scenarios and countermeasures related to climate change

| Risk scenarios | Risk countermeasures |
|---|---|
| • If our efforts to address climate change-related risks or to make appropriate disclosure are deemed insufficient, our corporate value may be impaired.<br>• Impact on our credit portfolio management and operations resulting from the impact of climate change on our business partners | • Promote various measures in line with the Carbon Neutrality Declaration while disclosing relevant information and enhancing scenario analysis based on recommendations from the TCFD.<br>• Formulate interim targets consistent with the Paris Agreement regarding the volume of GHG emissions in addition to updating our Environmental and Social Policy Framework and strengthening engagement with corporate clients. |

## Improving the effectiveness of risk management

The Risk Appetite Statement elucidates the Risk Appetite Framework which embodies MUFG's attempts to achieve an integrated group strategy along with effective risk management. The Risk Appetite Statement contains an overview of the Risk Appetite Framework (basic policy and management process) as well as specific business strategies, financial plans and risk appetite details. A summary of the Risk Appetite Statement is distributed throughout the Group in an effort to spread the basic philosophy behind the Risk Appetite Framework.

# Risk management: Scenario analysis (1)

Since 2019, MUFG has been a participant in the pilot project led by the United Nations Environment Programme Finance Initiative (UNEP FI) with the objective of discussing and developing methods for climate change-related financial information disclosure. Based on the results of the pilot project, we conducted an analysis of transition risks up to the year 2050 and physical risks up to the year 2100.
In addition to the results of the above-mentioned pilot project, the scenario analysis reflects the results of verification by external experts. While engaging in dialogue with regulatory authorities, we also continuously examine ways to raise the level of our analytical approaches.

## Transition risks

### Scenario analysis process

| | |
|---|---|
| **Selection of sectors to be analyzed** | Based on the characteristics of the risk heat map and portfolio, formulate the priority ranking of sectors to be measured |
| **Sample company selection** | Perform sample company selection incorporating portfolio characteristics of sectors, discussions with relevant departments, etc. |
| **Parameter selection** | Perform selection of parameters based on industry characteristics and construction of a Risk Factor pathway for risk measurement |
| **Estimation of impact** | Estimate impact by sector (cost of credit, etc.) for each scenario |
| **Aggregation and reporting** | Perform aggregation and verification of results across multiple patterns according to purpose, hold discussions with related departments, etc. |

### Methods and results

Based on the results of the UNEP FI pilot project, a comprehensive approach was adopted for the measurement method, combining the bottom-up method at the individual company level and the top-down method at the sector level to assess the impact.
In addition to the sustainable development scenario (the [well below] 2°C scenario) released by the International Energy Agency (IEA), the Network for Greening the Financial System's (NGFS) 1.5°C scenario was used as an assumption. Both the (well below) 2°C scenario and the 1.5°C scenario were analyzed for the impact on credit ratings under each scenario and the financial impact for the target sectors' overall credit portfolio.

| | |
|---|---|
| **Scenario** | • Various scenarios, including the sustainable development scenario (the [well below] 2°C scenario) of the IEA and the 1.5°C scenario released by the NGFS |
| **Analytical method** | • An integrated approach was adopted to assess the impact by combining the bottom-up approach at the individual company level and the top-down approach at the sector level. Using this approach, the impact on credit ratings in each scenario was analyzed along with the financial impact for the target sectors' overall credit portfolio. |
| **Target sector** | • Energy, utilities, automotive, steel, air transportation, and maritime transportation sectors |
| **Target period** | • Until 2050 using the end of March 2022 as the standard |
| **Result of analysis** | • Single-year basis: 1.5 billion yen to 28.5 billion yen*1 |

*1 No significant change under standards as of the end of March 2023

# Risk management: Scenario analysis (2)

## Physical risks

### Scenario analysis process

**Selection of disasters to be analyzed**
Based on regional characteristics, the magnitude of damage caused by disasters, etc., formulate the priority ranking of disasters to be analyzed

**Parameter selection**
Acquire or calculate data required such as risk maps of disasters, probability of occurrence, etc.

**Creation of geographical data**
Identify assets to be analyzed based on supply chain data and location data of business partners

**Direct impact estimate**
**Indirect impact estimate**
**Estimation of degree of damage to collaterals, etc.**
**Estimation of business impact on clients**

**Impact estimation, aggregation, reporting**

*1 Source: "Global flood risk under climate change;" Hirabayashi Y, Mahendran R, Koirala S, Konoshima L, Yamazaki D, Watanabe S, Kim H, and Kanae S; *Nature Climate Change*, 3 (9), 816-821 (2013); doi:10.1038/nclimate1911
*2 No significant change under standards as of the end of March 2023

### Methods and results

Among the risks associated with physical damage caused by climate change, we adopted an approach to measure the impact on the overall credit portfolio using the default probability of a borrower that has changed because of the occurrence of floods, which have been particularly prominent in Japan and other countries in recent years in terms of both frequency of occurrence and damage level.
The climate scenarios are based on the Representative Concentration Pathway (RCP) 2.6 (2°C) and RCP8.5 (4°C) scenarios from the Coupled Model Intercomparison Project Phase 5 (CMIP5) released by the Intergovernmental Panel on Climate Change (IPCC). The RCP8.5 scenario, which expects floods to be more frequent and larger in magnitude, was analyzed to estimate the damage caused by floods using data*1 provided by various organizations.
In calculating financial impact, in consideration of discussions conducted within the UNEP FI pilot project, we have reflected business suspension periods, loss arising in held assets, and other factors.

| | |
|---|---|
| **Scenario** | • RCP2.6 (2°C scenario) and RCP8.5 (4°C scenario) published by the IPCC |
| **Analytical method** | • Estimated damage in the event of a flood is analyzed, and an approach to measure its impact on the overall credit portfolio using the change in default probability that the occurrence of floods would have on the credit portfolio is adopted.<br>• In the calculation of financial impact, the period of the suspension of the business of the borrower and the loss of assets, among other aspects, are reflected. |
| **Target of analysis** | • Flood |
| **Target period** | • Until 2100 using the end of March 2022 as the standard |
| **Result of analysis** | • Cumulative total: Approximately 115.5 billion yen*2 |

# Risk management: Analysis by sector

MUFG has categorized transition and physical risks by TCFD-recommended disclosure sectors. The methodology for analyzing transition and physical risks are still under development and the heat map below only indicates our current state of analysis. As with scenario analysis, sector assessments will continually be reviewed and upgraded to keep pace with changes in climate change-related policies, technologies, markets, and other changes, as well as the latest developments in climate science.

