

Disclosure in Line with the Recommendations of the TCFD

September 2021
(Revised December 2021)

Marubeni Corporation

Disclaimer Regarding Forward Looking Statements and Original Language

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This material is an English language translation of the materials originally written in Japanese. In case of discrepancies, the Japanese version is authoritative and universally valid.

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Disclosure in Line with the Recommendations of the TCFD

In February 2019, recognizing the importance of climate-related financial disclosures, the Marubeni Group affirmed the TCFD* recommendations. We are committed to enhancing related disclosure.

* The Task Force on Climate-related Financial Disclosures (TCFD) was established by the Financial Stability Board (FSB).

Marubeni Group's Stance on Climate Change and Initiatives

Marubeni Group's Recognition on the Current Climate-Related Issues

The Marubeni Group recognizes climate change as a global and highly urgent societal issue, and identifies it as one of its Environmental and Social Materiality issues. Recognizing the growing expectations and needs for the role to be played by the private sector under the Paris Agreement, in which the international community cooperates to abate GHG emissions, we believe that contributing to climate change countermeasures through our business will lead to the sustainable growth of the Marubeni Group.

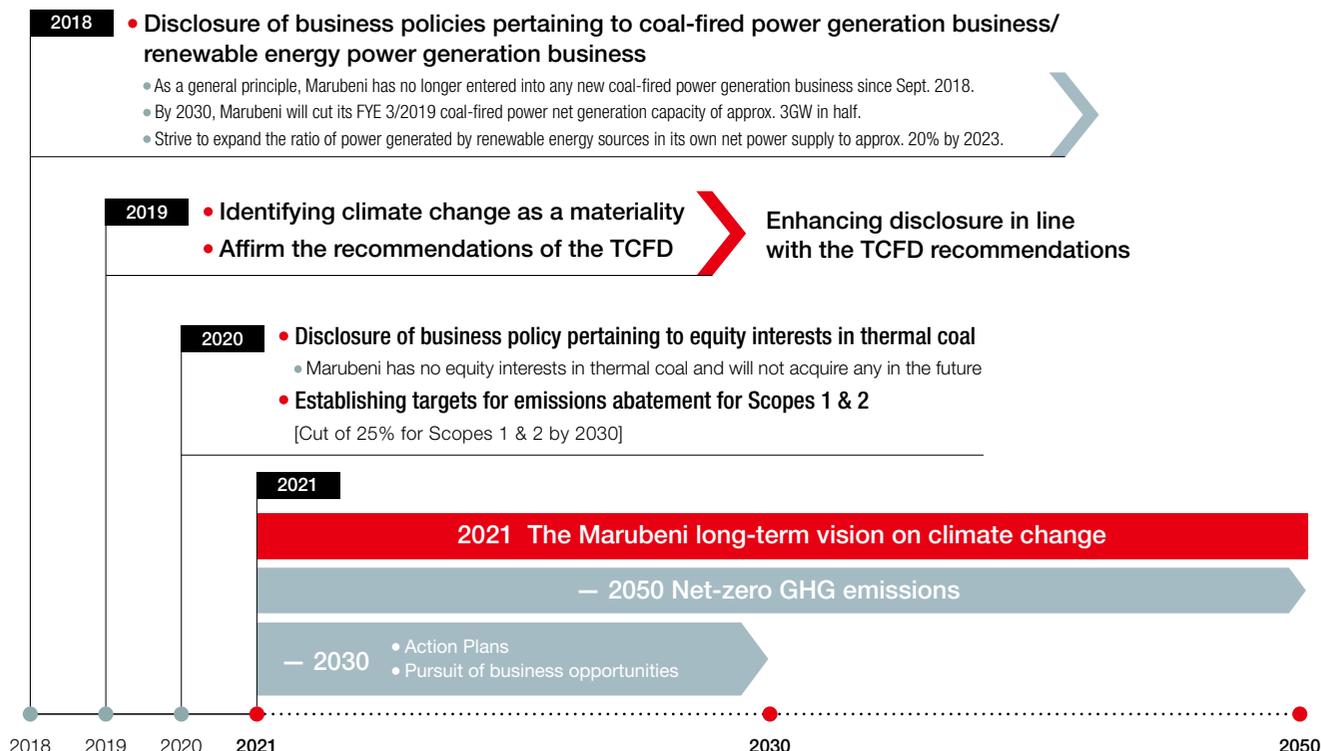
Basic Stance on Climate Change

The Marubeni Group is striving to anticipate shifts in society linked to climate change and to create growth opportunities while mitigating related risks.

1. Reductions in Marubeni Group GHG emissions	The Marubeni Group is targeting net-zero GHG emissions by 2050. We are engaged in various initiatives aimed at reducing the Group's GHG emissions.
2. Contributions through Marubeni Group businesses to support the transition to a low-carbon or decarbonized society	The Marubeni Group views the transition to a low-carbon or decarbonized society as a business opportunity. Through Group businesses and other initiatives relating to energy supply and demand, land use, and other fields, we are contributing to efforts to reduce GHG emissions, both within the Marubeni Group and across society.
3. Dynamic business portfolio flexibility	We will consider alternatives, including exiting a sector, in cases where Marubeni Group businesses are expected to face obsolescence or downward earnings pressure due to climate change. We see appropriately scaled and timed revisions to our business portfolio as supporting the growth in corporate value over time.
4. Increased resilience	The highly diversified nature of the Group's business portfolio provides a high degree of resilience to climate change. While the potential impacts on the Group's finances due to the risks within specific industries or businesses are expected to be limited, we will continue to improve risk management on an ongoing basis.

Contributions to Measures Addressing Climate Change

(Marubeni Group's efforts so far and the direction of future initiatives)



Note: Data in the above chart match those in the original announcement.

In line with the basic stance on climate change, we have been promoting specific initiatives to address climate change.

In 2018, Marubeni announced the “Notification Regarding Business Policies Pertaining to Sustainability (In Relation to Coal-Fired Power Generation Business and Renewable Energy Generation Business)”. In this document, which outlined the process of shifting away from coal-fired power generation, it was announced that:

As a general principle, the Company has no longer enter into any new coal-fired power business;
By 2030, Marubeni will cut its FYE 3/2019 coal-fired power net generation capacity of approximately 3GW in half, and;
Marubeni will strive to expand the ratio of power generated by renewable energy sources in its FYE 3/2019 net power supply to approximately 20% by 2023.

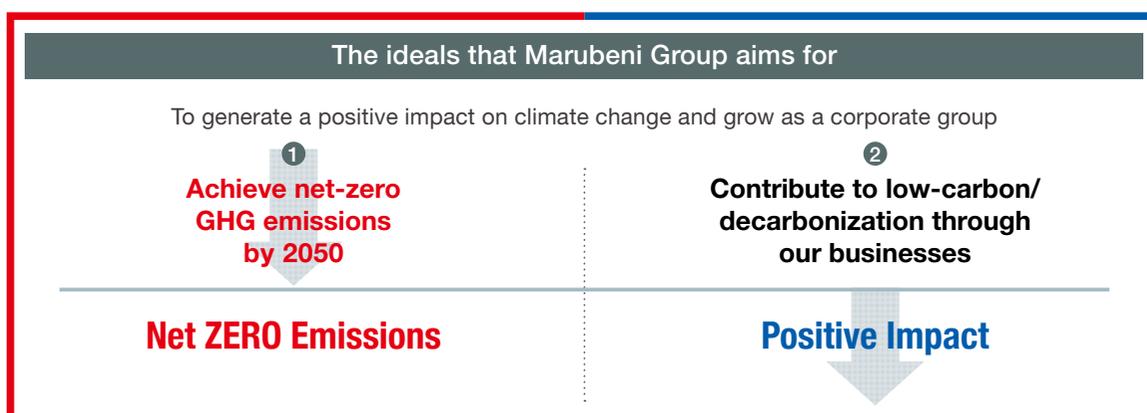
In 2019, we identified climate change as one of the Environmental and Social Materiality issues and affirmed our support for the TCFD recommendations. With regard to our equity interests in thermal coal, we have established a policy of not acquiring any new equity interests in thermal coal and have also established targets for GHG emissions abatement of Marubeni Corporation and its consolidated subsidiaries.

