



MUFG Progress Report

Moving towards Carbon Neutrality

April 2022

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- In April 2021, we defined our purpose as being “Committed to empowering a brighter future.” Since then, we have been implementing our medium-term business plan, led by a heightened commitment to helping resolve environmental and social issues.
- To better contribute to building a sustainable environment and society, MUFG has selected 10 priority environmental and social issues with an eye on better fulfilling society’s expectations in areas where MUFG’s strengths can be applied. One of the priorities we especially focus on is climate change measures and environmental protection.
- We have always been proactive in addressing climate change and environmental protection issues. It included formulating the MUFG Environmental and Social Policy Framework for assessing and managing the risks associated with our business activities as well as setting sustainable finance targets. During this period, the movement to combat climate change gained tremendous global momentum, as can be seen, for example, by the Japanese government’s Carbon Neutrality Declaration. MUFG has taken another step forward by announcing the MUFG Carbon Neutrality Declaration in May 2021. Guided by this declaration, MUFG is implementing group-wide environmental measures globally, aiming to achieve net zero GHG emissions from the financed portfolio by 2050 and net zero GHG emissions from our own operations by 2030.
- This report highlights the progress of MUFG’s carbon neutrality initiatives and the measures that we are taking. In addition to the results and targets, we also report on our approach to achieving them and our thought process on which they are based. Through sharing the concept of MUFG’s initiatives in detail, we hope to work together with wide range of stakeholders to achieve a sustainable environment and society.

Purpose: Committed to Empowering a Brighter Future.

Medium-term Business Plan

Corporate transformation

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Digital transformation (DX)

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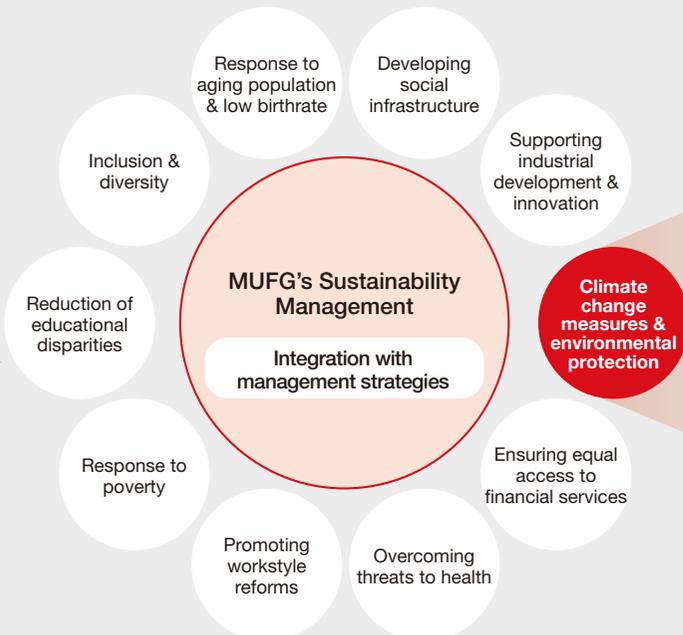
Contributing to resolving environmental and social issues

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Transforming our corporate culture

Identify areas of high affinity between world expectations and our business operations

10 Priority Environmental and Social Issues That MUFG Must Address



MUFG Carbon Neutrality Declaration

Net zero GHG emissions from our financed portfolio by 2050

Net zero GHG emissions from our own operations by 2030

Milestones

	2019	2020	2021	2022	...	2030	...	2040	
1 Net Zero GHG Emissions from the Financed Portfolio									
Power: Interim Targets for 2030 (emission intensity)	349gCO ₂ e/kWh						156-192 gCO ₂ e/kWh		NEW
Oil & Gas: Interim Targets for 2030 (emission reduction rate)	83MtCO ₂ e						15-28% reduction from 2019		NEW
2 Decarbonization through Financial Services									
Sustainable finance (cumulative balance from FY2019)	3.7 trillion yen (including 2.2 trillion yen for the environment)	7.9 trillion yen (including 3.6 trillion yen for the environment)	10.4 trillion yen through the first half (including 4.3 trillion yen for the environment)			35 trillion yen (including 18 trillion yen for the environment)			
Credit balance targets for coal-fired power generation									
Project finance (FY)	USD 3.58 billion	USD 3.77 billion				50% reduction from FY 2019		Zero	
Corporate finance (FY)	Approx. 120 billion yen							Zero NEW	
3 Net Zero GHG Emissions from Own Operations									
			Completely shift to 100% renewable energy for electricity procured domestically by the Bank, the Trust Bank, and the Securities HD			Completely shift to 100% renewable energy for electricity procured domestically NEW		Net zero	

Progress Since the Carbon Neutrality Declaration

1 Net Zero GHG Emissions from the Financed Portfolio

Set interim targets for the power and oil & gas sector

- Determined the power and oil & gas sectors as priority sectors. Measured actual results (2019) and set interim targets for 2030.
- Power: GHG emission intensity from 349gCO₂e/kWh to 156-192gCO₂e/kWh; Oil & Gas: Reduce absolute GHG emissions from 83MtCO₂e by 15-28%.

Decarbonization through Responsible Investment

Joined NZAM and will set interim targets for 2030

- Positioning climate change as a significant ESG issue and promoting engagement with investees.
- In November 2021, we joined the Net Zero Asset Managers initiative (NZAM) to accelerate our efforts. Set interim targets for 2030 by October 2022.

2 Decarbonization through Financial Services

Accelerated a range of initiatives based on customers' needs

- Providing diverse solutions to help them measure their own GHG emissions, set reduction plans, and implement carbon offsets. Proactively worked to establish rules and design markets.

Set corporate finance targets for coal-fired power generation

- Set corporate finance target to reduce the credit balance to zero by FY2040.

Participation in Initiatives

Leading the discussion on the development of a global framework

- Appointed as Chair of the Financing & Engagement Subcommittee of the Net-Zero Banking Alliance (NZBA), which is responsible for developing a framework for transition finance.
- Through discussions at the initiatives, we are gathering a wide range of information on global trends and the movements of global financial institutions to strengthen MUFG's initiatives.

3 Net Zero GHG Emissions from Own Operations

Made progress on measuring global group-wide GHG emissions

- Measured global group-wide GHG emissions for the first time.

Shifted to 100% renewable energy for electricity procured domestically by the Bank, the Trust Bank, and the Securities HD

- Completed ahead of initial target: March 31, 2022. As a result, GHG emissions have been reduced by approximately 60% domestically (approximately 30% of global GHG emissions)

Other Efforts

Krungsri announced their Carbon Neutrality Vision

- Krungsri has committed to decarbonization of own emissions by 2030 and decarbonization of financial services by 2050.

Revision of the MUFG Environmental and Social Policy Framework

- Tightened the Policy Framework, including prohibition of financing to new thermal coal mining projects for power generation.