## Risk and opportunity heat map

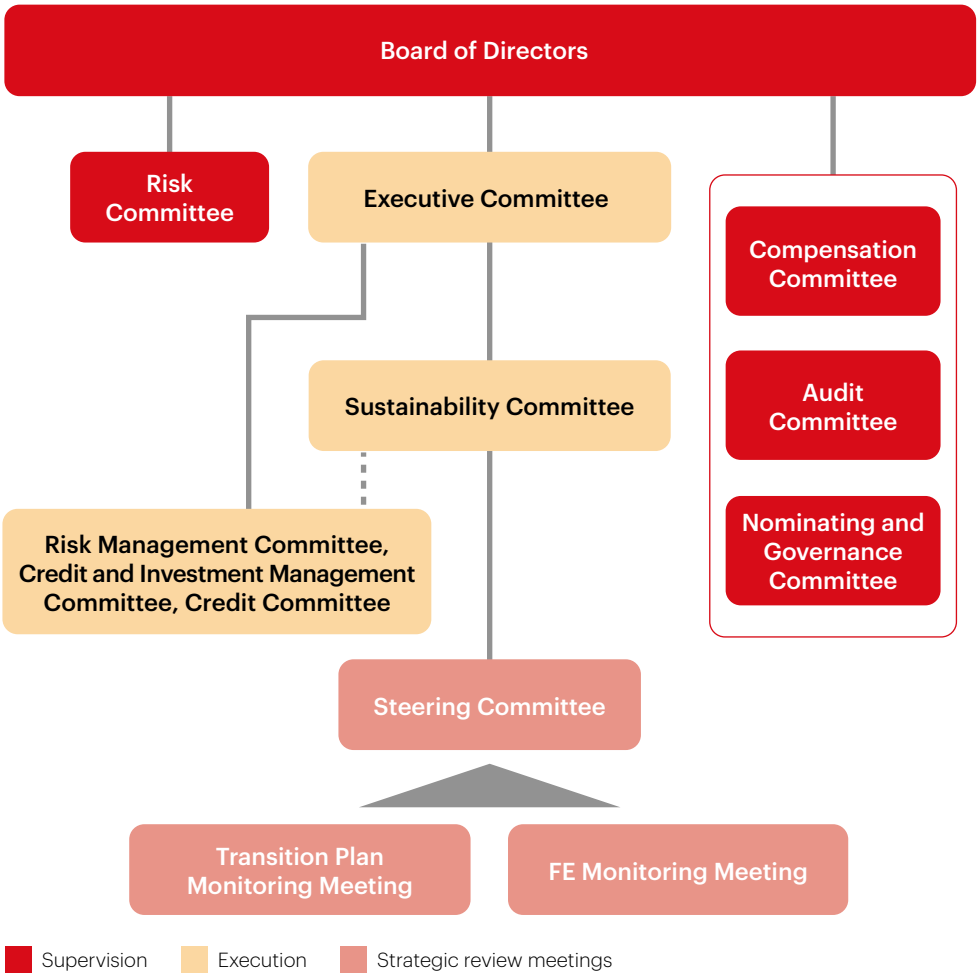
| Sector | Transition risk | Physical risk | Business opportunity*1 |
|---|---|---|---|
| Oil & gas | Mid-High | Middle | ++ |
| Coal | High | Middle | + |
| Electric utilities | High | Low | +++ |
| Aviation | Middle | Middle | + |
| Maritime transportation | Low | Low | + |
| Rail transportation | Middle | Middle | + |
| Trucking services | Middle | Middle | ++ |
| Automobiles & components | Middle | Middle | +++ |
| Metals & mining | Low | Middle | + |
| Chemicals | Low | Middle | + |
| Construction materials | Low | Middle | + |
| Capital goods | Middle | Middle | ++ |
| Real estate management & development | Low | Middle | ++ |
| Beverages | Low | Middle | + |
| Agriculture | Low | Middle | ++ |
| Packaged foods & meats | Low | Middle | ++ |
| Paper & forest products | Low | Middle | + |

*1 Based on a sector-specific 2050 capital investment forecasts that takes the NGFS scenario into account, conducted by an external research organization

# Governance: Governance structure and carbon neutrality promotion project team

At MUFG, the Sustainability Committee under the Executive Committee regularly discuss policies and initiatives to address opportunities and risks related to environmental and social issues, including climate change. We have also established global, group-wide project teams to discuss strategies and policies and make swift decisions through the Steering Committee and strategic review meeting attended by the CEO and other key members of management.

## Governance structure




## Carbon neutrality promotion project teams

| | Function | Main initiatives |
|---|---|---|
| WG1 | Business promotion Enhancement of client engagement | • Client decarbonization support business<br>• Transition Whitepaper project |
| WG2 | Improving of intelligence functions | • Activities as NZBA Steering Group member and chair of working group |
| WG3 | Measurement of emission and target setting by sector | • Setting of interim targets by sector<br>• Measurement of financed emissions |
| WG4 | Risk management | • Establishment of transition assessment framework<br>• Establishment of transaction screening process |
| WG5 | Enhancement of disclosures | • Preparation of Climate Report and TCFD Report<br>• IR and SR |
| WG6 | Responsible investment | • Establishment of NZAM interim targets<br>• Promotion of engagement |
| WG7 | Net zero of our own emissions | • Planning and implementation of measures to reduce emissions from own operations<br>• Initiatives for resource conservation and recycling |
| WG8 | Partner banks | • Collaboration with partner banks to achieve carbon neutrality |
| WG9 | Carbon pricing | • Development of carbon credit business<br>• Participation in GX League |

# Governance: Overview of meeting bodies

Meeting bodies | Chair, committee chairpersons, etc. | Main matters for discussion and reporting

## Supervision

### Board of Directors
**Chair: Chairman**

- Matters to be discussed and reported at meetings of the Sustainability Committee

### Risk Committee
**Chair: Outside director**

- Recommendations for matters to be resolved or reported at Board of Directors
- Recommendations for the climate change-related risk management system deliberated and reported at Credit and Investment Management Committee, Risk Management Committee, and Credit Committee

### Compensation Committee
**Chair: Outside director**

- Revision of executive compensation system (incorporation of ESG-related items into performance evaluation items)

### Audit Committee
**Chair: Outside director**

- Monitoring, supervising, and recommending towards our ESG responses
- Monitoring of the status of developing a framework for sustainability information disclosures

### Nominating and Governance Committee
**Chair: Outside director**

- Selection of board members with experience related to sustainability, including response to environmental and social issues, as a key criterion

## Execution

### Executive Committee
**Presiding officer: President**

- Matters to be discussed and reported at meetings of the Sustainability Committee

### Sustainability Committee
**Chair: Group CSuO**

- Progress on transition plan
- Revision of sustainable finance targets
- Updates to Environmental Policy Statement and Environmental and Social Policy Framework
- Setting of interim targets by sector and monitoring of progress
- Policy for climate change-related initiatives for the next fiscal year and beyond

### Credit and Investment Management Committee
**Chair: President**

- Direction of the climate change-related risk management system

### Risk Management Committee
**Chair: President**

- Monitoring the status of climate change-related risks using the Risk Appetite Framework and integrated risk management techniques
- Report on climate change-related risks which is considered as a top risk

### Credit Committee
**Chair: CRO**

- Status and direction of climate change-related risk management initiatives
- Revision of credit policy related to climate change
- Development of transition assessment framework

## Strategic review meetings

### Steering Committee
**CEO, presidents of business categories, CSO, CRO, group heads of business groups, CSuO, etc.**

- Progress on transition plan
- Setting of interim targets by sector and monitoring progress
- Initiatives and plans of each working group of the carbon neutrality promotion project teams

### Transition Plan Monitoring Meeting
**CSO, CRO, audit officers, CSuO, etc.**

- Progress of transition plan
- Status of implementation of operating framework for effective management to achieve interim targets

### FE Monitoring Meeting
**CSO, CRO, audit officers, CSuO, etc.**

- Progress of interim targets by sector
- Financed emissions performance of overall financed portfolio

# Governance: Director skills matrix / external advisors

MUFG's Board of Directors is comprised of individuals with experience in global operations in light of our business development as well as IT and digital technology and sustainability to take the lead in our digital shift and solving social issues such as climate change.
We hold regular meetings for exchanging ideas between external advisors and members of management to utilize outside expertise in our sustainability initiatives.