In March 2021, Marubeni has formulated the Long-Term Vision on Climate Change. Under this vision, Marubeni has set a goal to strive for net-zero GHG emissions by the group by 2050. In addition, we have formulated a series of action plans towards 2030 in order to make the goal of net-zero GHG emissions by 2050 effective.

The Long-Term Vision on Climate Change

In accordance with the Paris Agreement, the Marubeni Group recognizes the importance and urgency of limiting the increase in mean global temperature to 1.5°C by 2100 (hereinafter, the “1.5°C pathways”). We have formulated a long-term vision on climate change to help us contribute to global measures to address climate change over the medium and long term. As part of this vision, we have set a goal for the Marubeni Group of net-zero GHG emissions by 2050. We have also formulated action plans with the measures we plan to implement heading towards 2030 to make the goal of net-zero GHG emissions by 2050 more effective.

Our long-term vision envisages two pillars: first, to achieve net-zero GHG emissions by the Marubeni Group; second, contribute to the transition to a low-carbon or decarbonized society through business activities. By proceeding with both at the same time, we hope that our business activities will have a positive environmental impact in overall terms.



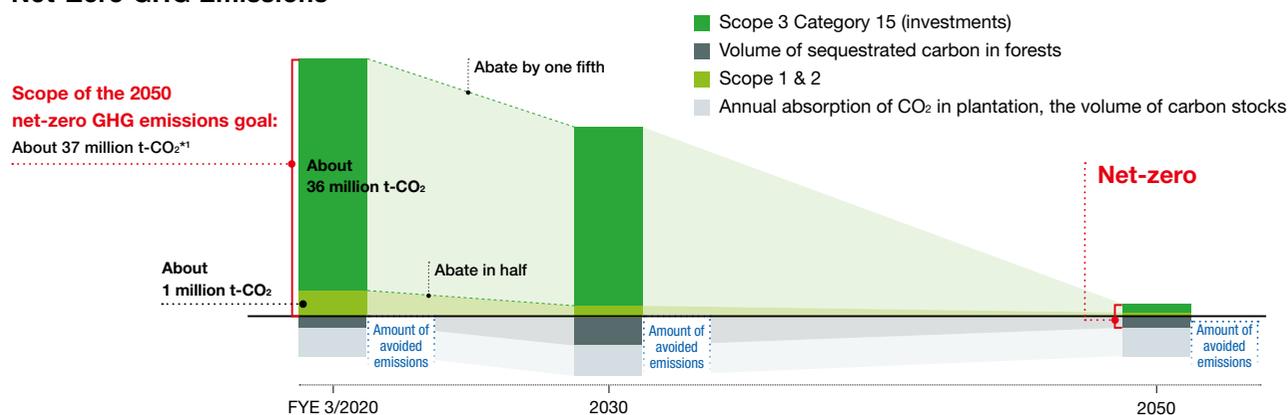
Net ZERO Emissions ① Achieve net-zero GHG emissions by 2050

Marubeni will abate GHG emissions at a level consistent with the said 1.5°C pathways. Any residual emissions that cannot be abated will be neutralized (GHG elimination) through internationally recognized nature-based solutions (e.g., forests, farmland, etc.), or through technological solutions, with the aim of achieving net-zero GHG emissions by 2050.*

* Boundary of net-zero GHG emissions:

- Scope 1: Direct emissions from owned or controlled sources of Marubeni and its consolidated subsidiaries, such as through burning of fuel, industrial process, etc.
- Scope 2: Indirect emissions from the generation of purchased energy consumed by Marubeni and its consolidated subsidiaries.
- Scope 3 Category 15 (Investments): Among all other indirect emissions that occur in the Marubeni Group's value chain, Scope 1 and Scope 2 for associate investees account for using the equity method (hereinafter, "associate investees").

Net-Zero GHG Emissions



*1. Includes GHGs that are biological in origin (in tons of CO₂ equivalents)

Action Plans towards 2030

Marubeni has formulated the following action plans heading towards 2030 in order to make the 2050 net-zero GHG emissions effective. By executing these actions, by 2030 the Marubeni Group will try to abate its FYE 3/2020 emissions by one-fifth over the total scope covered by our net-zero GHG emissions goal. This plan was formulated to apply to the Marubeni Group's business portfolio as of March 2021 and is based on certain assumptions about current international recognition and foreseeable changes in system and technological innovations. Marubeni will revise them appropriately in light of any future changes to these premises.

① Halve the CO₂ emissions of FYE 3/2020, about one million tons of CO₂, emitted by Marubeni and its consolidated subsidiaries (Scope 1 and Scope 2)

Marubeni has revised the targeted abatement figure released in September 2020 (25% abatement from FYE 3/2019 levels by 2030) to make it a more consistent level to the 1.5°C pathways, and will halve its total volume of emissions, which was about one million tons of CO₂ in FYE 3/2020 by 2030.

② Reduce by one-fifth the CO₂ emissions of FYE 3/2020, about 36 million tons of CO₂ *2, emitted by associate investees of the Marubeni Group (Scope 3, Category 15 (Investments))

Changes in the emissions volume associated with increased emissions from new investments and fluctuations in the emissions volume by plant load factors, as well as reductions in the emissions volume due to the utilization of new technologies (CCS*3, co-combustion of hydrogen and ammonia, etc.), are not included in the assumptions for the above estimation. In the interest of meeting the needs of society as it makes the low-carbon transition, the development of new gas-related projects such as gas-fired power generation businesses will continue. For aspects that could affect the emissions volume by associate investees going forward, we will monitor the progress of abatement of GHG emissions and conduct reviews thereof. In addition, we will continually perform studies with the aim of establishing milestones towards net-zero GHG emissions by 2050 that are consistent with the 1.5°C pathways.

*2. This emissions volume comprises the FYE 3/2020 performance of existing investees plus the estimated emissions from projects already contracted as of March 2021 (as for power generation projects, projects for which associate investees of the Marubeni Group have entered into power purchase agreements but have not yet achieved commercial operations.)

*3. Carbon dioxide Capture and Storage

③ Move up the timetable to halve the net power generation capacity of our coal-fired power generation businesses

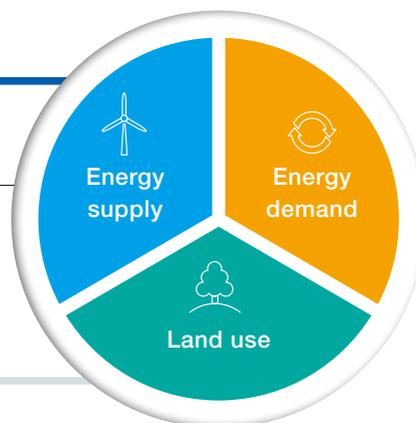
Based on our Business Policies Pertaining to Sustainability (In Relation to Our Coal-Fired Power Generation Business and Renewable Energy Generation Business) that Marubeni released in September 2018, and taking into account the progress made so far in pulling out of coal-fired power generation, with regard to coal-fired power net generation capacity, we will accelerate our goal of cutting FYE 3/2019 capacity in half by 2030 to 2025, and aim for capacity of approximately 1.3 GW in 2030 (included in the above reduction figure ② for associate investees), and further, aim for zero capacity by 2050.

④ Absorb and sequester CO₂ through our forests

Marubeni will strive to expand the volume of carbon stocks in our forests (about 11 million tons of CO₂ equivalents*4 as of March 2021) and, at the same time, expand the sequestered volume of carbon through the multi-purpose utilization of afforested assets.