[Click here for details](#)

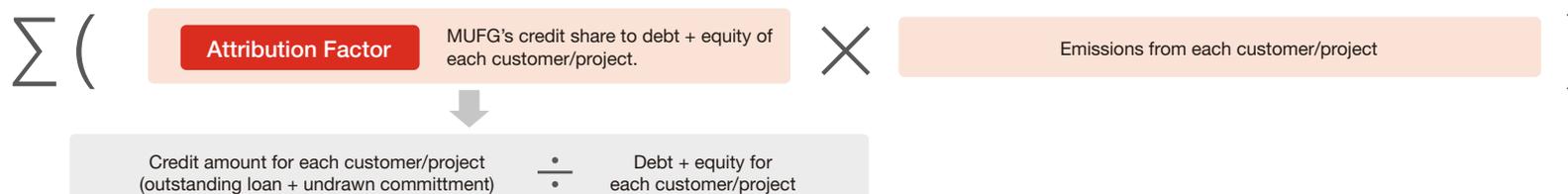
2030 Interim Targets

- MUFG joined NZBA in June 2021 after announcing the Carbon Neutrality Declaration. NZBA members share a common goal: net zero financed portfolios by 2050. They are also required to set interim targets for 2030 or earlier using a science-based approach.
- We are committed to helping achieve the goals of the Paris Agreement by achieving carbon neutrality by 2050, and at the same time, supporting a smooth transition to a decarbonized society through our financial services, and proactively contributing to creating a sustainable society by fostering a virtuous cycle between the environment and the economy. Today, we have set interim targets for 2030, aligned with the Paris Agreement. We recognize that the processes for achieving these targets vary depending on the characteristics of each region and business. We are also aware that our business is greatly affected by geopolitical risks and other factors, so we will share issues that we find through engagement (dialogue) with customers and support them to help resolve these issues.
- Innovations which are still in the conceptual stage is another indispensable element for the world to achieve decarbonization. We believe that there is a gap between the real world and the goal that is yet to be materialized. Therefore, our aspiration is to further contribute to the changes where the world advances more towards decarbonization by developing research on new technologies for implementation.
- To reflect our stance mentioned above, we have set ranged interim targets in order to work together with our stakeholders to achieve net zero GHG emissions by 2050.

Net zero GHG emissions from the financed portfolio

- Net zero GHG emissions from the financed portfolio means decarbonizing the sector portfolio by reducing the GHG (Scope 3) generated through financing customers and projects.
- GHG emissions from the financed portfolio are defined as “financed emissions”. This is the amount of GHG emissions attributed to each financial institution through financing each customer or project.
- MUFG uses the calculation model recommended by the PCAF. When calculating MUFG’s attribution factor, while the PCAF guidelines recommend using outstanding amounts of loans and investments, MUFG uses outstanding credit amount which includes the undrawn amount of commitment in order to reflect our credit stance as a financial institution more accurately.

Financed Emissions by PCAF model



Four Approaches to Setting the Interim Target

- We have adopted the following four approaches to setting the interim target.
- Going forward, we will reflect the changes in the IEA (International Energy Agency) scenario and various guidelines, as well as the increase in the quality of data disclosed by our customers, as appropriate.

Science-based

- Following the NZBA Guideline, MUFG will ensure that the interim target for 2030 is scientifically “well below 2°C, preferably to 1.5°C,” as agreed in the Paris Agreement.
- As a benchmark for 1.5°C, we will refer to scientific scenarios published by IEA and others.

Highly standardized and transparent

- MUFG believes that targets should be set from a global perspective using widely accepted and transparent methods. We participate in various initiatives, collecting insights and reflecting them in the targets we set.
- We will proceed with target setting, incorporating guidelines and rules developed by NZBA, PCAF, PACTA, and SBTi etc., as well as the outcomes of the global working groups which we participate in.

Data quality

- We use the best available data to set targets. However, there are limits to the amount and quality of data currently available, so we will use the PCAF data quality score to check the quality of emissions data disclosed by MUFG. [Click here for reference page](#)
- When data is updated or new data is disclosed, improvements in accuracy and quality will be reflected. MUFG will also contribute to improving data accuracy by being highly transparent when disclosing information.

Sector-specific

- Pathways and the methods to achieve carbon neutrality vary by sector, so for each sector we will take into consideration the characteristics of the business, the guidelines and the targets set by each customer.
- By taking this approach, MUFG will identify issues in each sector and support customers’ efforts for achieving carbon neutrality.

Interim target-setting process

- MUFG will set interim targets for the following processes.



Identifying priority sectors



Sector analysis



Determine methodologies and measure GHG emissions



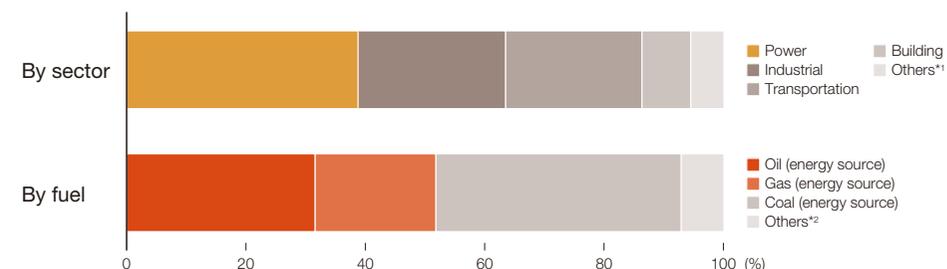
Set interim targets

Identifying Priority Sectors

○ The NZBA Guidelines define nine carbon-intensive sectors that should be prioritized when setting targets: agriculture; aluminium; cement; coal; commercial & residential real estate; iron & steel; oil & gas; power generation; and transport. Among these sectors, MUFG especially puts priority on the power and the oil & gas sectors for the following reasons.

- (1) CO₂ emissions from the power sector account for approximately 40% of global CO₂ emissions. The power sector is expected to take a leading role in promoting decarbonization across industries through electrification.
- (2) Oil & gas are widely consumed by industry and households, accounting for approximately 50% of global CO₂ emissions from fuels and therefore important for reducing GHG emissions from fossil fuels.
- (3) Both sectors have relatively large financed emissions in the MUFG portfolio.
- (4) Both sectors have relatively well-developed data and methodologies.

Figure 1: Global CO₂ emissions in 2019 (GtCO₂)



Source: IEA World Energy Outlook 2021

1. Agriculture, forestry, fisheries, etc.
2. CO₂ emissions from sources other than fossil fuel combustion (industrial processes, waste, etc.)

Characteristics of the power sector

● In the transition stage to a decarbonized society, the demand for power is expected to increase due to economic growth in developing countries and the electrification of industry. So, the power sector will need to shift to renewable energy and low-carbon fuels, while ensuring a stable supply of energy.*

* Electricity demand under the IEA 1.5°C scenario (IEA NZE scenario in which the increase in the global surface temperature rise is limited to 1.5°C with a 50% or greater probability of success) is estimated to grow by 39% by 2030 and 166% by 2050 (compared with 2020).

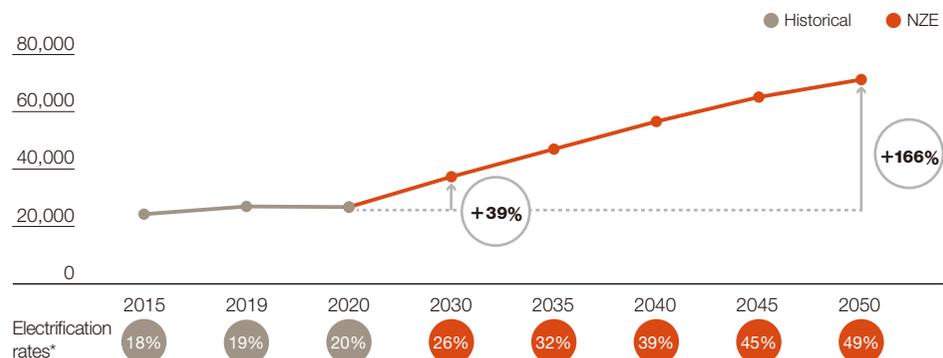
● The policies and initiatives of each country are important because the business model of this sector is local and therefore has particularly strong regional characteristics.