| | Name | Responsibility | Outside Director | Knowledge, expertise, experience | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Corporate management | Finance | Finance & Accounting | Legal affairs | Global | IT/Digital | Sustainability |
| 1 | Mariko Fujii | Nomination, compensation, risk★ | ● | – | ● | – | – | ● | – | – |
| 2 | Keiko Honda | Audit | ● | – | ● | – | – | ● | – | ● |
| 3 | Kaoru Kato | Nomination, compensation, audit | ● | ● | – | – | – | – | ● | ● |
| 4 | Satoko Kuwabara | Nomination, compensation★ | ● | – | – | – | ● | ● | – | ● |
| 5 | Hirofumi Nomoto | Nomination★, compensation | ● | ● | – | – | – | – | ● | ● |
| 6 | David Sneider | Risk | ● | – | – | – | ● | ● | – | – |
| 7 | Koichi Tsuji | Audit★ | ● | – | – | ● | – | ● | – | – |
| 8 | Tarisa Watanagase | Risk | ● | – | ● | – | – | ● | – | – |
| 9 | Kenichi Miyanaga | Audit | – | Familiar with the Group's business and possesses the ability to properly execute the Group's business management | | | | ● | – | – |
| 10 | Ryoichi Shinke | Audit | | | | | | ● | – | – |
| 11 | Kanetsugu Mike | | | | | | | ● | ● | ● |
| 12 | Hironori Kamezawa | Nomination, compensation | | | | | | ● | ● | ● |
| 13 | Iwao Nagashima | | | | | | | ● | – | ● |
| 14 | Junichi Hanzawa | | | | | | | – | – | ● |
| 15 | Makoto Kobayashi | | | | | | | ● | – | ● |

As of April 1, 2024. Nomination: Nominating and Governance Committee member; Compensation: Compensation Committee member; Audit: Audit Committee member; Risk: Risk Committee member. Asterisk (★) indicates chair.

## External advisors

| | |
|---|---|
| Rintaro Tamaki | President, Japan Center for International Finance |
| Junko Edahiro | Professor, Graduate School of Leadership and Innovation, Shizenkan University / President, Institute for Studies in Happiness, Economy and Society / Founder and President, e's Inc. |
| Kenji Fuma | CEO, Neural Inc. |

### Main comments from outside directors/external advisors

#### Outside directors

- Significant progress has been made on MUFG's initiatives since the MUFG Carbon Neutrality Declaration. I look forward to MUFG's continued highly attentive, quick and precise action.
- It is important to consider sustainability from a long-term perspective, with awareness of not only current stakeholders but future ones as well.
- It is vital that we act with an awareness of the gap with Global Systemically Important Banks (G-SIBs).

#### External advisors

- Climate change, biodiversity, and human rights are complex issues, and they often come with trade-offs. The question is how to proceed while focusing on the big picture.
- As there are no longer companies that fail to recognize the importance of decarbonization, what will be important as the next step in engagement is how we support individual companies' strategies.
- G-SIBs have established a net zero target for 2050, but the shift to green assets is still behind.

# Governance: Compensation system

MUFG has established the degree of improvement in ESG rating agencies as a medium- to long-term performance-linked indicator for stock compensation. At the same time, we have established contribution to resolving environmental and social issues, including climate change, as a target for the qualitative evaluation of performance of duties for bonuses to be paid to the president and other relevant officers.
In the executive compensation system for FY2024 and beyond, our policy is to continue to emphasize the evaluation of ESG and sustainability initiatives, including climate change action.

| | Linkage with performance | Performance based compensation range | Time of payment | Payment method | Standards for payment | Weight |
|---|---|---|---|---|---|---|
| **Annual base salary** | **Fixed** | — | Monthly | Cash | Paid based on positions, etc. | |
| **Stock compensation** | **Non-performance-linked** | — | At the time of retirement of executives | 50% in shares 50% in cash<br>*Subject to malus (confiscation) and clawback (restitution claim) | Base amount by position | |
| | **Medium- to long-term performance-linked** | 0–150% | At the end of the MTBP | | Base amount by position × | |
| | | | | | **Performance factor (medium- to long-term achievement evaluation)** Percentage of achievement of the following indicators compared to the targets in the medium-term business plan | **50%** |
| | | | | | (1) Consolidated ROE*1 | 30% |
| | | | | | (2) Consolidated expense reduction (excluding performance-linked expense)*1 | 15% |
| | | | | | (3) **Ratings granted by ESG rating agencies** | 5% |
| | | | | | **Performance factor (competitor comparison evaluation)*2** | **50%** |
| **Cash bonuses** | **Short-term performance-linked** | 0–150% | Annually | Cash | Base amount by position × | |
| | | | | | **Performance factor (quantitative evaluation)** | **60%** |
| | | | | | **Status of individual execution of duties (qualitative evaluation)** (Example applied to the Group CEO) Improvement in client-segment profitability Risks handling **Enhancement of efforts on ESG, evolution of sustainability management** | **40%** |

Absolute assessment of the degree of improvement in external assessments by five major ESG rating agencies (MSCI, FTSE Russell, Sustainalytics, S&P Dow Jones, and CDP)

ESG rating agency criteria (Main environmental criteria)
- Disclosure in line with TCFD recommendations
- Establishment of net zero financed emissions target and interim financed emissions reduction target
- Scope 3 measurement and breakdown
- Percentage of carbon intensive sectors in the portfolio
- Management of climate change-related risks

Establishment of targets for the initiatives below in evaluations of the Group CEO and relevant officers
- **Climate change action**
- Conservation of natural capital and biodiversity
- Inclusion & diversity
- Strengthening and enhancement of governance system
- Respect for human rights
- Human capital

*1 To support the improvement of profitability and capital efficiency, one of MUFG's most important management issues, and its earnings structure, MUFG will conduct an absolute evaluation of the achievement of both consolidated ROE and consolidated expense reduction (excluding performance-linked expenses) compared to the levels of those indicators outlined in the medium-term business plan.
*2 Competitor comparisons are evaluated based on relative comparisons with Mizuho Financial Group, Inc. and Sumitomo Mitsui Financial Group, Inc.

# Capability building: Overview of initiatives

MUFG is focusing on employee capability building to achieve carbon neutrality by 2050 and is developing various measures for each employee group.
In FY2023, we provided training programs for a total of around 2,000 front office representatives in charge of major corporations to improve their knowledge and expertise in order to enhance client engagement capabilities. We will continue to support the growth of our employees.

| Target group | Capability building initiatives (as of March 2024) | |
|---|---|---|
| For management | • Management workshop related to carbon neutrality strategies by sector  | FY2021: 4 times<br>FY2022: 8 times<br>FY2023: 2 times*1 |
| For front office representatives for major companies | • Green Transformation Strategy Project Team (GXPT) to share information to promote GX investments and financing with around 500 participants<br>• Training program for enhancing engagement skills<br>Current trends / Target setting / Transition plan<br>• Introduction of program to acquire sustainability-related certifications | FY2023: 20 times<br>FY2023: Total of about 2,000 participants<br>FY2024: Introduced new program |
| For front office representatives for small to medium-sized companies | • Streaming seminars for site management<br>Example theme: White paper and Japan's role for carbon neutrality<br>• Workshop for staff in charge<br>Example theme: Carbon neutrality action by small to medium-sized companies<br>• Introduction of program to acquire sustainability-related certifications | FY2023: 6 times<br>FY2024: Introduced new program |

*1 Separately, transition plan review meetings were held eight times in FY2023.