*4. By enlarging some of our plantation areas, improving stock volume per-unit area, and through the proper management of managed forests, estimated volume of carbon stocks in our forests will be about 19 million tons of CO₂ equivalents in 2030.

Positive Impact ② **Contribute to low-carbon/decarbonization through our businesses**



We see supporting the transition to a low-carbon or decarbonized society as representing major business opportunities. We contribute to low-carbon/decarbonization through our businesses.



Energy supply: Energy systems to serve as the foundations for a decarbonized society

Supply of power from renewable energy (power generation business and power retail business) a

- Strive to expand the ratio of power generated by renewable energy sources in our own net power supply to approx. 20% by 2023 (approx. 15% as of March 31, 2021)
- Fully owned subsidiary SmartestEnergy Ltd., a power retail provider in the U.K., derives approx. 80% of its contracted power capacity from renewable energy sources



Floating solar power plant in Changhua (Taiwan)

Alternative energy businesses, including new energy sources such as hydrogen/ammonia b

- Participate in demonstration projects to develop CO₂-free fuel supply chain
- Invest in U.S.-based biojet fuel producer, Fulcrum BioEnergy, Inc.



Biofuel production (U.S., etc.)

Develop distributed energy systems

Carbon-free mobility and EV- infrastructure/battery related businesses

- Supply cobalt, nickel and other raw materials for lithium batteries for EVs



Circ LLC (U.S. – Manufacture and sale of recycled textile materials)



Energy demand: Control/abate GHG emissions over a broad range of industries

Initiatives contributing to recycling and the circular economy c

- Invest in U.S.-based Circ LLC (formerly known as Tyton BioSciences LLC), which has technologies to recycle textile products such as textile and used clothes into raw textile materials
- Develop in the lithium-ion battery recycling business



Facility that uses CO₂ capture technologies supplied by Carbon Clean Ltd.

Supply energy-saving materials, products, and services

Solutions using decarbonization technologies such as CCUS*5 d

*5. Carbon dioxide Capture, Utilization and Storage

- Invest in the U.K.'s Carbon Clean Ltd., which develops CO₂ capture technology

Responding to modal shifts



Land use: Sustainable agri-input businesses and forest management

Improve agricultural productivity by environmentally conscious agri-input business e

- Marubeni owns North America's 2nd-largest agri-input retailer Helena Agri-Enterprises, LLC. Develop environmentally conscious agri-input businesses in Europe



Agri-input business Helena Agri-Enterprises, LLC (U.S.)

Sustainable forest management and utilization of forest assets f

- Around 300,000 hectares in forest assets, expertise and knowhow in forest management



PT. Musi Hutan Persada (Indonesia – forest plantation business)

Direction of Future Initiatives

In line with the Long-Term Vision on Climate Change announced in March 2021, besides working to mitigate risk by abating the Group's GHG emissions, we are looking to increase the resilience of our business portfolio through appropriately timed revisions to avoid damaging corporate value, which could face obsolescence or downward earnings pressure due to climate change.

The Marubeni Group views the transition to a low-carbon or decarbonized society as a business opportunity. On the supply side, there are opportunities to build the energy systems to serve as the foundations for a decarbonized society. On the demand side, we also promote efforts to control and abate GHG emissions in a wide range of industries. We are also contributing to efforts to cut GHG emissions through sustainable land use in the Group's agri-input and forest management businesses.

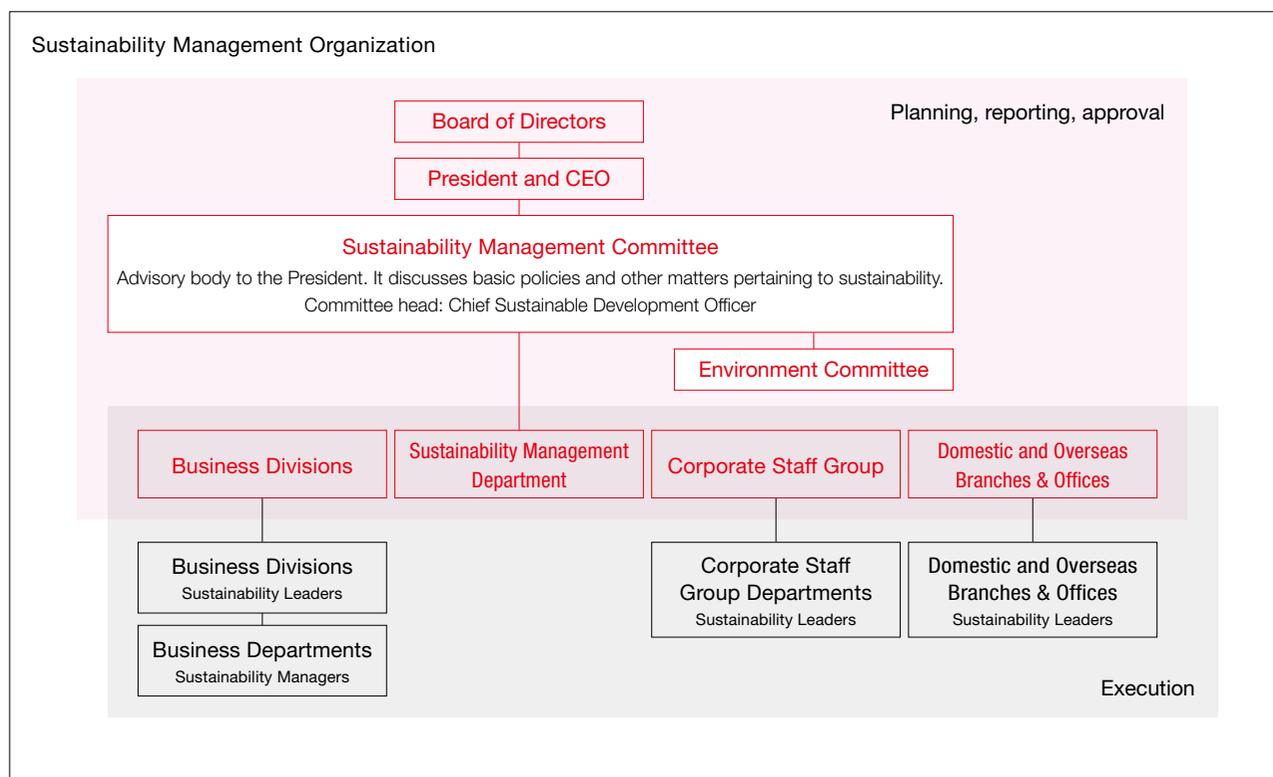
Governance

Our governance structure ensures adequate Board supervision of important climate change-related issues.

Specifically, the Sustainability Management Committee, an advisory body to the President, leads the process of evaluating opportunities and risks as identified in our TCFD climate-related disclosure; formulating, revising and monitoring strategy, risk management, metrics, and targets; and reviewing progress in climate-related innovation and changes in the external environment. The committee reports regularly on these matters to the Board of Directors. Important matters are deliberated and voted on by the Corporate Management Committee and the Board of Directors.

Chaired by the CSDO, the Sustainability Management Committee counts external directors and Audit & Supervisory Board members among its advisory members to support the management and supervision of sustainability-related matters from an independent external perspective.

At the execution, the system is set up to support discussion and promotion of sustainability-related matters. A Sustainability Leader in charge of sustainability management is appointed in each business division, each department within the Corporate Staff Group, and at each domestic or overseas branch and office. A Sustainability Manager is also appointed in each business department.



Strategy and Specific Initiatives (Scenario Analysis)

In line with our Basic Stance on Climate Change, the Marubeni Group is striving to take a strategic approach to climate-related opportunities and risks.

Scenario selection:

Climate-related risks and opportunities differ significantly across the Marubeni Group's business portfolio because of its broad diversification. In line with TCFD disclosure recommendations, we perform scenario analysis to study the businesses that will be relatively more susceptible to the impacts of climate change. Unless otherwise stated, using a time horizon to 2030, we use this process to consider related business conditions, risks and opportunities under baseline and transition scenarios.