Characteristics of the oil & gas sector

● For decarbonization, GHG emission reductions can be done through electrification of production processes, CCUS, etc. (i.e. Scope 1, 2 of the upstream business). On the other hand, a large amount of this sector's GHG emissions is due to cross-industrial consumption (Scope 3), indicating that decarbonization in the oil & gas sector cannot be achieved without industries and households transitioning away from fossil fuels.

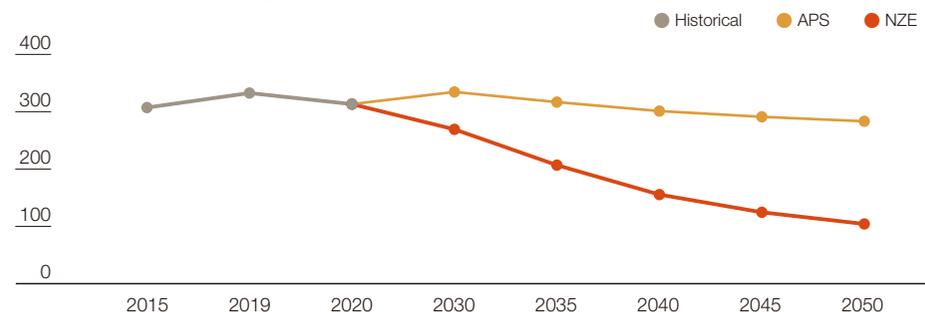
● The IEA figures suggest that currently there is a large gap between the demand (IEA APS scenario that is based on the commitments announced by each country) and the 1.5°C scenario. It is important to promote decarbonization in the demand sectors as well in order to close the gap between these two scenarios.

Figure 2: Global electricity demand (TWh)



Source: IEA World Energy Outlook 2021 * The ratios of electricity to final energy consumption

Figure 3: Global primary energy demand for Oil & Gas (EJ)



Source: IEA World Energy Outlook 2021

Setting Interim Target for the Power Sector

- Following SBTi and PACTA, the value chain and emission scope which we cover is Scope 1 of the power generation business, which accounts for the majority of GHG emissions in this sector.
- The power sector is expected to take a leading role in driving cross-industry decarbonization. GHG emission intensity, a measure of emission efficiency, will be used as the metric because the power sector needs to support the increasing electricity demand while simultaneously moving ahead with clean energy conversion.
- The average PCAF score for the target portfolio that is included in the calculation is 2.4. [Click here for reference page](#)
In addition to information disclosed by customers, we use data sources, including CDP and Bloomberg, etc. for GHG emission data. In cases where GHG emission data is not available, we use production data obtained from these data sources as well as emission intensity information obtained from IEA database, etc. to make estimates. Customers who do not have GHG emission data or production data are excluded from the calculation, yet we manage to cover more than 85% of our credit portfolio for this sector.
- Going forward, we will expand our target coverage and improve data quality reflected in our PCAF score in line with enhanced data availability.

Method for calculating emission intensity for the power sector

$$\sum \left(\text{GHG emissions intensity of each customer/project (gCO}_2\text{e/kWh)} \times \frac{\text{Loan amount to each customer/project}}{\text{MUGF total loan amount to power sector}} \right)$$

Target scope	Value chain: Power generation businesses Emission scope: Scope 1
Asset scope	Loan amounts (including undrawn-committed amounts)* As of December 31, 2019 <small>*More than 85% of the exposure is included in the calculation.</small>
Target metric	Emission intensity (gCO ₂ e/kwh)
PCAF score	Average PCAF score 2.4 (score 1-2: 54%, score 3: 46%)
Data source	Information disclosed by each customer, CDP, Bloomberg, etc.

Interim Targets for 2030 for the Power Sector

- The interim target for 2030 is 156-192gCO₂e/kWh.
- The power sector has a local business model with strong regional characteristics, and is expected to take a leading role in promoting each NDC with governments. We will achieve 192gCO₂e/kWh by supporting our customers to meet each country's NDCs, which are essential for achieving the Paris Agreement, and also by helping their initiatives for green, transition and innovation. 192gCO₂e/kWh is a level well below the IEA 2°C scenario in 2030.
- In addition to the above, we aim for 156gCO₂e/kWh, which is consistent with the IEA 1.5°C scenario in 2030, by making further contributions to the promotion of renewable energy, etc. as a leading company in sustainable finance.



Status of Engagement in the Power Sector

- MUFG conducts the following types of engagement (dialogue) with customers who have initiatives to reduce GHG emissions.

Japanese Corporate

○ Engagement example 1

MUFG coordinates dialogues between customers in the power sector and overseas institutional investors. As a financial institution, we encourage customers and investors to close the gap in their perceptions of their position, particularly the ideals and the reality of becoming carbon neutral. Most recently, we exchanged views on respective approaches to transitioning and contributed to building a foundation for formulating strategies.

○ Engagement example 2

MUFG, including top management, regularly exchanges opinions with customers in the power sector regarding the external environment and awareness of problems, and we are working to gain a more multifaceted understanding of the position of customers through tours of power generation plants. To achieve the common goal of carbon neutrality for both customers and MUFG, we will discuss how MUFG can best contribute to the formulation and implementation of customers' strategies, including the possibility of strategic investments and contributing human capital.

Global Corporate

○ Engagement example 3 (EMEA)

A UK utility company defined ESG as its core strategic priority to achieve its energy transition. MUFG has had on-going discussions with the company's management team to provide financing support. As a result, MUFG provided financing support to the company by serving as its financial advisor for a CCS project, collaborating on an offshore wind power project, and providing support on ESG-linked loan and green bond issuance.

○ Engagement example 4 (Oceania)

An Australian company building and maintaining infrastructure for high-voltage power transmission was looking to expand its renewable energy operations. In Australia, coal accounts for a large percentage of power generation, and the company launched a transmission infrastructure development project to improve the transmission infrastructure that could support the enhancement of renewable energy generation capacity. MUFG proposed financing solutions for this project, provided ESG-related advice, and engaged with participating companies as well as public and private stakeholders. MUFG contributed to the promotion of renewable energy project as the company's financial advisor.

Corporate finance targets for coal-fired power generation

- As we report in this document, MUFG set an interim target for 2030 for GHG emission intensity in the power sector as a target for becoming carbon neutral in 2050 through loans and investments to customers in the power sector. Going forward, we will disclose the progress toward the targets
- For credit related to coal-fired thermal power generation, we have set a target to reduce to zero* the balance of financing to coal-fired power generation projects by FY2040.
- In addition, for extending credit to customers in the power sector, we newly set a target to reduce the balance of corporate finance for coal-fired power generation to zero* by FY2040.
- We will continue to promote investments and loans for green, transition and innovation through engagement (dialogue) aimed to help customers decarbonize who are operating coal-fired thermal power generation.

Carbon-related assets (coal-fired power) 1.2 trillion yen

For coal-fired power generation

Project Finance

Approx. 380 billion yen

FY 2040: Zero
(Halved by FY 2030)

Corporate Finance

Approx. 120 billion yen

FY 2040: Zero

* Projects that contribute to the transition toward a decarbonized society are excluded following the MUFG Environmental and Social Policy Framework.