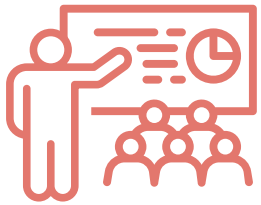
# Capability building: Fostering culture

In FY2023, we held internal seminars, communicated sustainability initiatives via our internal website, and launched an internal social media platform to ensure that each MUFG employee has a basic understanding of sustainability and awareness to take action on their own.

## Seminars

- Held MUFG Sustainability Seminar for employees
- Increased employee interest in specific activities to achieve carbon neutrality and reduce environmental impact

➡ **Seminars featured CSuO and outside experts, etc., and had more than 1,000 participants**



## Launch of internal social media

- Established a community of employees interested in sustainability, including environmental and social issues
- Promoted employee sustainability activities by spreading information to community participants and facilitating information exchange among participants

## Internal communication

- Communicated sustainability initiatives through our internal website
- Shared information that is easy for beginners to understand

## Visualization of energy consumption and waste

- Visualized the current status of our energy consumption and waste to foster employees' awareness of energy and resource conservation and resource recycling
- As a pilot project, introduced an app that visualizes the environmental impact of individual participants

# Next steps

# Core initiatives

While strengthening existing initiatives for each of our key strategies, MUFG will also pursue new initiatives that will contribute to achieving carbon neutrality.

## 1 Reducing emissions from own operations

- Implement energy efficiency & conservation initiatives and convert electricity contracted by other companies to renewable energy to achieve FY2026 interim target
- Realize and promote various business co-creations through partnerships with clients

## 2 Engagement and support

- Promote sustainable finance and GX value chain support as set forth in the new medium-term business plan
- Continue efforts to support transition through initiatives and policy engagement and enhance engagement activities through the Transition Whitepaper
- Implement findings of Asia Transition White Paper
- Implement integrated initiatives for natural capital, circular economy, and human rights

## 3 Reducing emissions from our financed portfolio

- Regularly review targets based on NZBA guidelines
- Regularly review Environmental and Social Policy Framework
- Review progress through transition plan monitoring and revise as necessary
- Study targets for facilitated GHG emissions

## 4 Risk management and governance

- Study quantification of climate change risks
- Strengthen compliance with non-financial information disclosure regulations and internal control
- Enhance climate change-related data management
- Strengthen training for front office representatives and spread insights for all employees

# Decarbonization initiatives as an asset manager

# Initiatives by MUFG AM

MUFG's asset management subsidiaries are committed to providing investment returns to our clients, and are taking actions that promote sustainable value enhancement and provide solutions to environmental and social issues faced by portfolio companies through stewardship activities. As part of our decarbonization efforts, we announced our Net-Zero Asset Management Initiative (NZAM) interim target for FY2030 in October 2022. To achieve our interim target, we will help address issues faced by portfolio companies through stewardship activities and develop products and solutions that contribute to achieving net zero emissions through our Sustainable Investing Policy. Furthermore, we will continue to strengthen our support structure for these efforts.

## Governance for promoting sustainable investment

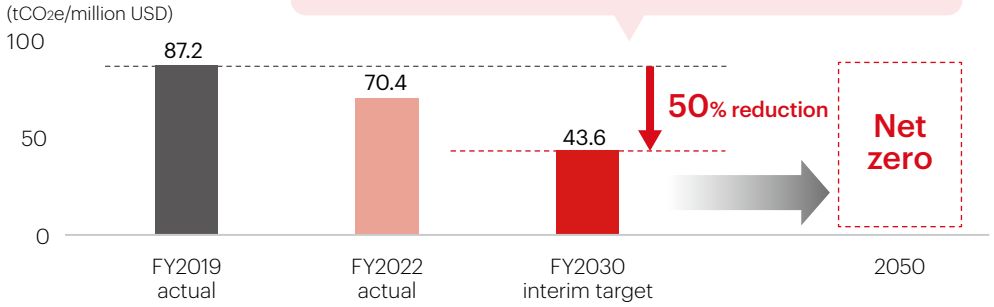
- MUFG Asset Management*1 (hereinafter, "MUFG AM") has been promoting sustainable investing in collaboration with the rest of the MUFG Group since April 2023. A new department has been established to lead MUFG AM's group-wide sustainable investing activities, and we will further promote investment, product development, and sales at Group companies.
- Based on our sustainable investing philosophy, "Investing for Our Sustainable Future," and the MUFG AM Sustainable Investing Policy, MUFG is continuing its activities to strengthen sustainable investing initiatives.

*1 MUFG Asset Management is a brand name formed by Mitsubishi UFJ Financial Group's asset management companies: Mitsubishi UFJ Trust and Banking Corporation; Mitsubishi UFJ Asset Management Co., Ltd.; Mitsubishi UFJ Real Estate Asset Management Co., Ltd.; Mitsubishi UFJ Asset Management (UK) Ltd.; and Mitsubishi UFJ Alternative Investments Co., Ltd.

## NZAM interim target and results

**NZAM interim target (FY2030)**

**Reduce GHG emissions per economic intensity by 50%, compared to FY2019** for 55% of assets under management




## Initiatives for decarbonization

**Demonstrating stewardship**

We are participating in engagement activities, exercising voting rights, and taking other initiatives toward decarbonization.

**Thematic engagement** P.88-89

We select priority theme from the investment universe MUFG AM has identified, and engage with debt issuers related to those themes.

**Collaborative engagement** P.90

We engage with debt issuers in collaboration and coordination with domestic and international initiatives and investment agencies.

**Public engagement** P.90

We not only work with market participants, but also make direct and indirect recommendations to regulators, initiatives, academia, and others.

**Development of products that contribute to net zero**

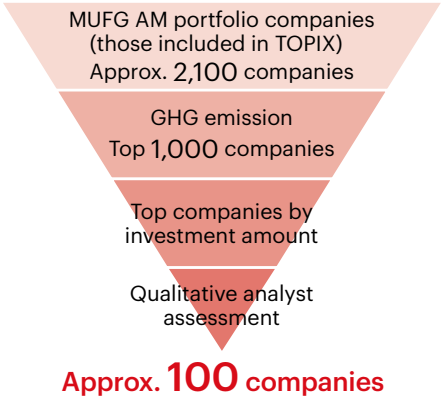
We developed the iSTOXX MUTB Paris Aligned Index, which consists of companies with goals aligned with the Paris Agreement.

# Initiatives by MUFG AM: Thematic engagement

MUFG AM is taking action to expand the engagement structure and increase its effectiveness, with the goal of stronger support for efforts to solve environmental and social issues and change corporate behavior. With respect to climate change, we engage with portfolio companies with high impact in order to have mutual understanding as it is our task to take action toward achieving net zero emissions.

## Selecting portfolio companies subject to engagement

- Companies subject to engagement are selected from among portfolio companies with high impact on climate change topics, based on their GHG emissions, investment amounts, and analyst insights.