To facilitate an objective assessment of new business opportunities and resilience of operations amid significant change in business conditions, we mainly reference the scenarios outlined below. These are taken from the International Energy Agency (IEA) publications "Energy Technology Perspectives 2017/2020," "World Energy Outlook 2020," and "Net Zero by 2050," as well as the Fifth Assessment Report and the 1.5°C Special Report released by the Intergovernmental Panel on Climate Change (IPCC).

Baseline scenarios	
IEA RTS [Reference Technology Scenario]	Taken from IEA Energy Technology Perspectives 2017, this scenario reflects countries' existing policies and targets (+2.7°C).
IEA STEPS [Stated Policies Scenario]	Taken from the IEA reports Net Zero by 2050 and World Energy Outlook 2020, this scenario reflects countries' existing policies and targets (+2.7°C).
IPCC RCP 8.5/6.0/4.5 [Representative Concentration Pathways]	As detailed in the IPCC Fifth Assessment Report, the RCPs are scenarios describing rises in mean temperature of up to 4°C or so by 2100 compared to pre-industrial levels (+4.3°C/+2.8°C/+2.4°C).
Transition scenarios	
IEA B2DS [Beyond 2°C Scenario]	Taken from IEA Energy Technology Perspectives 2017, this scenario describes efforts to limit the rise in temperature to well below 2°C (+1.75°C).
IEA SDS [Sustainable Development Scenario]	As outlined in publications such as the IEA reports World Energy Outlook 2020 and Energy Technology Perspectives 2020, this scenario describes a sustainable growth pathway consistent with the well below 2°C goal of the Paris Agreement and SDGs. (+1.65°C).
IEA NZE [Net Zero Emissions Scenario]	As outlined in the IEA report Net Zero by 2050, this scenario shows the changes that would be required in energy demand and the energy mix to achieve net-zero global emissions by 2050 and to limit the rise in temperature to 1.5°C (+1.5°C).
IPCC RCP 2.6/1.9 [Representative Concentration Pathways]	Taken from the IPCC's Fifth Assessment Report and the 1.5°C Special Report, the scenario describes low-emissions pathways to attain the goal of limiting future rises in temperature to well below 2°C (+1.6°C/+1.5°C).

Note: Figures in parentheses correspond to the projected temperature rise by 2100 under each scenario.

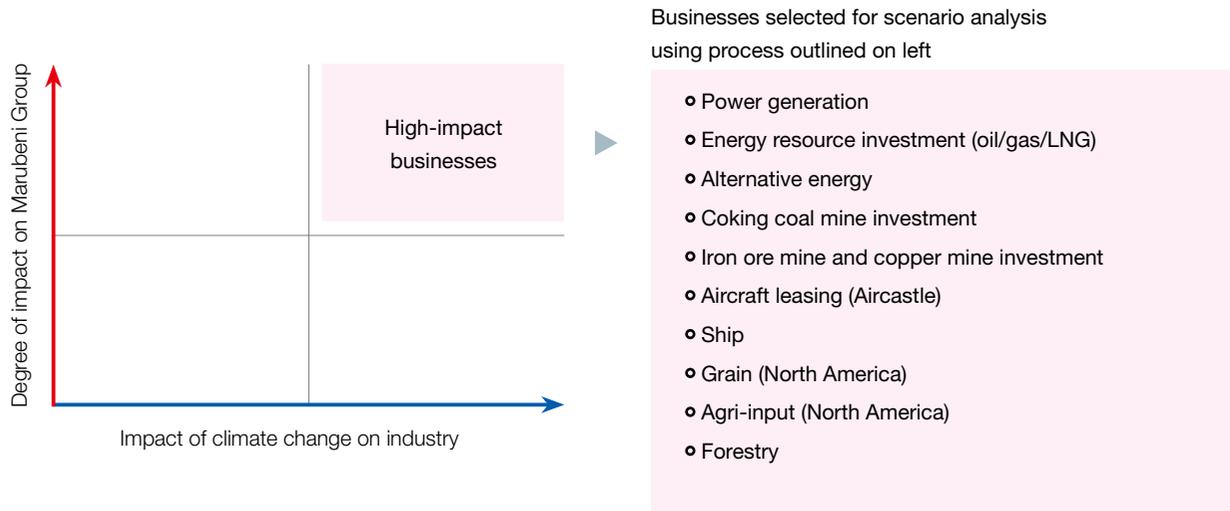
IEA RTS/STEPS/B2DS/SDS/NZE are referenced mainly for Marubeni Group businesses in power generation, energy resource investment (oil/gas/LNG), alternative energy, coking coal mine investment, iron ore mine and copper mine investment, aircraft leasing, ship, and forestry.

IPCC RCP is referenced mainly for the Group's grain/agri-input, ship, and forestry businesses.

Business selection for scenario analysis:

Businesses in the upper-right quadrant of the matrix shown below are selected for the scenario analysis.

- Horizontal axis** Business domains with high financial impact due to climate change
- Vertical axis** Degree of impact on Marubeni Group (scale of assets/earnings, etc.)



Results of scenario analysis:

The chart below summarizes the results of the scenario analysis for each business selected.

The scenarios and business environment overviews represent the understanding of the Marubeni Group based on major scenarios as developed by the IEA and other international organizations, but do not provide an outlook for the Group.

How to read the charts

Name of selected business	Business environment overview	<p>Baseline scenarios</p> <p>Expected changes in conditions for the selected businesses based on demand projections under baseline scenarios</p> <p>The data show demand projections for the selected business under each scenario as conditions evolve (all data are global, unless otherwise noted).</p> <p>Example: coal-fired power generation</p> <p>Baseline scenarios: IEA RTS (+2.7°C), IEA STEPS (+2.7°C), IPCC RCP8.5 (+4.3°C), IPCC RCP6.0 (+2.8°C), IPCC RCP4.5 (+2.4°C)</p> <p>Transition scenarios: IEA B2DS (+1.75°C), IEA SDS (+1.65°C), IPCC RCP2.6 (+1.6°C), IEA NZE (+1.5°C), IPCC RCP1.9 (+1.5°C)</p> <p>Figures in parentheses correspond to the projected temperature rise by 2100 under each scenario. <small>Note: Data for IEA RTS referenced from 2014 rather than 2020. Note: Data for IEA SDS referenced from 2019 rather than 2020. Note: Data for 2020 are scenario-based projections rather than actual figures.</small></p>	<p>Transition scenarios</p> <p>Expected changes in conditions for the selected businesses based on demand projections under transition scenarios</p>
	Responses to future business risks/opportunities	<p>This section outlines Group policies and initiatives for the businesses, based on the business environment overview from the scenarios.</p> <p>Note: Unless otherwise stated, the analysis target is up to 2030.</p>	
	Impact on performance up to 2030	<p>The impact on the performance of the selected businesses up to 2030 is summarized graphically in overall terms.</p> <p>One of seven possible arrows is used to indicate the overall assessment.</p> <p>Positive (High) ↑ (Med) ↗ (Low) →</p> <p>Neutral →</p> <p>Negative (Low) ↘ (Med) ↓ (High) ↓</p>	
	Financial information	<p>This section shows the net profit/loss attributable to owners of the parent for the selected businesses of the relevant segment (division) and the financial exposure* or segment assets.</p> <p>* Exposure includes investments, loans receivable, tangible fixed assets, and guarantees.</p>	
	Business environment overview	<p>The impact on the performance of the selected businesses up to 2030 is summarized graphically in overall terms.</p> <p>This section explains the assessment in more detail.</p>	

Business environment overview

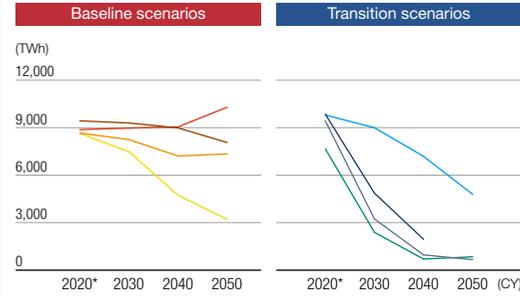
Baseline scenarios

- Global electric power demand is expected to increase.
- Coal-fired power will stay flat or fall if fossil fuel dependence continues, while demand will grow for gas-fired power and renewables.

