# Disclosures Based on the TCFD Recommendations

March 2022

March 2023

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ITOCHU ENEX CO.,LTD.

Notes

Figures, forecasts and forward-looking statements contained in these Disclosures Based on the TCFD Recommendations are based on the information available as of the date of its release and certain assumptions and forecasts. Accordingly, actual performance, results and the like may differ materially from them depending on future economic trends, market prices and various other uncertainties. The Company and information providers are not liable for any damages incurred based on any information herein.

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## 1. Disclosures based on the TCFD recommendations

At the Itochu Enex Group, we have been delivering energy and services to people stably for more than 50 years under our Corporate Philosophy, "The Best Partner for Life and Society - with Energy, with the Car, with the Home -." We quickly got involved in environmental business and next-generation energy in response to the rapid move toward a carbon-free society. In 2021, we formulated the Sustainability Policy, and further, identified climate change actions as a material issue that we should prioritize and address. We are implementing an action plan to contribute to the creation of a decarbonized society and accelerating initiatives to solve sustainability issues in a Group-wide manner over the medium and long terms.

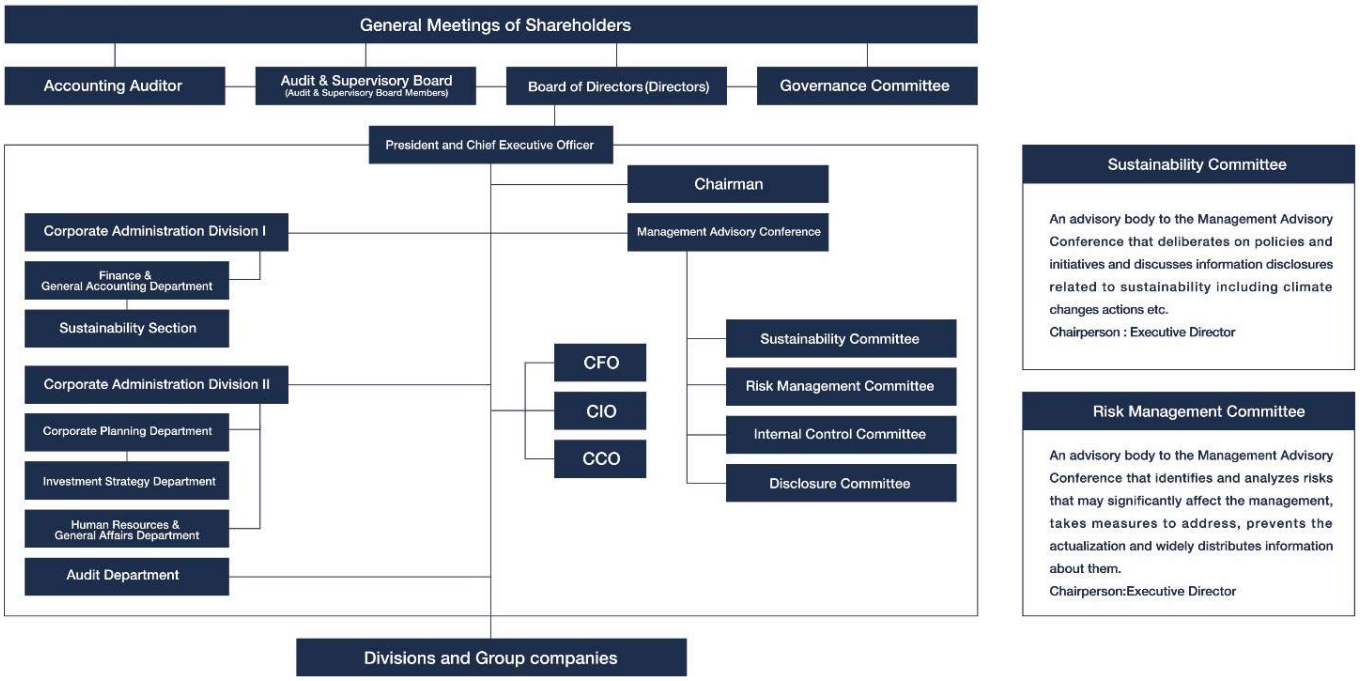
Then, we have recognized the importance of disclosing climate-related financial information and expressed our support for the TCFD recommendations.

Additionally, we will identify the risks and opportunities that climate change affects our business activities, conduct a scenario analyze and disclose them based on the concept of TCFD recommendations. We will continue to enhance our initiatives by maintaining our management strategy of positioning climate change actions as new business opportunities. We will review our disclosures based on the TCFD recommendations appropriately and continue to disclose the information properly.

## 2. Governance

We discuss the climate change problem, including our policies on handling the risks and opportunities related to climate change, our greenhouse gas (GHG) reduction targets, and initiatives for reducing GHG emissions at meetings of the Sustainability Committee (held at least six times a year) where we deliberate overall sustainability issues including issues related to climate change. Chaired by an Executive Director, this committee operates in a way that enables the Board of Directors to monitor important management themes and important matters are reported to the Board of Directors as necessary. The chairman of the Sustainability Committee also attends meetings of the Board of Directors and the Management Advisory Conference to reflect the perspective of climate change actions in business strategies and the risk management of the company as a whole. Heads of functional departments are appointed as members of the committee, and the general managers of sales divisions participate as necessary. Thus, a system is in place that enables each organization to implement climate change actions promptly.