Setting Interim Target for Oil & Gas Sector

- According to PACTA, upstream businesses of fossil fuel sectors are important as they have significant impact on other segments down the value chain. Therefore MUFG focuses on the upstream of the value chain, which have the largest environmental impact. The emission scope which we look into covers not only Scope 1 and Scope 2 but also Scope 3, from which the majority of GHG emissions from this sector is generated.
- We have chosen to use absolute GHG emissions as the target metric to directly capture fossil fuel burns (Scope 3) which are the main cause of GHG emissions.
- The average PCAF score for the target portfolio that is included in the calculation is 2.6. [Click here for reference page](#)
In addition to information disclosed by customers, we use data sources, including CDP and Bloomberg, etc. for GHG emission data. In cases where GHG emission data is not available, we use production data obtained from these data sources as well as emission intensity information obtained from IEA database, etc. to make estimates. Customers who do not have GHG emission data or production data are excluded from the scope of calculation, yet we manage to cover more than 85% of our credit portfolio for this sector.
- Going forward, we will expand our target coverage and improve data quality reflected in our PCAF score in line with enhanced data availability.

Absolute GHG emissions calculation method in the Oil & Gas sector

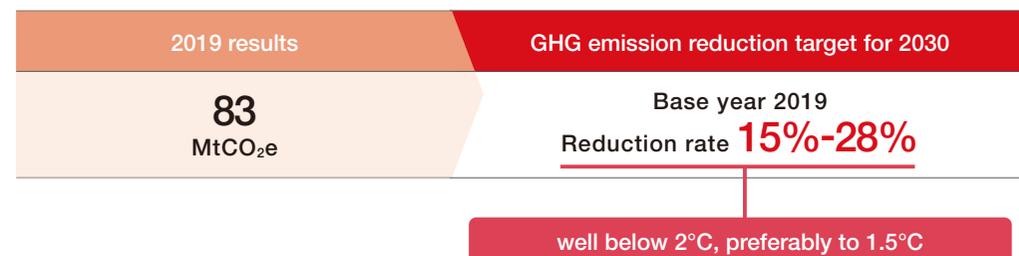
$$\sum (\text{Attribution factor} \times \text{GHG emissions from each customer/project})$$

Attribution factor
MUFG's credit share against debt + equity for each customer/project
×
GHG emissions from each customer/project

Target scope	Value chain: Upstream production businesses (including integrated businesses heavily involved in upstream businesses) Emission scope: Scope 1, 2, 3
Asset scope	Loan amounts (including undrawn-committed amounts)* As of December 31, 2019 <small>*More than 85% of the exposure is included in the calculation.</small>
Target metric	Absolute GHG emissions (MtCO ₂ e)
PCAF score	Average PCAF score 2.6 (score 1-2: 44%, score 3: 56%)
Data source	Information disclosed by each customer, CDP, Bloomberg, etc.

Interim target for 2030 for the oil & gas sector

- The interim target for 2030 is 15%-28% reduction from 2019.
- We will achieve 15% reduction by engaging with our customers and supporting their efforts in reducing GHG emissions. 15% reduction is a level well below the IEA 2°C scenario in 2030.
- We aim for 28% reduction which is consistent with the IEA 1.5°C scenario in 2030. However, to achieve this it is essential for both the oil & gas sector (supply-side) and the industries (demand-side) to simultaneously accelerate decarbonization. Therefore, we intend to achieve 28% reduction by making contribution to the world to further advance toward decarbonization.



Engagement in the Oil & Gas Sector

- MUFG conducts the following types of engagement (dialogue) with customers who have initiatives to reduce GHG emissions.

Japanese Corporate

○ Engagement example 1

MUFG uses a wide range of engagement activities with customers in the oil & gas sector to help them achieve transitions, including exchanging opinions on the future of the industry as well as providing opportunities to discuss developments in new areas, such as forest management. We are also focusing on ways to deepen mutual understanding by providing suggestions gained from our participation in COP26 and information on the environment in which financial institutions are operating.

○ Engagement example 2

MUFG not only provides project finance support for geothermal power projects to customers in the oil & gas sector, but we also encourage customers to enter the renewable energy field by providing financial advisory services for equity investments in these projects. We are also one of the lead managers for issuing green bonds, and MUFG Group companies are working together to help customers make successful transitions.

Global Corporate

○ Engagement example 3 (EMEA)

MUFG has been having regular conversations with a global energy company's senior management team to support the company's transition strategy. In addition to understanding the company's energy transition strategy, MUFG shared its views and made proposals tailored to the company's strategy by leveraging MUFG's strength in structured finance. This led to providing financial support to contribute to the acceleration of the company's energy transition.

○ Engagement example 4 (Oceania)

The company was considering participating in a CCS project as its core strategy to prepare for carbon neutrality – in line with the Paris Agreement. However, CCS market is still immature and requires cooperation beyond public-private partnership to achieve practical application. MUFG teams in Japan and Australia jointly provided early stage financing advice as well as facilitated discussions between various stakeholders, which ultimately contributed to the company's progress in CCS opportunities and in energy transition.