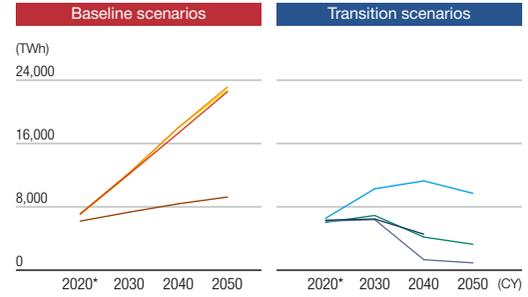
Transition scenarios

- Global electric power demand is expected to increase.
- Coal-fired power will fall significantly if the world progresses toward becoming a low-carbon or decarbonized society. Gas-fired power is expected to stay flat until 2030, before starting to fall. Demand for renewables is expected to grow significantly.
- The costs of using fossil fuels will rise if carbon pricing is introduced or enforced more rigorously.

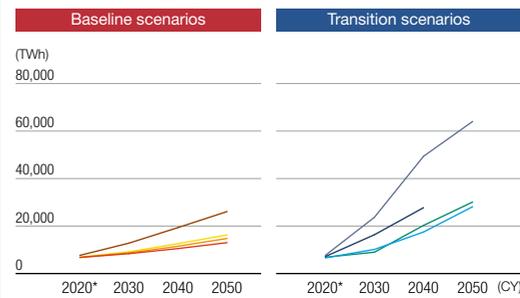
Coal-fired power generation



Gas-fired power generation



Renewable energy power generation



* Refer to chart legend below.

Responses to future business risks/opportunities

Note: Unless otherwise stated, the analysis target is up to 2030.

- We will respond to rising global electric power demand by expanding the Group's power generation business, focusing especially on the renewables sector.
- We will expand the renewable power generation businesses and increase the ratio of renewable energy sources of net generation capacity to approx. 20% by 2023 (as of March 2021, the ratio is approx.15%). We will promote greater use of renewable energy in the power wholesale and retail business and in the de-centralized power generation business to help contribute to a low-carbon society.
- Marubeni will no longer enter into any new coal-fired power generation business. By 2025, we also aim to cut our FYE 3/2019 coal-fired power net generation capacity of approx. 3GW in half, with further abatement to approx.1.3GW by 2030, and aim for zero by 2050.
- We will continue to develop gas-fired power generation businesses in response to the needs of society transitioning to a low-carbon society. We will also seek to mitigate CO₂ emissions from thermal power generation utilizing new technologies based on the co-combustion of hydrogen and ammonia.
- The analysis identifies the risk of higher costs of CO₂ emissions due to the adoption of carbon taxes or emissions trading schemes. The risk of regulatory change is already hedged in the long-term power purchase agreements that govern most of our power generation business.

Impact on performance up to 2030

Coal-fired power	↓ Negative (Low)	The impact of lower demand on existing businesses is limited by the long-term power purchase agreements governing most of our power generation business. However, earnings from coal-fired power generating businesses will diminish as assets are retired.
Gas-fired power	↑ Positive (Low)	New project development should have a positive impact on earnings since electric power demand is projected to increase under the baseline scenarios and some new demand is projected over the short and medium term under the transition scenarios.
Renewable energy	↑ Positive (High)	New project development should have a significantly positive impact on earnings since power demand is projected to rise under the baseline scenarios and expand rapidly under the transition scenarios.

Financial information

Power Business Division

- Relevant segment net profit (FYE 3/2021): approx. ¥10 billion (power IPP business reported a net profit* of approx. ¥35.9 billion)
- Relevant segment assets (as of March 31, 2021): approx. ¥741.2 billion

* Total net profits of consolidated subsidiaries and share of associates and joint ventures of our IPP business.
Reference: Capacity of power generation assets was approx. 2.6GW for coal-fired power generation, approx. 1.8GW for renewable energy power generation, and approx. 7.5GW for gas-fired power generation, and others (as of March 31, 2021)

Baseline scenarios:	■ IEA RTS (+2.7°C)	■ IEA STEPS (+2.7°C)	■ IPCC RCP8.5 (+4.3°C)	Figures in parentheses correspond to the projected temperature rise by 2100 under each scenario.
	■ IPCC RCP6.0 (+2.8°C)	■ IPCC RCP4.5 (+2.4°C)		Note: Data for IEA RTS referenced from 2014 rather than 2020.
Transition scenarios (below 2°C):	■ IEA B2DS (+1.75°C)	■ IEA SDS (+1.65°C)	■ IPCC RCP2.6 (+1.6°C)	Note: Data for IEA SDS referenced from 2019 rather than 2020.
	■ IEA NZE (+1.5°C)	■ IPCC RCP1.9 (+1.5°C)		Note: Data for 2020 are scenario-based projections rather than actual figures.

Business environment overview

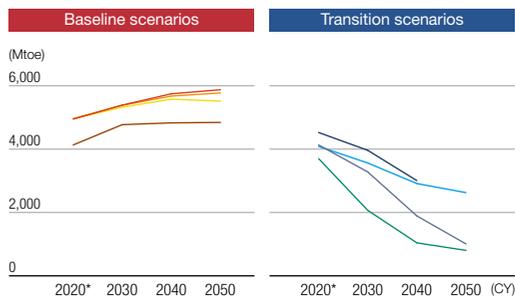
■ Baseline scenarios

- The share of oil and natural gas in total primary energy is expected to be on the rise.
- **Oil** demand and production are expected to increase until 2030, then flatten out, with demand and supply in equilibrium.
- **Gas** demand and production are expected to increase until 2040, with supplies of gas generally tightening over time.
- Demand for **alternative energy** will remain on a gradual uptrend.

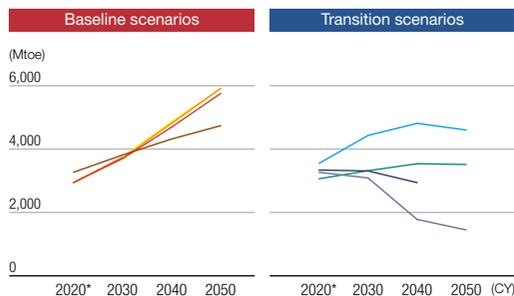
■ Transition scenarios

- The share of oil and natural gas in total primary energy is expected to be on a declining trend.
- **Oil** demand and production are expected to decrease slightly until 2030 and then decline. The supply and demand balance will see a slight shift to oversupply.
- Demand for **gas** will remain almost flat until 2030 and then decline. Production of gas will decrease. Supply and demand will be in equilibrium or shift slightly to undersupply.
- Demand for **alternative energy** will gradually increase until 2030, and then rise steadily after 2030.

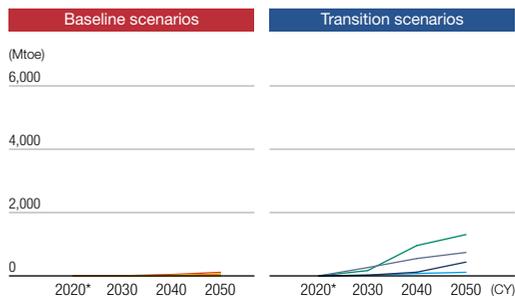
Oil demand



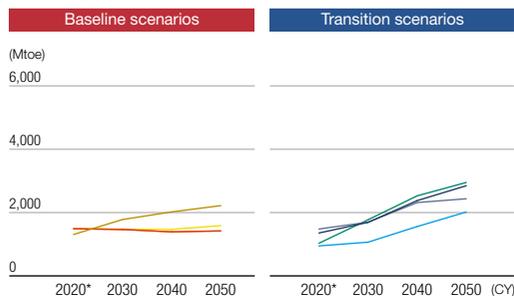
Natural gas demand



Hydrogen demand



Bioenergy demand



* Refer to chart legend below.