**Results**

| | |
|---|---|
| **GHG emission coverage** | **70%** (100 companies in FY2023, covering 70% of total portfolio emissions) |
| **Main sectors** | • Power<br>• Oil & gas<br>• Chemical<br>• Electric equipment |

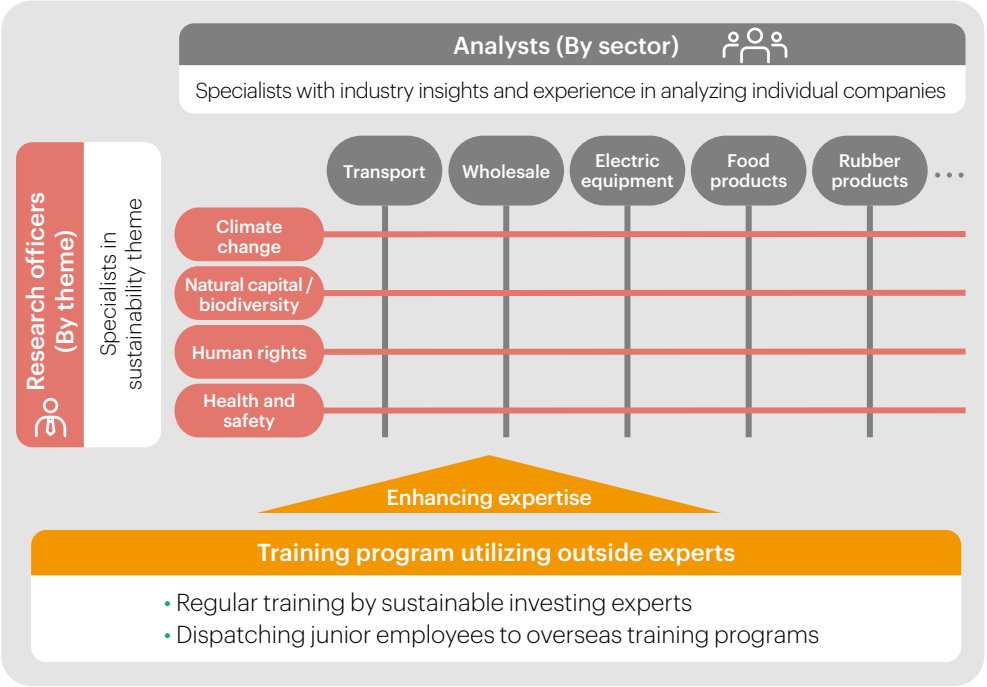
## Engagement stage management

- Management across four stages allows us to address issues through engagement.

| | |
|---|---|
| **Stage 1 Issue recognition** | Analyzing companies subject to engagement and recognizing issues |
| **Stage 2 Start of dialogue/ issue sharing** | Initiating dialogue and sharing issues with companies |
| **Stage 3 Checking action** | Checking that companies have taken action to address issues |
| **Stage 4 Monitoring** | Ensuring that companies continue to take action to resolve issues |

## Highly effective corporate engagement structure

- In accordance with the MUFG AM Sustainable Investing Policy, the Group's investment companies work together to promote engagement.
- In addition to corporate/industry-specialized analysts, we also retain research officers specializing in sustainability topics, reflecting the latest knowledge in the rapidly changing field of sustainability.
- We also maintain a high level of expertise through regular utilization of outside experts to train our analysts and research officers.



# Engagement case study: Thematic engagement

**Company subject to engagement:**
**Company A (Rail transportation)**

**Theme:**
**Utilization of hydrogen energy**

## Objective

- Company A is a major player in the railroad industry, having significant impact on overall social infrastructure. Therefore, engagement was not only for passive purposes—that is, to reduce GHG emissions—but also to take a proactive stance and encourage actions toward achieving net zero emissions and disclosing progress toward this goal, with the aim of enhancing the company's corporate value.

## Dialogue

- Dialogue covered issues related to the practical application of hydrogen energy, its future potential and superiority as an energy source, and the establishment of a hydrogen supply chain. In addition, opinions were exchanged on milestones for the future implementation of hydrogen energy in society.

## Progress and future policies

- Company A is conducting demonstration tests for energy conversion and the establishment of a hydrogen supply chain, and it has been confirmed that the technical aspects of the project are on track for practical application. Through the engagement, we were also able to confirm the effectiveness of the company's efforts in encouraging the use of hydrogen energy throughout the industry.
- However, issues still impede full-scale commercialization, such as formulation of laws and regulations and technical standardization. We intend to encourage the company to make policy suggestions as an industry leader and to disclose the progress of these efforts.

# Engagement case study: Collaborative engagement / Public engagement

## Collaborative engagement

**Company subject to engagement**
**Company B (Electric equipment)**

**Engagement in collaboration with other investors and investment institutions within Climate Action 100+*1**

### Objective

- Company B is a leader in the global air conditioning industry. In the air conditioning business, GHG emissions are generated through the use of refrigerants and end products.
- In anticipation of further market expansion ahead, engagement was designed to help Company B achieve sustainable growth through both strategic business expansion and efforts to become carbon neutral.

### Dialogue

- In addition to calling for transparent information disclosure from an investor's perspective, discussions covered topics such as initiatives to reduce emissions and acquiring certifications related to emission reduction plans.

### Progress and future policies

- We have confirmed that Company B has established a policy to set the achievement of carbon neutrality as one theme for strengthening its management foundation and a policy to enhance information disclosure in their integrated report.
- We were also able to elicit commitments toward achieving carbon neutrality, such as by taking action to receive SBTi certification for emission reduction plans.
- Going forward, we intend to encourage the company to leverage its industry position and other strengths to exert influence in making policy suggestions

## Public engagement

- We co-hosted an event at COP28 with the Asian Development Bank, a provider of climate finance in the Asia–Pacific (APAC) region. At this event, participants discussed measures for each country's contribution activities and financing issues in light of the unique circumstances faced in the APAC region. We also deepened our activities in highly government-connected initiatives, such as GFANZ and AIGCC*2, and exchanged opinions with authorities in various Asian countries.


- Going forward, we will continue to exchange opinions with relevant government agencies in the APAC region, the Asian Development Bank, and regional financial institutions. Furthermore, we will discuss ways in which each country and regional financial institution can contribute to achieving net zero emissions.

*1 Climate Action 100+ is an investor-led global initiative, which aims to reduce GHG emissions across the value chain and align the global average temperature increase with the goals of the Paris Agreement.
*2 AIGCC: Asia Investor Group on Climate Change, a climate change-related association of financial institutions and investors in the Asia-Pacific region.