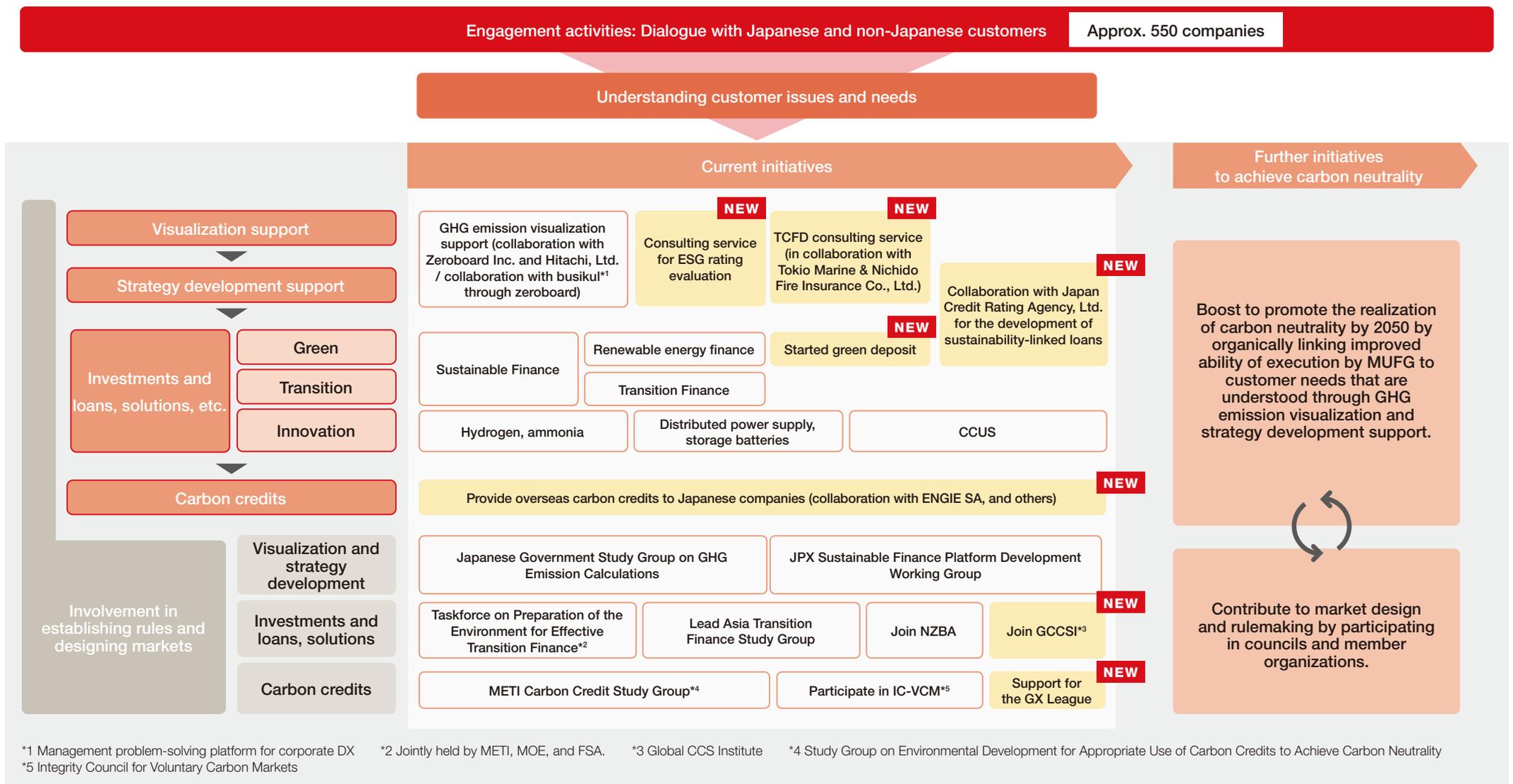
MUFG's achievement so far

- We have set the interim targets for the power sector and oil & gas sector in line with the NZBA Guidelines. MUFG will continue to follow NZBA Guidelines by reporting annual progress for the targets, reviewing the targets within five years, and setting new interim targets for other carbon-intensive sectors.

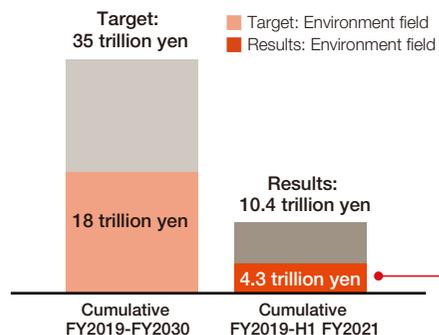
	Outline of the NZBA Guidelines	MUFG's action
Disclosure requirement	Set 2050 targets for alignment with the Paris Agreement	Announced target of net zero by 2050 in the MUFG Carbon Neutrality Declaration
	For carbon-intensive sectors, set interim targets for 2030 or earlier for several key sectors within 18 months of joining <small>*Agriculture; aluminium; cement; coal; commercial & residential real estate; iron & steel; oil & gas; power generation; and transport. (Banks may prioritize sub-sectors based on GHG emissions and financial exposure and/or data and methodology availability.)</small>	Disclosed interim targets for 2030 for the power and the oil & gas sectors
	Set interim targets for 2030 or earlier for the majority of carbon-intensive sectors within 36 months of joining	We will set targets for the sectors other than power and the oil & gas sectors going forward
Scenarios	Use of widely accepted science-based decarbonization scenarios	Refer to the scenarios published by the IEA
Data used	The target base-year shall be no more than two full reporting years prior to the setting of the target. (If there are issues, such as economic conditions or data quality, then data older than two years is acceptable. In that case, explanations will be required.)	Used 2019 data <small>*We use 2019 GHG emissions data as 2020 is impacted by Covid-19</small>
Asset scope	Loans (on balance sheet) Investment (on balance sheet) remains a recommendation	Included corporate finance and project finance <small>*Underwriting is not included. (consistent with NZBA guidelines, PCAF is still in the process of developing guidelines.) *Proprietary trading and loans from partner banks account for less than 5% of the total, so they are not considered material and are not included.</small>

Engagement Activities Based on the Needs of Customers

- MUFG intends to be a financial institution that empowers a brighter future by supporting customers' decarbonization. We aim to start engagement (dialogues) with customers through the Energy Transformation Strategy Project Team and to support customers to become carbon neutral by developing and providing solutions based on the varied issues and needs of each customer.



Target and Results of Sustainable Finance



- Project finances, etc. for renewable energy and environment-related businesses **1.3 trillion yen**
- Underwriting green bonds **1.2 trillion yen**
- Corporate loan origination for businesses contributing to climate change mitigation and adaptation, etc. **0.5 trillion yen**
- Financial advisory for businesses that contribute to climate change mitigation and adaptation **1.2 trillion yen**

The Third ESG Finance Awards Japan



- Gold award in the Banking Category (MUFG Bank)
- Silver Award in the Financial Service Category (Securities Division) (MUFG Morgan Stanley Securities)
- Selected as an Environmental Sustainable Company in the Environmental Sustainable Company Category (MUFG)

New Initiatives by MUFG

Collaboration with Tokio Marine & Nichido Fire Insurance Co., Ltd.

- Two financial institutions that focus on long-term engagement have joined forces to address TCFD disclosure issues for customers. These issues include climate change risk/opportunity analysis and formulating strategies. By leveraging the complementary strengths of these two institutions, we now provide consulting services with an eye to providing solutions.

Support for Building Ammonia Supply Chains

- Marubeni Corporation is working on a feasibility study for building a supply chain for clean fuel ammonia from Western Australia to Japan, to be implemented jointly with government agencies, power companies, and Australian companies. MUFG participates in financing to support for building ammonia supply chains.

Positive Impact Finance

- MUFG Bank began handling positive impact finance in FY 2021 as part of strengthening engagement. We provided our first positive impact finance to Mitsubishi Heavy Industries, Ltd., a key technology player in the decarbonization field (loan agreement amount: 2 billion yen).

Leading Practices Overseas

- First large-scale offshore wind project finance deal in the US (total financing amount: approx. USD 2.3billion) – one of the largest renewable energy project finance deal closed in 2021. (Awarded 2021 PFI Global ESG Deal of the Year)
- First carbon credit backed supply chain finance in EMEA (total financing amount: approx. USD 640million)

Consulting service for ESG Rating Evaluation

- Mitsubishi UFJ Trust and Banking has started providing consultations to identify ESG issues and improving evaluations, based on ESG ratings such as FTSE. This supports engagement activities with investors and other stakeholders.

Collaboration with Japan Credit Rating Agency, Ltd. (JCR)

- We collaborate with JCR, an agency with an extensive track record in evaluations for sustainable finance, and developed a sustainable finance product that incentivizes GHG emissions reductions by combining JCR's expertise with MUFG Bank's customer base, financial expertise and Zeroboard Inc.'s services.

Participation in the Global CCS Institute (GCCSI)

- MUFG is the first Asian private financial institution to participate in this international think tank, established with the aim of promoting the global use of carbon capture and storage (CCS) technology.

Transition Bond

- Mitsubishi UFJ Morgan Stanley Securities provides support as the lead manager and structuring agent for the world's first transition bonds in the aviation industry issued by Japan Airlines Co., Ltd.

Collaboration with ENGIE SA

- MUFG Bank reached an agreement with ENGIE SA, with over 10 years of experiences in low-carbon energy and services, to collaborate on solutions to help MUFG Bank's customers mitigate climate change by supporting their decarbonization strategies. Through this collaboration, we aim to establish a way to provide appropriate carbon credits supplied by ENGIE to our customers. We will also consider further business development and collaborations in renewable energy as well as in new fields such as hydrogen.