Responses to future business risks/opportunities

Note: Unless otherwise stated, the analysis target is up to 2030.

- We will consider an appropriate and timely review of our oil upstream portfolio by comprehensively taking into account a variety of factors, including future supply and demand trends and progress in climate change countermeasures.
- With natural gas and LNG interests, we will assess trends in transition needs, particularly in Asia, and seek to increase customers' value by increasing value throughout the value chain.
- With new energy, we will actively develop, secure, produce, and handle new energy resources, such as hydrogen and ammonia, which will be needed in large quantities in the future, aiming at improving profitability and taking steps to play an appropriate role in society.
- In addition, we will actively consider and promote the production and sales of other alternative energies, such as biofuels and bio-methane and synthetic fuels, along with the development of the CCUS* business.

* Carbon dioxide Capture, Utilization and Storage

Impact on performance to 2030

- Oil** → Neutral: The impact of decreasing demand on the Group's performance is expected to be limited until 2030, even under the transition scenarios.
- Natural gas/LNG** → Positive (Low): As demand is expected to remain almost unchanged or even slightly increase until 2030, the impact on our business affected by the external environment will be neutral or slightly positive.
- Alternative energy** → Positive (Med): We plan to engage more deeply in this sector in anticipation of the expansion of the market over the medium and long term. The impact on earnings is expected to be fairly positive, depending on technological progress.

Financial information

- Relevant segment net profit including energy resource investment business (oil/gas/LNG) (FYE 3/2021): approx. ¥11.9 billion for Energy Division (including net profit of approx. ¥5.4 billion for LNG projects and net loss of approx. ¥7.8 billion for oil/gas exploration and production business)
- Exposure of energy resource investment business (oil/gas/LNG) (as of March 31, 2021): approx. ¥140 billion for oil/gas interests and approx. ¥40 billion for LNG interests
- Our alternative energy businesses are operated by multiple segments, including Energy Division, Infrastructure Project Division, Power Business Division, Forest Products Division, and Chemicals Division.

Baseline scenarios: ■ IEA RTS (+2.7°C) ■ IEA STEPS (+2.7°C) ■ IPCC RCP8.5 (+4.3°C)
 ■ IPCC RCP6.0 (+2.8°C) ■ IPCC RCP4.5 (+2.4°C)
 Transition scenarios (below 2°C): ■ IEA B2DS (+1.75°C) ■ IEA SDS (+1.65°C) ■ IPCC RCP2.6 (+1.6°C)
 (1.5°C): ■ IEA NZE (+1.5°C) ■ IPCC RCP1.9 (+1.5°C)

Figures in parentheses correspond to the projected temperature rise by 2100 under each scenario. Note: Data for IEA RTS referenced from 2014 rather than 2020. Note: Data for IEA SDS referenced from 2019 rather than 2020. Note: Data for 2020 are scenario-based projections rather than actual figures.

Business environment overview	<p>■ Baseline scenarios</p> <ul style="list-style-type: none"> Steel production is expected to increase as populations and economies grow. Demand for coking coal will increase slightly to 2030, before growing further. <p>■ Transition scenarios</p> <ul style="list-style-type: none"> Steel production is expected to increase more slowly than in the baseline scenario, due to efforts such as extending the life of buildings and reducing the weight of vehicles. Demand for coking coal will decline slightly to 2030, before falling faster. <p>Coal demand in steel industry</p> <p>* Refer to chart legend below.</p>
	<p>Responses to future business risks/opportunities</p> <p>Note: Unless otherwise stated, the analysis target is up to 2030.</p> <ul style="list-style-type: none"> We plan to maintain and continue existing businesses as we head towards 2030, based on projected growth in steel demand and progress in new technological development. In the long term, we will flexibly consider our portfolio, based on progress on decarbonization by the steel industry.
	<p>Impact on performance up to 2030</p> <p>→ Neutral</p> <p>The impact of decreasing demand on the Group's performance is expected to be limited until 2030, even under the transition scenarios.</p>
	<p>Financial information</p> <p>Metals & Mineral Resources Division</p> <ul style="list-style-type: none"> Relevant segment net profit (FYE 3/2021): approx. ¥61.4 billion (including net profit of approx. ¥5.0 billion by Marubeni Resources Development*) Exposure (as of March 31, 2021): approx. ¥70 billion for coking coal mine investment business <p>* Australia-based Group company managing investments in coking coal mining business</p>

Business environment overview	<p>■ Baseline scenarios</p> <ul style="list-style-type: none"> Demand for steel is expected to be firm as populations and economies grow. Demand for copper is expected to increase due to population and economic growth, as well as boosts from progress on decarbonization and electrification. <p>■ Transition scenarios</p> <ul style="list-style-type: none"> Demand for steel is expected to be firm as populations and economies grow. Demand for copper is expected to increase significantly due to population and economic growth, as well as boosts from progress on decarbonization and electrification. <p>Steel production</p> <p>* Refer to chart legend below.</p> <p>Steel/copper demand related to energy technologies such as power infrastructure (rate of change)</p>
	<p>Responses to future business risks/opportunities</p> <p>Note: Unless otherwise stated, the analysis target is up to 2030.</p> <ul style="list-style-type: none"> We plan to contribute to stable supplies of iron ore and copper to cater to growing demand through our iron ore mining business in Australia and copper mining business in Chile. We are involved in initiatives to reduce the environmental impact of our mining operations such as switching to renewable power sources and using processed seawater for operational use in Chile. We will pursue the possibility of the replenishment and future expansion of ore reserves to respond to the increase in demand over the medium to long term and to strengthen cost competitiveness.
	<p>Impact on performance up to 2030</p> <p>Iron ore → Positive (Low)</p> <p>Led by the iron ore mining business in Australia, we expect a positive impact on earnings due to rising demand.</p> <p>Copper → Positive (Med)</p> <p>Led by the copper mining business in Chile, we expect a positive impact on earnings due to rising demand. Further boosts to earnings are anticipated under the transition scenarios due to increased demand for copper from electrification trends.</p>
	<p>Financial information</p> <p>Metals & Mineral Resources Division</p> <ul style="list-style-type: none"> Relevant segment net profit (FYE 3/2021): approx. ¥61.4 billion (including net profits of approx. ¥30.1 billion by the Roy Hill Iron Ore Project*¹ and approx. ¥16.4 billion by Marubeni LP Holding*²) Exposure (as of March 31, 2021): approx. ¥170 billion for iron ore mine investment business and approx. ¥230 billion for copper mine investment business <p>*¹. Iron ore mining business in Australia *². Chile-based Group company managing investments in copper mining business</p>

Baseline scenarios: ■ IEA RTS (+2.7°C) ■ IEA STEPS (+2.7°C) ■ IPCC RCP8.5 (+4.3°C)
 ■ IPCC RCP6.0 (+2.8°C) ■ IPCC RCP4.5 (+2.4°C)
 Transition scenarios (below 2°C): ■ IEA B2DS (+1.75°C) ■ IEA SDS (+1.65°C) ■ IPCC RCP2.6 (+1.6°C)
 (1.5°C): ■ IEA NZE (+1.5°C) ■ IPCC RCP1.9 (+1.5°C)

Figures in parentheses correspond to the projected temperature rise by 2100 under each scenario. Note: Data for IEA RTS referenced from 2014 rather than 2020. Note: Data for IEA SDS referenced from 2019 rather than 2020. Note: Data for 2020 are scenario-based projections rather than actual figures.