# Appendix

# Details of financed emissions (FE) in our portfolio

## Portfolio FE breakdown by sector

| | MtCO2e | Oil & gas | Coal | Electric utilities | Aviation | Maritime transportation | Rail transportation | Trucking services | Automobiles & components | Metals & mining | Chemicals | Construction materials | Capital goods | Real estate management & development | Beverages | Agriculture | Packaged foods & meats | Paper & forest products | Others | TCFD total | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FY2021 | Scope 1 and 2 | 35*1 | 0.2 | 85 | 13*2 | 12*2 | 0.4 | 0.5 | 3 | 23 | 9 | 3 | 2 | 1 | 0.3 | 2 | 5 | 2 | | 198 | |
| | Scope 3 | 99*1 | 0.4 | 29 | 4*2 | 6*2 | 0.5 | 4 | 73 | 27 | 25 | 2 | 93 | 2*2 | 2 | 1 | 11 | 3 | | 383 | |
| | Loan balance in scope of FE*3 (Billion $) | 49 | 0.4 | 61 | 20*2 | 16*2 | 13 | 14 | 63 | 26 | 35 | 4 | 53 | 88*2 | 7 | 2 | 16 | 6 | | 474 | |
| | PCAF Score (Scope 1 and 2) | 3.2 | 2.7 | 2.8 | 2.4 | 2.9 | 3.6 | 3.8 | 2.2 | 2.1 | 2.4 | 2.2 | 2.2 | 3.7 | 2.2 | 4.1 | 3.5 | 3.1 | | 2.7 | |
| | PCAF Score (Scope 3) | 3.2 | 3.2 | 3.1 | 2.5 | 3.0 | 3.7 | 3.8 | 2.2 | 2.2 | 2.4 | 2.2 | 2.6 | 3.7 | 2.3 | 4.5 | 3.5 | 3.5 | | 2.8 | |
| FY2022 | Scope 1 and 2 | 36 | 0.2 | 73 | 13 | 10 | 0.5 | 1 | 3 | 20 | 11 | 5 | 2 | 0.4 | 0.3 | 1 | 4 | 2 | 15 | 180 | 196 |
| | Scope 3 | 135 | 0.3 | 32 | 4 | 5 | 0.9 | 4 | 75 | 28 | 26 | 2 | 380 | 2 | 2 | 1 | 17 | 2 | 104 | 716 | 819 |
| | Loan balance in scope of FE*4 (Billion $) | 48 | 0.4 | 58 | 18 | 14 | 13 | 11 | 59 | 26 | 34 | 5 | 48 | 74 | 6 | 1 | 14 | 5 | 404 | 435 | 839 |
| | PCAF Score (Scope 1 and 2) | 2.7 | 3.3 | 2.4 | 2.6 | 2.9 | 2.7 | 3.6 | 2.1 | 2.1 | 2.2 | 2.5 | 1.9 | 2.9 | 2.0 | 3.4 | 3.0 | 2.8 | 3.7 | 2.5 | 3.1 |
| | PCAF Score (Scope 3) | 2.8 | 3.5 | 2.6 | 2.6 | 3.0 | 2.7 | 3.7 | 2.0 | 2.2 | 2.3 | 2.6 | 2.0 | 2.8 | 1.6 | 3.6 | 3.1 | 3.1 | 3.7 | 2.5 | 3.1 |

*1 Due to revisions in some emission data, the disclosed data for the previous fiscal year has been revised (Scope 1 and 2: 34 → 35; Scope 3: 97 → 99).
*2 FE for aviation finance, ship finance, and real estate non-recourse loans, which were not included in the scope of measurement in the previous fiscal year, were measured this fiscal year. Therefore, data for FY2021 disclosed in the previous fiscal year were revised retroactively.
([Aviation] Scope 1 and 2: 4 → 13; Scope 3: 2 → 4; Balance: 11 → 20; [Marine transportation] Scope 1 and 2: 8 → 12; Scope 3: 4 → 6; Balance: 11 → 16; [Real estate] Scope 3: 1 → 2; Balance: 80 → 88)
*3 Loan balance as of March 31, 2022 (including undrawn-committed amounts)
*4 Loan balance as of March 31, 2023 (including undrawn-committed amounts)

# Financing support: Target products for sustainable finance

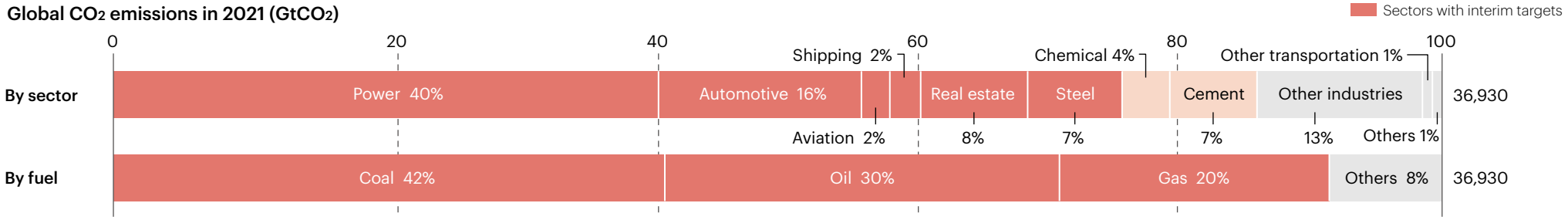
| | Target products | Definition (Including for refinancing) |
|---|---|---|
| Environment | **Project finance for renewable energy and environment-related projects** | Underwriting amount of project finance executed for renewable energy and environment-related projects such as solar and wind power generation |
| | **Financial advisory services for transactions/business for climate change mitigation and adaption** | Total amount of finance executed for such deals (excluding the project finance above) |
| | **Green bonds** | Underwriting amount of finance executed for deals complying with the Green Bond Principles by the ICMA*1 |
| | **Green loans** | Transition amount of finance executed for deals complying with the Green Loan Principles by the LMA and others*2 |
| | **Transition bonds / transition-linked bonds** | Underwriting amount of finance executed for third-party certified projects that comply with the Climate Transition Finance Handbook by the ICMA |
| | **Transition loans / transition-linked loans** | |
| | **Others** | Finance that utilizes the government's environment-related interest subsidy programs or that is used for resolving environmental issues (e.g. renewable energy funds) |
| Society | **Social bonds** | Underwriting amount of finance executed for deals complying with the Social Bond Principles by the ICMA |
| | **Project finance for public infrastructure-related projects** | Underwriting amount of project finance for basic infrastructure facilities such as public transportation and water facilities as well as essential services such as hospitals and schools |
| | **Financial advisory services for public infrastructure-related project financing** | Total amount of finance executed for such deals (excluding the project finance above) |
| | **Others** | Financing that utilizes the government's society-oriented interest subsidy programs or the new industry growth support program, or that is used for resolving social issues (e.g. microfinance funds and funds to make Japan a center of tourism initiatives) |
| Others | **Sustainability bonds / sustainability-linked bonds** | Underwriting amount of finance executed for projects that comply with the Sustainability Bond Guidelines and the Sustainability-Linked Bond Principles, both by the ICMA |
| | **Sustainability loans / sustainability-linked loans** | Underwriting amount of finance executed for projects that comply with the Sustainability Bond Guidelines by the ICMA and the Sustainability-Linked Loan Principles by the LMA and others |
| | **Proprietary investment in green bonds, etc.** | New investment amount for proprietary investments in green bonds, social bonds, etc. |
| | **Positive impact finance** | Underwriting amount of finance executed for deals complying with the Principles for Positive Impact Finance by the UNEP FI |
| | **Others** | MUFG's proprietary sustainability-related products including sustainability management support loans and private placement bonds |

*1 ICMA: International Capital Market Association *2 LMA: Loan Market Association

# Supplementary sector information

## Sector overview

**Global $CO_2$ emissions in 2021 ($GtCO_2$)**




## Formula for calculating emissions from the financed portfolio (by sector)

- **Emission intensity for the power sector**

$$\sum \left( \text{Emission intensity for each client or project (g } CO_2\text{e/kWh)} \times \frac{\text{Loan amount to each client/project}}{\text{Total of loan amount to each client/project}} \right)$$

- **Emission intensity for the commercial real estate sector**

$$\sum \left( \text{Emission intensity for each client or NRL*1 property (kg } CO_2\text{e/m}^2\text{)} \times \frac{\text{Loan amount to each client or NRL property}}{\text{Total of loan amount to each client or NRL property}} \right)$$

- **Absolute GHG emissions from the steel sector**

$$\sum \left( \text{Attribution factor: MUFG's credit share against debt + equity of each client} \times \text{GHG emissions from each client} \right)$$

- **Emission intensity for the aviation sector**

$$\sum \left( \text{Emission intensity for each client or aircraft (g } CO_2\text{/RPK)} \times \frac{\text{Loan amount to each client or aircraft}}{\text{Total of loan amount to each client or aircraft}} \right)$$

- **Absolute GHG emissions from the oil & gas sector**

$$\sum \left( \text{Attribution factor: MUFG's credit share against debt + equity of each client/project} \times \text{GHG emissions from each client/project} \right)$$