Introducing fuel cell buses and contributing to the community through the decarbonization concept

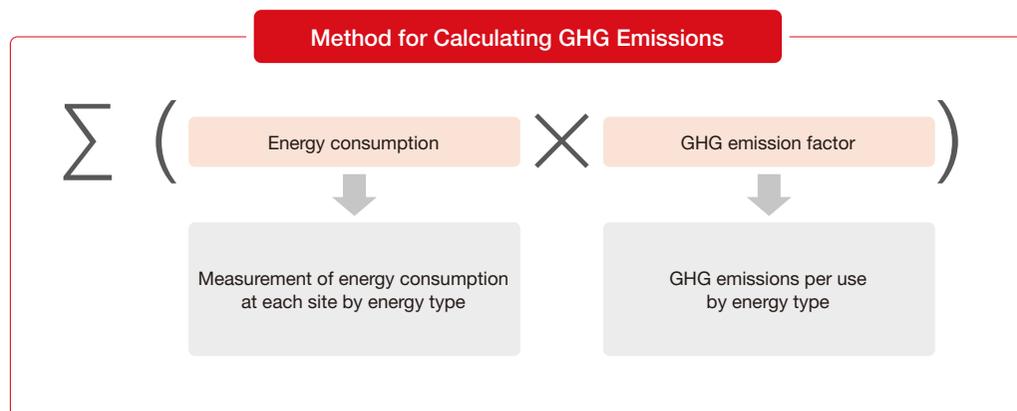
- MUFG's supports (donations) help to fund the introduction of fuel cell buses in Tokyo and Osaka, with a view to increasing demand and promoting the use of hydrogen.
- MUFG contributes, including donations, to local communities by helping to create sustainable businesses originating in Osaka, looking ahead to achieving carbon neutrality goals set by Osaka Prefecture, and presenting and promoting technology at expositions.

Contributing to the World by Reducing Our Own GHG Emissions

- Under the MUFG Carbon Neutrality Declaration, we set the target of achieving net zero GHG emissions in our own operations by 2030.
- MUFG will promote initiatives that reduce GHG emissions in more than 50 countries and regions where we operate. Together with stakeholders in each country, we will contribute to decarbonization around the world while overcoming challenges.

Method for Calculating GHG Emissions

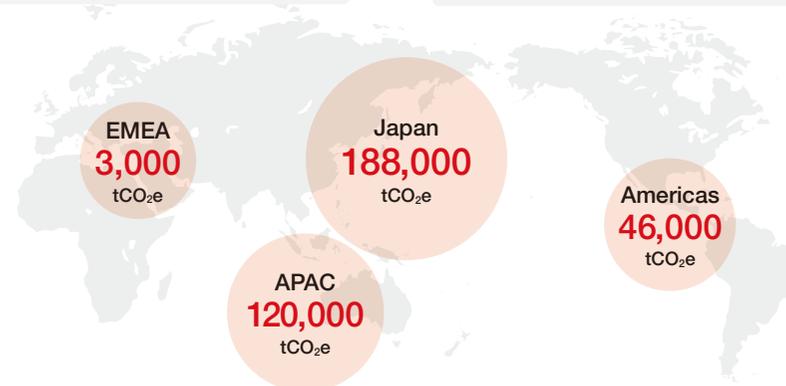
- Based on the GHG Protocol, we measure energy consumption at all group and global sites, multiply those figures by the GHG emissions per use for each country and energy type, and then total the results.



- **Scope of measurement:** The companies included in the calculation of GHG emissions are those that have management control over their businesses (an operational control approach). At MUFG, each locations including overseas of the holding company and consolidated subsidiaries are covered.
- **Measurement criteria:** Scope 2 emissions related to electricity use are not location-based, which is calculated based on emission factors specified for each region, but market-based, which reflects the switch to renewable energy electricity, etc. in the emission factors.
- **Period in scope:** In principle, from April 1, 2020 to March 31, 2021

GHG Emission Results

- For the first time, MUFG has measured and aggregated GHG emissions on a group and global basis.
- GHG emissions totaled approximately 360,000 tCO₂e. By energy type, direct GHG emissions (Scope 1) were 30,000 tCO₂e (8%) and indirect GHG emissions (Scope 2) were 327,000 tCO₂e (92%).
- By region, the ratios of Japan and overseas were nearly one half each. Japan and APAC accounted for 86% of total GHG emissions.
- We aim to obtain a third-party guarantee for the content of our disclosures in the future.



Initiatives for Net Zero GHG emissions in our own operations by 2030

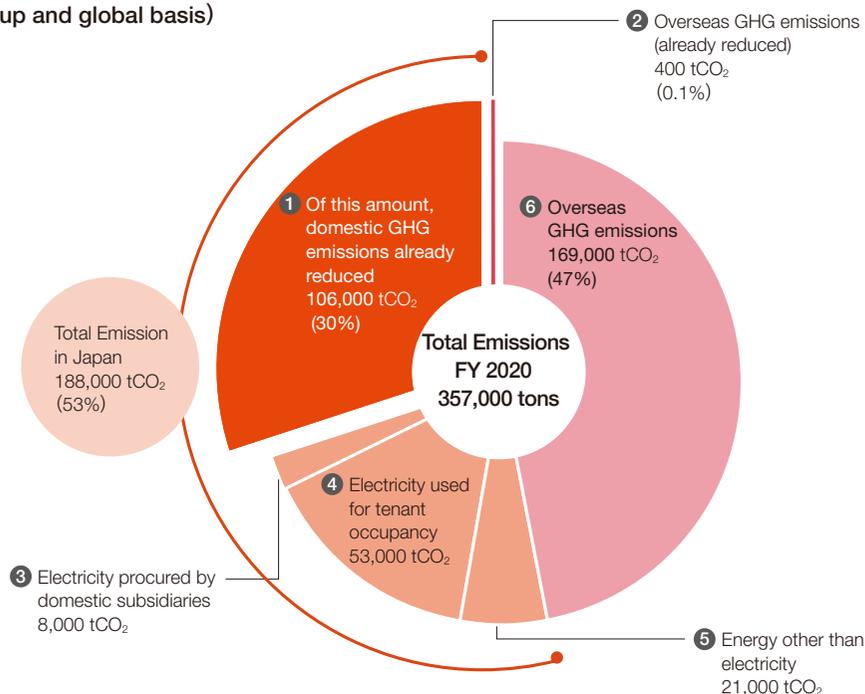
- Since the Carbon Neutrality Declaration in May 2021, MUFG has reduced approximately 60% of domestic GHG emissions (which is approximately 30% of global GHG emissions).
- In addition to our initiatives to reduce energy use through continued energy conservation,*1 we will reduce our gasoline consumption by switching to electric vehicles (EVs) and promote the use of renewable energy sources for electricity to become net zero for GHG emissions by 2030. We will also work to establish and introduce raw green power*2 to directly contribute to an increase in renewable energy sources.
- Overseas, while accumulating expertise from promoting domestic environmental initiatives and introducing renewable energy at our European business locations, we will accelerate implementing specific measures, taking into account the status of policies and systems to promote decarbonization in each country.

*1 Nagoya Building (completed in 2021): acquired CASBEE S rank, MUFG Park's two new buildings (to be completed in 2023): plan to acquire BELS/ZEB certifications, relocation to energy-efficient properties and offices, etc.