Business environment overview	<p>■ Baseline scenarios</p> <ul style="list-style-type: none"> Further growth in demand for air transportation is expected, led by Asia-Pacific and North America. 	<p>■ Transition scenarios</p> <ul style="list-style-type: none"> Further growth in demand for air transportation is expected, led by Asia-Pacific and North America. Reduced use of air transportation is expected due to changes in people's behavior. Use of biofuels and synthetic fuels is expected to increase within the aviation sector.
	<p>Distance transported by air</p>	
	<p>* Refer to chart legend below.</p>	
<p>Responses to future business risks/opportunities</p> <p><small>Note: Unless otherwise stated, the analysis target is up to 2030.</small></p>	<ul style="list-style-type: none"> Based on projected growth in passenger air travel in the medium and long term, our business management policy focuses on the use of narrow-body aircraft, which have a lower environmental impact, in the countries and regions where demand is expected to recover post-pandemic. Our aircraft leasing business could see a fall in profitability due to lower demand for leased aircraft, if airlines as our customers are negatively affected under any of the transition scenarios. Since the airline industry is susceptible to the impact of carbon pricing, we will monitor related trends closely. 	
<p>Impact on performance up to 2030</p>		<p>With demand expected to grow even under the transition scenarios, we expect a positive impact on earnings as we seek to mitigate environmental impact.</p>
<p>Financial information</p>	<p>Finance & Leasing Business Division</p> <ul style="list-style-type: none"> Relevant segment net profit (FYE 3/2021): approx. ¥8.9 billion (including net loss of approx. ¥7.8 billion by Aircastle) Exposure (as of March 31, 2021): approx. ¥140.4 billion for Aircastle (carrying amount of interests) 	

Business environment overview	<p>■ Baseline scenarios</p> <ul style="list-style-type: none"> Demand for freight (ton-km) is expected to increase. Demand for bulk carriers is projected to grow slightly. Demand for LNG carriers will peak in 2040 and fall gradually thereafter. 	<p>■ Transition scenarios</p> <ul style="list-style-type: none"> Demand for freight (ton-km) is expected to increase. Demand for bulk carriers is projected to be flat. Demand for LNG carriers will tend to decline. Carbon pricing will push up the costs of using fossil fuels. Conversion to alternative fuels such as ammonia, biofuels, and hydrogen will be gradually implemented and these are expected to become the main fuels in the longer term.
	<p>Distance transported by sea</p>	
	<p>* Refer to chart legend below.</p>	
<p>Responses to future business risks/opportunities</p> <p><small>Note: Unless otherwise stated, the analysis target is up to 2030.</small></p>	<ul style="list-style-type: none"> We will target higher earnings in this field, with growth in freight (ton-km). In accordance with the IMO (International Maritime Organization) GHG emission reduction target and the strategy with regard to fuel efficiency performance regulations, we will improve fuel efficiency by implementing high-efficiency vessels, improving the efficiency of ship allocation, and introducing energy-saving technology for existing vessels. We will support ongoing programs to develop and introduce next-generation vessels powered by carbon-recycled, bio-methane, hydrogen or ammonia fuels. Besides monitoring carbon pricing trends closely, we aim to create new businesses in the ship sector relating to green technologies, based on collaboration within the Group. 	
<p>Impact on performance up to 2030</p>		<p>With demand expected to grow even under the transition scenarios, we expect a positive impact on earnings as we seek to mitigate environmental impact.</p>
<p>Financial information</p>	<p>Aerospace & Ship Division</p> <ul style="list-style-type: none"> Relevant segment net profit (FYE 3/2021): approx. ¥3.2 billion Relevant segment assets (as of March 31, 2021): approx. ¥265.7 billion 	

Baseline scenarios: ■ IEA RTS (+2.7°C) ■ IEA STEPS (+2.7°C) ■ IPCC RCP8.5 (+4.3°C)

Transition scenarios (below 2°C): ■ IPCC RCP6.0 (+2.8°C) ■ IPCC RCP4.5 (+2.4°C) ■ IPCC RCP2.6 (+1.6°C)

(1.5°C): ■ IEA B2DS (+1.75°C) ■ IEA SDS (+1.65°C) ■ IEA NZE (+1.5°C) ■ IPCC RCP1.9 (+1.5°C)

Figures in parentheses correspond to the projected temperature rise by 2100 under each scenario. Note: Data for IEA RTS referenced from 2014 rather than 2020. Note: Data for IEA SDS referenced from 2019 rather than 2020. Note: Data for 2020 are scenario-based projections rather than actual figures.

Grain/agri-input businesses (North America)	<p>Business environment overview</p> <p>Baseline scenarios</p> <ul style="list-style-type: none"> Global grain demand is expected to rise. In line with rising grain demand, cultivation area is also expected to expand by deforestation. In North America, it is expected that the cultivable period will be extended mainly in the western and southern regions due to the rise in temperature. Overall, there are many regions with precipitation increases, and this tendency is more remarkable in the baseline scenarios. The water stress across North America is expected to be high in the western region, but relatively low in the eastern region. <p>Transition scenarios</p> <ul style="list-style-type: none"> Global grain demand is expected to rise. In line with rising grain demand, cultivation area is also expected to expand by converting land from other applications. In North America, it is expected that the cultivable period will be extended mainly in the western and southern regions due to the rise in temperature. Overall, there are many regions with precipitation increases, but it will tend to decline in the southwestern and central regions. The water stress across North America is expected to be high in the western region, but relatively low in the eastern region. However, its impact will be smaller than the one in baseline scenarios.
	<p>Grain demand</p> <p>Cultivation area</p> <p>* Refer to chart legend below.</p>
	<p>Responses to future business risks/opportunities</p> <p>Note: Unless otherwise stated, the analysis target is up to 2030.</p> <ul style="list-style-type: none"> We will continue to grow earnings by capturing the increase of grain and food demand. The extension of the cultivable period caused by global warming is also expected to contribute to our earnings increase. We will increase our competitiveness and expand our business by providing goods and services that support higher crop yields and lower environmental impact. We will work on reducing physical risks by diversifying and expanding our procurement and sales networks for logistical impacts caused by the increase and intensification of natural disasters, and by expanding our networks in the regions that are relatively less affected by water stress.
	<p>Impact on performance up to 2030</p> <p>➔ Positive (Low)</p> <p>We expect a positive impact on our earnings due to rising grain demand. In baseline scenarios, the impact of physical risks could potentially slow the growth of our grain business. In the transition scenarios, the need for higher crop yields could bring fast growth to our agri-input business.</p>
	<p>Financial information</p> <p>Agri Business Division</p> <ul style="list-style-type: none"> Relevant segment net profit (FYE 3/2021): approx. ¥42.4 billion (net profits of approx. ¥21.5 billion by Gavilon Agriculture Investment*1, approx. ¥3.6 billion by Columbia Grain International*2, and approx. ¥22.8 billion by Helena*3) Relevant segment assets (as of March 31, 2021): approx. ¥1,402.9 billion <p>*1. Holding company of Gavilon Group (handling/sales of grain, fertilizer, etc.) *2. Group company engaged in handling, storage, export and domestic sales of grain produced in North America *3. Group company engaged in sales of agri-input materials and supply of various agri-related services in the U.S.</p>