- **Emission intensity for the residential real estate sector**

$$\sum \left( \text{GHG emission intensity of each property used to secure mortgage (kg } CO_2\text{e/m}^2\text{)} \times \frac{\text{Loan amount to each mortgage}}{\text{Total of loan amount to each mortgage}} \right)$$

- **Emission intensity for the automotive sector**

$$\sum \left( \text{Emission intensity for each client (g } CO_2\text{/vkm)} \times \frac{\text{Loan amount to each client}}{\text{Total of loan amount to each client}} \right)$$

- **Method for calculating PCA for the shipping sector**

$$\sum \left( \text{VCA} \times \frac{\text{Loan amount to each vessel}}{\text{Total of loan amount to each vessel in asset scope}} \right)$$

$$\text{Vessel Climate Alignment (VCA)} = \frac{\text{}CO_2\text{e emission intensity for each vessel (g } CO_2\text{e/dwt-nm)} - \text{Required trajectory value by vessel}}{\text{Required trajectory value by vessel}}$$

*1 Non-recourse loan

# Abbreviations for MUFG organizations and titles

## MUFG organizations

| Organization | Official name/notes |
|---|---|
| **MUFG** | Mitsubishi UFJ Financial Group, Inc. |
| **Bank** | MUFG Bank, Ltd. |
| **Trust Bank** | Mitsubishi UFJ Trust and Banking Corporation |
| **Securities** | Mitsubishi UFJ Securities Holdings Co., Ltd. |
| **MUMSS** | Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. |
| **MUFG AM** | MUFG Asset Management |
| **Krungsri** | Bank of Ayudhya Public Company Limited.: An MUFG consolidated subsidiary in Thailand |
| **Bank Danamon** | PT Bank Danamon Indonesia Tbk: An MUFG consolidated subsidiary in Indonesia |

## MUFG titles

| Abbreviation | Official title |
|---|---|
| **CEO** | Chief Executive Officer |
| **CRO** | Chief Risk Officer |
| **CSO** | Chief Strategy Officer |
| **CSuO** | Chief Sustainability Officer |

# Glossary (1)

| Terms and abbreviations | Official name | Remarks |
|---|---|---|
| **ATFSG** | Asia Transition Finance Study Group | Based on the Asia Energy Transition Initiative (AETI) proposed at the Special Meeting of ASEAN Ministers on Energy in June 2021, the Asia Transition Finance Study Group was launched in October 2021 to "present and disseminate the concept of an Asian version of transition finance." |
| **CCS**<br>**CCU**<br>**CCUS** | Carbon dioxide Capture and Storage<br>Carbon dioxide Capture and Utilization<br>Carbon dioxide Capture, Utilization and Storage | CCS is a carbon capture and storage technology that separates out $CO_2$ emitted from power plants, chemical plants, etc. from other gases, collects them, then stores or injects the $CO_2$ deep underground. CCU refers to technology that separates, recovers, and reuses $CO_2$ for fuel, while CCUS refers to technology that recovers, effectively uses, and stores $CO_2$. |
| **CDP** | — | CDP (a nonprofit organization) run by a coalition of institutional investors and with an office in London that calls on companies with high market capitalization in major countries to disclose their environmental strategies and greenhouse gas emissions. |
| **$CO_2e$** | $CO_2$ equivalent | Carbon dioxide equivalent (examples: methane and nitrous oxide, etc.) figures |
| **COP** | Conference of the Parties | The Conference of the Parties to the United Nations Framework Convention on Climate Change. The 28th Conference (COP28) was held from November to December 2023 in Dubai, UAE. |
| **CRREM** | Carbon Risk Real Estate Monitor | An initiative that calculates and provides scenario benchmark values for 2°C and 1.5°C by building types covering 44 countries (as of November 2023) across Europe, Americas, and APAC, including Japan. |
| **DAC** | Direct air capture | A type of technology that removes $CO_2$ from the air, directly extracting $CO_2$ from the surrounding atmosphere. There are a variety of technological methods available to separate $CO_2$ from air at various scales, using heat, moisture, pressure, and/or electricity. |
| **FE** | Financed Emission | A concept that indicates the portion of GHG emissions from each client or project in which a financial institution invests and finances that are deemed to be attributable to the financial institution through financing. |
| **GFANZ** | Glasgow Financial Alliance for Net Zero | A coalition of initiatives, including those of banks, insurance companies, asset owners, and investment institutions, established to support the transition to net zero emissions. |
| **GHG** | Green House Gas | Gases, such as $CO_2$ and methane, that cause the greenhouse effect. |
| **GX** | Green Transformation | Transformation of the entire economic and social system to achieve emission reductions and increase industrial competitiveness by viewing efforts to achieve 2050 carbon neutrality and 2030 national GHG emission reduction targets as an opportunity for economic growth. |
| **IEA** | International Energy Agency | An international organization within the Organisation for Economic Co-operation and Development (OECD) that publishes scenarios (SDS, APS, NZE, etc.) for achieving the goal of limiting the increase in global average surface temperature. |
| **IMO** | International Maritime Organization | A specialized agency of the United Nations to promote international cooperation on maritime issues, including ship safety and the prevention of marine pollution from ships. |
| **JETP** | Just Energy Transition Partnership | A multilateral partnership to accelerate the phase-out of coal-fired power plants and provide support for investment in renewable energy and related infrastructure. |
| **NDC** | Nationally determined contribution | An agreement, as part of the Paris Agreement, that sets out how much a given country will contribute to reducing GHG emissions. Agreements have been submitted by more than 190 countries, and must be updated every five years. |
| **Net zero** | — | A state in which GHG emissions are reduced to a net value of zero when combining captured and removed emissions. |
| **NGFS** | Network for Greening the Financial System | A network of central banks and financial regulatory authorities established in 2017. It aims to expand climate risk management and green finance for financial institutions, providing stress test scenarios for climate risk. |
| **NZAM** | Net Zero Asset Managers initiative | Formed voluntarily in 2020 by asset management companies, this initiative calls for becoming net zero by 2050 as well as limiting, through investments, the increase in global average surface temperature to 1.5°C. |
| **NZBA** | Net-Zero Banking Alliance | Established by the United Nations Environment Programme Finance Initiative (UNEP FI) in April 2021, this initiative commits banks to net zero GHG emissions in their financed portfolios by 2050. |
| **PACTA** | Paris Agreement Capital Transition Assessment | A tool to analyze the alignment of portfolios with climate change scenarios, led by 2° Investing Initiative, a French thinktank. |
| **PCA** | Portfolio Climate Alignment | An index of alignment that indicates the difference from the required level for an entire financed portfolio related to vessels. Calculated by weighted average of the Vessel Climate Alignment (VCA) of each vessel financed as a percentage of the loan portfolio. |
| **PCAF** | Partnership for Carbon Accounting Financials | Launched in 2015 with the goal of standardizing GHG measurements and the disclosure of financed GHG emissions. |