*2 Green power, generated from renewable energy sources such as wind, solar, and biomass (biological resources), is sent directly from the power plant to the consumer. Customers can use green power directly as electricity for their own use, rather than "deemed" to do so.

Breakdown of GHG Emissions in FY 2020

(Group and global basis)



Progress in Reducing Our Own GHG Emissions and Future Directions

Switch to renewable energy sources

- 1 **Completely shift to 100% renewable energy** by November 2021 for electricity procured domestically by the Bank, the Trust Bank and the Securities HD
- 2 Some bases in Europe have already switched to renewable energy
- 3 **Completely shift to 100% renewable energy** for electricity procured domestically **by the end of FY 2022**
- 4 Encourage tenants and other owners to switch to renewable energy sources for their electricity contracts

⇒ **Initiatives for introducing raw green power: directly contribute to increasing domestic renewable energy sources**

- Signed a 20-year purchase agreement from a new solar power plant (corporate PPA)

Switching to electric vehicles (EVs) for company cars

- 5 Aiming to switch to 100% EV use in Japan by FY 2030 (by formulating a specific plan that takes into account the expiration of existing lease contracts and the charging environment)

Specific measures in each country and region

- 6 Specific measures, such as switching to renewable energy sources and purchasing renewable energy certificates

Initiatives to Address Material ESG Issues through Responsible Investment

- MUFG's subsidiary asset management company is working on the initiatives to continuously enhance value of the investee companies and resolve various ESG issues through managing investment portfolio. In particular, we believe that "climate change" is not only a manifestation of risk due to the deterioration of the global environment, but also an opportunity for the development of new technologies to solve the problem of our investees and to increase the potential for business expansion.
- MUFG has set "material ESG issues" which MUFG prioritizes to address through responsible investment activities, and aims to make a contribution to resolving by engagement activities, etc. For one of these issues, especially in climate change, we are participating in a global initiative and working with investors around the world to solve the problem.

Positioning Climate Change as a Material ESG Issue

- In a materiality matrix, ESG issues on asset management are mapped from the perspective of materiality in terms of society and MUFG Asset Management. In this context, climate change has been positioned as one of the most significant issues. (We are the first Japanese asset management company to adopt a materiality matrix)
- Addressing climate change is essential for improving investment value. We will contribute to the smooth transition to a decarbonized society through engagement, etc. with our investees.

Materiality matrix

Materiality in terms of society	Extremely high		Circular economy Pollution prevention and control Natural capital and biodiversity	Governance structure Information disclosure / Climate change Human rights and diversity Health and safety
	Very high		Supply chain	Scandals and corruption
	High	Stakeholders and regional community	Risk management	Human capital Data security and privacy
		← Unique	Companies / Industries / Assets	→ General
		Materiality in terms of MUFG Asset Management		

Participation in global initiatives

Joined CA100+ in December 2017

An initiative to work on collaborative engagement toward more than 160 companies that emit high levels of GHG. MUFG leads dialogue in two Japanese companies.



Joined CDP in August 2018

A project in which institutional investors work together to encourage businesses to disclose their climate change strategies and GHG emissions. MUFG utilizes it as ESG database to evaluate non-financial disclosures of investees.



Supported TCFD as an asset manager in May 2019

We started measuring GHG emissions of our investment portfolio from 2020 and started the disclosure based on TCFD recommendations.



Joined AIGCC in November 2019

An initiative consisting of financial institutions and investors in the Asia-Pacific region to address climate change. MUFG supports it as a board committee member.



Joined NZAM in November 2021

An asset management company initiative to achieve net zero GHG emissions by 2050, in line with international efforts to limit the global temperature increase to 1.5°C. MUFG will set an interim target for 2030 by October 2022 for the proportion of assets under management consistent with achieving net zero GHG emissions by 2050.

Contributing to Global Initiatives

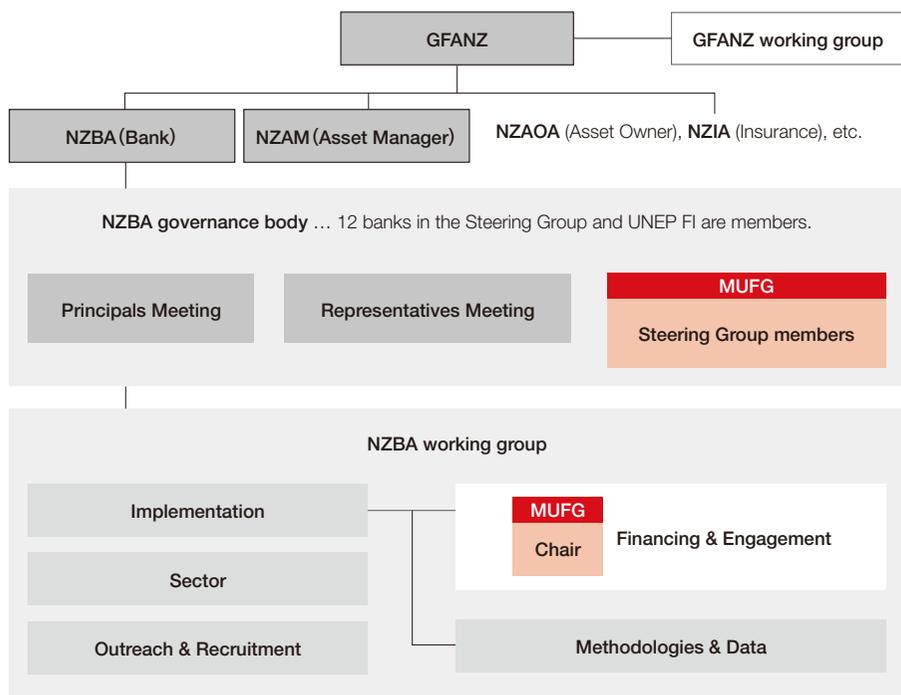
- MUFG has participated in initiatives to recognize our position from a global perspective and to reflect a highly-standardized and transparent methodologies when setting GHG emission targets for our financed portfolio. As a leading financial institution in Asia, we are committed to communicating our views.

GFANZ (Glasgow Financial Alliance for Net Zero)

Through the GFANZ working groups, MUFG has been discussing net zero initiatives across financial sector as well as recommendations from the financial industry to other industries. GFANZ plans to use these discussions to make policy recommendations to the G20 and COP27.

NZBA (Net-Zero Banking Alliance)

In June 2021, we became the first Japanese bank to join the NZBA and have been contributing as an Asian representative in the Steering Group. In December 2021, we were appointed Chair of the Financing & Engagement working group. MUFG leads the development of a global framework for transition finance.