Forestry business	<p>Business environment overview</p> <p>Baseline scenarios</p> <ul style="list-style-type: none"> Paper/pulp-related production is expected to rise gradually. Forest area is expected to decrease. <p>Transition scenarios</p> <ul style="list-style-type: none"> Paper/pulp-related production is expected to rise gradually. Supplies of wood-derived biomass fuels are expected to increase. Forests and cultivated areas for bioenergy are expected to grow. Introduction and stricter enforcement of carbon pricing regimes from 2030 will boost the importance of forests for absorption and sequestration of CO₂. This will focus attention on approaches that use plantation forests and bioenergy technologies such as BECCS*1.
	<p>Forest area</p> <p>*1. Bioenergy with Carbon Capture and Storage *2. Refer to chart legend below.</p>
	<p>Responses to future business risks/opportunities</p> <p>Note: Unless otherwise stated, the analysis target is up to 2030.</p> <ul style="list-style-type: none"> We will improve the sustainability of our forest plantation businesses and seek to increase the value of long-term stable supplies of forestry resources. By raising the carbon sequestration of our plantation and managed forests and utilizing the plantation forests for multiple purposes, we will boost carbon sequestration volumes, increase environmental value, and lead to the building of asset value.
	<p>Impact on performance up to 2030</p> <p>➔ Positive (Med)</p> <p>Under the transition scenario, climate change measures will improve forest value, and the expansion of forest area will increase opportunities for business expansion, which will have a positive impact on earnings.</p>
	<p>Financial information</p> <p>Forest Products Division</p> <ul style="list-style-type: none"> Relevant segment net profit/loss (FYE 3/2021): net loss of approx. ¥2.1 billion (including net losses of approx. ¥4.4 billion by Musi Pulp Project*1 and approx. ¥0.3 billion by WA Plantation Resources*2) Relevant segment assets (as of March 31, 2021): approx. ¥285.9 billion <p>*1. Indonesia-based Group company engaged in forestry (hardwood plantation) and manufacture/sales of pulp *2. Australia-based Group company engaged in plantation forest management and manufacture/sales of wood chips for use in production of paper and biomass fuels</p>

Baseline scenarios:	■ IEA RTS (+2.7°C)	■ IEA STEPS (+2.7°C)	■ IPCC RCP8.5 (+4.3°C)	Figures in parentheses correspond to the projected temperature rise by 2100 under each scenario.
Transition scenarios (below 2°C):	■ IPCC RCP6.0 (+2.8°C)	■ IPCC RCP4.5 (+2.4°C)	■ IPCC RCP2.6 (+1.6°C)	Note: Data for IEA RTS referenced from 2014 rather than 2020.
	■ IEA B2DS (+1.75°C)	■ IEA SDS (+1.65°C)	■ IPCC RCP1.9 (+1.5°C)	Note: Data for IEA SDS referenced from 2019 rather than 2020.
	■ IEA NZE (+1.5°C)			Note: Data for 2020 are scenario-based projections rather than actual figures.

The Marubeni Group conducts business activities globally and in a wide range of sectors. Our performance and financial position may be adversely affected due to the emergence of physical risks associated with climate change, such as increases in the intensity of natural disasters, extreme weather, shifting rainfall and weather patterns, rising average temperatures, and rising sea levels.

We anticipate impacts on every business, including on the infrastructure for power generation and resource projects, in our logistics businesses, and across supply chains. We are taking varied measures to mitigate risks, including the formulation of business continuity plans and disaster countermeasures, and the use of various types of insurance. Specific measures are outlined below for two sectors where we expect great impact: (1) our North American grain and agri-input business, and (2) our forestry business.

Grain/agri-input business (North America)

Anticipated business impacts	<ul style="list-style-type: none"> Poor harvests due to the change of climate patterns in North America, our main areas, could have significant impact on earnings of our grain handling and agri-input business. Paralysis of logistics functions due to extreme weather conditions could affect our business.
Risk mitigation responses	<ul style="list-style-type: none"> Expansion of agricultural support business through sales of agri-input materials and providing services that contribute to improving productivity. We will comprehensively manage risks by geographically diversifying and expanding the procurement and sales network, and diversifying production areas and crops.

Forestry business

Anticipated business impacts	<ul style="list-style-type: none"> Wildfires across areas of Southeast Asia and Western Australia due to the drier and stormier conditions associated with climate change and global warming could have a significant impact on the earnings from our plantation forestry and wood-derived resources businesses.
Risk mitigation responses	<ul style="list-style-type: none"> To address the threat from wildfires, we are installing fire-fighting equipment, investing in systems for fire prevention and monitoring, and conducting activities to raise awareness in local communities. We are installing meters-wide firebreaks (gaps where trees are not planted) to help create separate blocks of plantation forest to better prevent fire from spreading.

Besides the above, we are also evaluating whether individual measures are optimal and are considering building a system to respond to any crisis.

Risk Management

The Marubeni Group manages and monitors climate change-related and other opportunities and risks that are highly important from the perspective of sustainability by the Sustainability Management Committee.

Besides climate change, the Marubeni Group is assessing potential risks from a business sustainability perspective as well. We have developed an assessment framework to support the multifaceted analysis of 27 items across the three risk categories of environmental, health and safety, and social. We define the risk evaluation criteria based on relevant laws and regulations, international standards, and historical case studies drawn from similar sectors. In addition, we assess the importance and impact of potential risks in line with the specifics of the business, its sector, and the country or region where it is operating.

We use this risk assessment approach in sustainability assessment methods. It is also part of the process used to make any investment and financing decisions. Besides monitoring existing businesses, we use this approach to gauge the value of Group businesses on an ongoing basis from a sustainability perspective. Where necessary, our business domains judged high-risk are deliberated by the Investment and Credit Committee, the Corporate Management Committee, and the Board of Directors.

While monitoring sustainability-related trends in Japan and overseas as driven by international institutions, governments, business sectors and industry groups, we review our risk assessment approach periodically based on information from stakeholders, including investors, financial institutions, and NGOs.

We are continually reviewing efforts to develop our systems for managing risks from sustainability and other varied perspectives.

Risk assessment items by category (27 items across 3 categories)

Environmental	Climate change / environmental pollution / biodiversity / resource management / mitigation measures and administrative procedures
Health and Safety	Machine safety / fires and explosions / toxic substance exposure / infection / hazardous operations / mitigation measures and administrative procedures
Social	Forced labor and human trafficking / child labor / working hours / wages and employment contracts / discrimination / harassment at work and disciplinary measures / respect for diversity / freedom of association / land issues / negative social impact on local communities / indigenous peoples and cultural heritage / conflict minerals / privacy / animal welfare / responsible marketing / mitigation measures and administrative procedures (supply chain)

Climate Change-Related Metrics and Targets

The Marubeni Group has formulated the following metrics and targets as part of our response to the opportunities and risks associated with climate change.

Metrics and targets	Progress and status
1. Cut Group's coal-fired power net generation capacity from FYE 3/2019 value of approx. 3GW in half by 2025, with further abatement to approx. 1.3GW by 2030, and aim for zero by 2050	Approx. 2.6GW (as of March 31, 2021)
2. Expand the ratio of power generated by renewable energy source in Group's own net power supply to approx. 20% by 2023	Approx. 15% (as of March 31, 2021)
3. Expand "Green Revenue" to around ¥1,300 billion by FYE 3/2024	Approx. ¥740 billion (FYE 3/2021)
4. Achieve net-zero GHG emissions* ¹ by 2050 By 2030: (1) Reduction of 50% in Scope 1 & 2 CO ₂ emissions from FYE 3/2020 level (about 1 million t-CO ₂) (2) Reduction of 20% in Scope 3 CO ₂ emissions (Category 15: Investment) from FYE 3/2020 level (estimated CO ₂ emissions about 36 million t-CO ₂ * ²)	(1) Scope 1 & 2 CO ₂ emissions: approx. 0.97 million t-CO ₂ (FYE 3/2021) (2) Scope 3 CO ₂ emissions (Category 15: Investment): approx. 25 million t-CO ₂ Breakdown Power generation approx. 21 million t-CO ₂ Resource projects approx. 3 million t-CO ₂ Other businesses approx. 1 million t-CO ₂ (FYE 3/2021)
*1. Includes Scope 1, Scope 2, and Scope 3 (Category 15: Investment) emissions *2. This emissions volume comprises the FYE 3/2020 performance of existing investees plus the estimated emissions from projects already contracted as of March 2021 (as for power generation projects, projects for which associate investees of the Marubeni Group have entered into power purchase agreements but have not yet achieved commercial operations.)	

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