# Glossary (2)

| Terms and abbreviations | Official name | Remarks |
|---|---|---|
| **PCAF score** | PCAF Data Quality Score | PCAF's own five-point scale scoring system that indicates the quality of the disclosed data. Scores are determined according to the degree of estimation, with Score 1 as the highest rank. |
| **PPA** | Power purchase agreement | A system in which businesses rent the roofs of facilities or idle land owned by companies and municipalities, install power generation equipment free of charge, and use the electricity generated at their facilities, thereby reducing electricity costs and $CO_2$ emissions. |
| **SAF** | Sustainable aviation fuel | An aviation fuel produced mainly from biomass, used cooking oil, and garbage from cities, and is expected to significantly reduce GHG emissions compared to conventional aviation fuel. Global SAF production is limited currently, and manufacturing costs present a challenge. |
| **SBTi** | Science Based Targets initiative | Established by the United Nations and other organizations to encourage the private sector to set GHG emission reduction targets based on climate science. Certification can be obtained by meeting SBTi's goal-setting guidelines. |
| **Scope 1, 2 and 3** | — | Scope 1: Direct GHG emissions by the reporting company itself (e.g., fuel combustion, industrial process); Scope 2: Indirect GHG emissions from using electricity, heat, or steam supplied by others; and Scope 3: Indirect GHG emissions other than Scope 1 and 2 (GHG emissions by others related to the company's activities). |
| **TCFD** | Taskforce on Climate-related Financial Disclosures | Taskforce set up by the Financial Stability Board (FSB) in 2015 to develop a consistent approach to disclosing climate change-related financial risks. |
| **UNEP FI** | United Nations Environment Programme Finance Initiative | A global partnership established between the United Nations Environment Programme (UNEP) and the financial sector. Promotes action to align economies with sustainable development throughout the financial system. |
| **VCA** | Vessel Climate Alignment | The degree of climate alignment of individual vessels for which financing is being provided. Calculated by dividing the difference between the GHG emission intensity of each ship and the required level for each ship for each year by the required level for each ship for each year. |
| **ZEB** | Net zero energy building | A building that aims to achieve a comfortable indoor environment while reducing the annual balance of primary energy consumed by the building to zero. |
| **ZEH** | Net zero energy house | Housing that is highly insulated and airtight, consumes less energy through use of high-efficiency equipment, and generates energy through solar power generation and other methods, resulting in annual net energy consumption for the residence of around zero or less. |
| **ZEV** | Zero emission vehicle | A vehicle that does not emit air pollutants or GHGs such as $CO_2$, which is considered the primary cause of global warming. |

## PCAF Data Quality Score*1

We score the quality of emission data by each client/project according to the categories shown below, and aggregate the average score for the sector as a whole by weighted average of loan amount.

High ↑ Low

| Quality | Category | Summary |
|---|---|---|
| Score 1 | Disclosed information | Verified emissions data of each client/project |
| Score 2 | Disclosed information | Unverified emissions data of each client/project |
| Score 2 | Estimated value (based on physical metrics) | Estimation based on energy consumption data of each client/project |
| Score 3 | Estimated value (based on physical metrics) | Estimation based on production data of each client/project |
| Score 4 | Estimated value (based on financial metrics) | Estimation based on the sales of each client/project and the sectorial emission benchmarks per sales |
| Score 5 | Estimated value (based on financial metrics) | Estimation based on loan balances of each client/project and sectorial emission benchmarks per asset |
| Score 5 | Estimated value (based on financial metrics) | Estimation based on loan balances of each client/project, sectorial emission benchmarks per revenue, and asset turnover ratio per sector |

*1 Based on The Global GHG Accounting & Reporting Standard for the Financial Industry

# Links

| Publication date | Report | Overview |
|---|---|---|
| **May 2021** | Carbon Neutrality Declaration | Declaration of carbon neutrality by MUFG. We are committed to achieving net-zero GHG emissions from our financed portfolio by 2050 and our own net-zero GHG emissions by 2030. Click here for reference page |
| **Apr. 2022 & Apr. 2023** | Progress Report | In addition to presenting MUFG's quantitative results and targets, the report provides an overview of the approach to achieving carbon neutrality and our thought process on which this is based. Click here for reference page |
| **Sept. 2022 & Sept. 2023** | Sustainability Report | This report summarizes MUFG's most recent initiatives on sustainability, focusing on policies, systems, and measures to achieve a sustainable environment and society as well as sustainable growth. Click here for reference page |
| **Sept. 2022 & Sept. 2023** | TCFD Report | Based on the TCFD recommendation, this report provides a summary of MUFG's climate change-related risks and opportunities disclosure report based on Governance, Strategy, Risk Management, and Indicators and Targets. Click here for reference page |
| **Oct. 2022** | Transition White Paper 2022 | Taking the six sectors of materials and power (iron & steel, cement, chemicals, paper, glass, and power) as examples, this report summarizes the path to carbon neutrality in Japan, including background information, such as regional characteristics. Click here for reference page |
| **Sept. 2023** | Transition White Paper 2023 | Focusing on carbon neutrality for electricity and heat in Japan, this report makes policy comparisons against Europe and the United States, and compiles a list of technologies that Japan is considering implementing with respect to carbon neutrality for electricity and heat. Click here for reference page |
| **Nov. 2023** | Asia Transition White Paper 2023 | This report provides a deep dive into the power sector in Thailand and Indonesia, analyzing the bankability and challenges of each decarbonization lever, and compiling examples of support measures from a financial institution perspective. Click here for reference page |

## References

- **ATF Guidelines (ATFSG, released September 2022)** Click here for reference page

Provide practical guidance, mainly by organizing the process and key points for financial institutions when considering transition finance, and by using case studies to illustrate the guideline's concepts.

- **ATF Activity Report (ATFSG, released September 2023)** Click here for reference page

This report summarizes the ATFSG's members and activities, as well as recommendations for public sector support necessary for transition finance initiatives.

- **NZBA Transition Finance Guide (NZBA, released October 2022)** Click here for reference page

Defines principles that can be referred to in addressing transition finance and also provides policy suggestions for expanding transition finance.

- **Developing Metrics for Transition Finance (NZBA, released December 2023)** Click here for reference page

Provides proposals to financial institutions for quantifying, understanding, and disclosing the impact of transition finance as a complementary indicator to financed emissions, with the goal of expanding transition finance.

**Disclaimer**

This report (the "Subject") is intended to comply with the general principles, laws, rules and regulations related to environmental, social, and governance (ESG), sustainability or corporate responsibility. However, please be aware that ESG standards and regulatory requirements may vary significantly across different jurisdictions. As such, depending on your country of residence or incorporation, there may be specific local requirements or standards that the Subject does not fully address. We encourage you to consider your local requirements and your own ESG criteria and objectives when selecting our products and services. It should be noted that no universally accepted global framework (legal, regulatory, or otherwise) currently exists, nor is there a market consensus in terms of what constitutes a "green", "sustainable", "responsible", "traditional", or equivalent "ESG" investment, communication, product, or offering. Furthermore, no assurance can be given that such a universally accepted framework or consensus will develop over time. Although there have been regulatory efforts in certain jurisdictions and regions (in particular, in the European Economic Area) to define such concepts, the legal and regulatory framework is still under development.

Additionally, the lack of common or harmonized definitions and labels currently regarding what is considered "green", "ESG", "sustainable", "responsible", and other similar criteria, or clear guidelines on what these monikers mean may result in different approaches being taken by different institutions.

Alongside its sustainable financing activities, MUFG and its affiliates invest in and finance projects associated with a wide range of industries, businesses and jurisdictions including in, but not limited to, high-emitting and hard to abate sectors such as the energy sector. MUFG commits to achieve net zero emissions in its finance portfolio by 2050 and its own operations by 2030. MUFG's Carbon Neutrality Declaration can be found **here**.

Accordingly, no assurance, warranty or representation can be given by MUFG that any of their investments, products, communications, services or offerings will meet any or all expectations regarding "green", "ESG", "sustainable", "responsible", or other equivalently labelled objectives or that no adverse environmental, social, and/or other impacts will occur.