Asia Transition Finance Study Group (ATFSG)

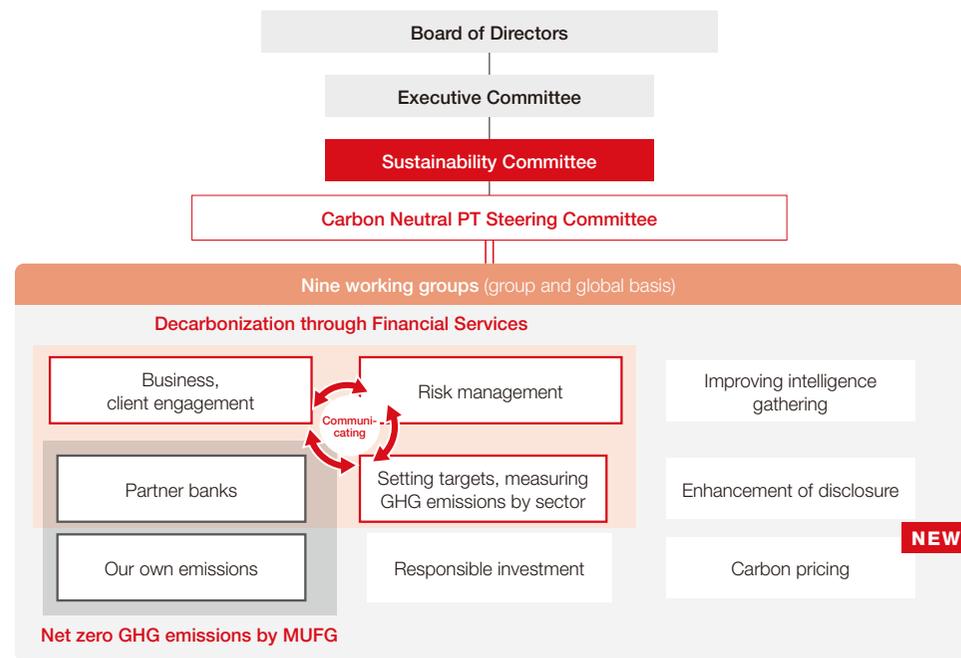
- ATFSG was launched under the Asia Energy Transition Initiative (AETI) with a focus on major financial institutions active in ASEAN countries. Leading by MUFG, this study group is discussing the common principles and standards, etc. necessary to have a realistic and gradual energy transition in Asia.

Collaboration with the University of Tokyo – Launching the ETI-CGC

- In November 2021, the University of Tokyo and 13 major domestic companies launched the Energy Transition Initiative – Center for Global Commons (ETI-CGC) as an initiative to help with decarbonization. We advance discussions of pathways to achieve carbon neutrality in Japan.

Carbon Neutral Project Team

- MUFG has established project teams on a group and global basis to discuss and make decisions through a steering committee in which the CEO and other key management members participate.



In alignments with “MUFG Carbon Neutrality Declaration” and the Carbon Neutrality Declaration made by governments of Thailand and Indonesia, Krungsri and Bank Danamon, our Partner Banks in Asia, have enacted their own measures to achieve a sustainable environmental and social objectives in their respective countries.



Krungsri's Carbon Neutrality Vision

In alignment with Thailand's declaration at COP26 to achieve Carbon Neutrality by 2050, Krungsri, as the second commercial bank in Thailand, has announced its pledge to decarbonization as follows.

- Decarbonization of own emissions by 2030
- Decarbonization of financial services by 2050
- Phasing out exposure to coal-fired power plants within 2030
- Social and sustainable finance target of 50-100 billion baht* by 2030

*Approx. 160~330 billion yen

Krungsri, through collaborative efforts with MUFG, has been instrumental in promoting and advancing ESG finance market development in Thailand. In 2021 (January to December), the Bank ranked number one on the ESG debenture league table, commanding the market share of 29 percent.



Bank Danamon's Commitment to Sustainability

Bank Danamon recognizes the importance of incubating initiatives in realizing a sustainable environmental and social society, and is participating in Indonesia's pledge for decarbonization. Furthermore, Bank Danamon will accelerate its contributions as the Indonesian Presidency leads the G20 of 2022.

- Strengthen Management's Engagement.
 - Enhanced committee structure to be directly supervised by Management
- Sustainable Finance Portfolio*1 Target
 - Established an aspirational target to increase the Sustainable Finance portfolio to 25% in the next five years
- Advanced Disclosure among Indonesia Peers
 - Disclosure of carbon-related assets which aligns with MUFG's TCFD report
 - Disclosed policies for Palm Oil sector such as requiring commitment to NDPE*2 and encouraging to obtain certification
- Contribute to MUFG's target of achieving net zero GHG emissions on its own operations by 2030

*1: Aligned with local regulations

*2: NDPE: No Deforestation, No Peat and No Exploitation

THAILAND

INDONESIA

Terms and abbreviations	Official name	Remarks
AETI	Asia Energy Transition Initiative	Japan's comprehensive support measures for the transition in Asia proposed at the Special Meeting of ASEAN Ministers on Energy and Minister of Economy, Trade and Industry of Japan, in June 2021.
APS	Announced Pledges Scenario	Scenarios published by the IEA that build on the nationally determined contributions (NDCs) already announced by the Paris Agreement member countries.
BELS ZEB Certification	Building-Housing Energy-efficiency Labeling System Net Zero Energy Building Certification	A third-party certification system supervised by the Ministry of Land, Infrastructure, Transport and Tourism that oversees the energy-saving performance of buildings. The number of stars is determined on a five-point scale. Buildings with excellent energy-saving performance, or with 5 stars, the highest rank, are certified as ZEB.
CCS/CCUS	Carbon Capture and Storage / 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. CCUS is a technology for using the separated and stored CO ₂ .
CASBEE	Comprehensive Assessment System for Built Environment Efficiency	A system for evaluating the environmental performance of buildings, developed in 2001 at the initiative of the Ministry of Land, Infrastructure, Transport and Tourism. There are five levels of evaluation: S, A, B+, B-, and C.
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 ₂ e	CO ₂ equivalent	Carbon dioxide equivalent (examples: methane and nitrous oxide, etc.) figures
COP	Conference of Parties	Conference of the Parties to the United Nations Framework Convention on Climate Change. The 26th Conference (COP26) was held in Glasgow, UK, in October and November 2021.
GHG	Greenhouse Gas	Gas, such as CO ₂ or Methane, etc., that cause greenhouse effect
IEA	International Energy Agency	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.
NDC	Nationally Determined Contribution	This report, submitted by over 190 countries, shows how much each country will contribute to reducing GHGs under the Paris Agreement. An update to the report is required every five years.
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.
NZAOA	Net-Zero Asset Owner Alliance	An asset owners' initiative to commit to the carbon neutrality of their managed portfolios by 2050.
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.
NZE	Net Zero Emissions by 2050 Scenario	A scenario released by the IEA where the increase in global average surface temperature is limited to 1.5°C with a 50% or greater probability of success.
NZIA	Net-Zero Insurance Alliance	An alliance of insurance companies to promote the transition of underwriting portfolios to achieve carbon neutrality 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.

Terms and abbreviations	Official name	Remarks
PCAF	Partnership for Carbon Accounting Financials	Launched in 2015 with the goal of standardizing GHG measurements and the disclosure of financed GHG emissions.
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. Score 1 is the highest rank.
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 goalsetting guidelines.
Scope 1, 2, 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 Scope 2 (GHG emissions by others related to the company's activities).
SDS	Sustainable Development Scenario	A scenario released by the IEA in which the increase in the global average surface temperature rise is limited to 1.8°C with a 66% or greater probability of success.
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.
IC-VCM	Integrity Council for Voluntary Carbon Markets (Taskforce on Scaling Voluntary Carbon Markets)	Taskforce with the goal to expand an effective and efficient carbon credit market to help achieve the Paris Agreement goals. Newly launched by Task Force on Scaling Voluntary Carbon Markets as a governance institution to consider the quality and evaluation system for carbon credits.

What is the PCAF Data Quality Score (PCAF score)?

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

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

Source: created by MUFG based on The Global GHG Accounting & Reporting Standard for the Financial Industry