[Our climate change-related governance framework]




## 3. Strategy

At the Itochu Enex Group, we view various opportunities and risks associated with climate change as one of the important perspectives to be applied when formulating our business strategy. We will incorporate its consideration of the impact of climate change from medium- and long-term perspectives into its formulation of business plans.

■ Scenario analysis

In considering our scenario analysis, we referred to the work of the International Energy Agency (IEA) and the International Panel on Climate Change (IPCC). We identified and analyzed items that materially impact us from items included in multiple scenarios including the Beyond 1.5 °C /2 °C Scenario. We considered risks and opportunities in the results of the scenario analyses in the aspect of transition, generated by social change caused by government policy, technology and other factors, as well as in the physical aspect generated by natural disasters, rising temperatures, and similar events.

[Conditions]

| Scope | Itochu Enex Co., Ltd. and Consolidated subsidiaries (all businesses) |
|---|---|
| Time span in scenario analysis | Expected timing of the actualization of risks |
| Short term | Up to 1 year |
| Medium term | By FY2030 |
| Long term | By FY2050 |
| Financial Impact Assessment | As of 2030 |

[Reference scenarios]

| | 1.5°C / below 2°C scenario | 4°C scenario |
|---|---|---|
| Transition | Announced Pledges Scenario (APS), a transition scenario made by the International Energy Agency (IEA) (IEA WEO 2022), and the Net Zero Emissions by 2050 Scenario (NZE WEO 2022) | Stated Policies Scenario (STEPS), which is a transition scenario created by the International Energy Agency (IEA) (IEA WEO 2022) |
| Physical | AR6 SSP1-1.9 and AR6 SSP1-2.6, which are climate change forecast scenarios created by the Intergovernmental Panel on Climate Change (IPCC) | AR6 SSP5-8.5, which is a climate change forecast scenario created by the Intergovernmental Panel on Climate Change (IPCC) |

| | Vision of society in the 1.5 °C/below 2 °C scenario foreseen by the Company | Vision of society in the 4 °C scenario foreseen by the Company |
|---|---|---|
| Transition | ■ The business portfolio will change in line with the ongoing decline of demand for petroleum products and progress in the transition to new fuels in the coal-fired thermal power generation businesses.<br>■ Demands that $CO_2$ emissions are reduced will be more intense and burdens related to carbon taxes will be heavier.<br>■ Capital investment in higher efficiency equipment and facilities, energy conservation and other investments will be more costly and business continuity costs will be higher.<br>■ It will be necessary to actively address businesses dealing with heat supply, hydrogen, electric vehicles, photovoltaic power generation for private consumption, ammonia and other environmental items including next-generation fuels with some $CO_2$ emissions reduction effect.<br>■ In the period of transition from petroleum products and other fuels to next-generation products and fuels with net zero $CO_2$ emissions, demand for GTL, LNG, LP gas and other fuels with relatively limited $CO_2$ emissions from combustion will rise temporarily. | ■ Burdens related to carbon taxes and demand for the reductions of $CO_2$ emissions in the coal-fired thermal power generation business will increase to some extent, but to a lesser degree than in the 1.5 °C/below 2 °C scenario.<br>■ Capital investment in higher efficiency equipment and facilities, energy conservation and other investments will be more costly and business continuity costs will be higher.<br>■ Demand for heat supply, hydrogen, electric vehicles, photovoltaic power generation for private consumption, ammonia, next-generation fuels and other items with some effect of cutting $CO_2$ emissions will expand and business opportunities for environmental items are expected to increase to some extent. Activities matched to the demand need to be implemented.<br>■ Demand for the business of heat supply with some energy conservation effect will be higher than in the 1.5 °C/below 2 °C scenario. |
| Physical | ■ The intensification of abnormal weather will make power outages more frequent and supply less stable due to supply facilities being damaged.<br>■ A constant temperature rise will change the volatility of demand for kerosene and other fuels for heating devices used in winter.<br>■ There will be more opportunities where core LPG filling stations and disaster-resistant stations ensuring the stability of supply will be used in the event of disaster.<br>■ Tight power supply will increase demand for storage batteries and regulated power supplies. | ■ Abnormal weather that is more intense than in the 1.5 °C/below 2 °C scenario will increase the frequency of power outages, destabilize supply networks following damage to supply facilities and decrease profits.<br>■ A constant temperature rise will more quickly result in larger fluctuations in fuel demand and the greater volatility of profits.<br>■ Higher temperatures in summer will increase demand for electric power for air conditioning.<br>■ There will be even more opportunities where core LPG filling stations and disaster-resistant stations ensuring stability of supply will be used in the event of disaster.<br>■ A higher frequency of disasters and a tight power supply will increase demand for storage batteries and regulated power supplies.<br>■ The sales and customer base will hollow out after disasters. |

*All of the information above mentions uncertain future predictions and may differ from actual events.

■ Results of scenario analysis

The degree of impact is rated “minor” if the amount of the impact is less than 0.1 billion yen, “small” if it is between 0.1 billion yen and 1 billion yen, “medium” if it is between 1 billion yen and 10 billion yen, “large” if it is between 10 billion yen and 20 billion yen, and “enormous” if it’s impact is 20 billion yen or more. For anything whose quantitative impact has yet to be evaluated, the results in consideration of its qualitative impact are stated.

Analysis based on the 1.5 °C/below 2 °C scenario

| Category | | | Risks | Opportunities | Time span | Degree of impact | Response policies |
|---|---|---|---|---|---|---|---|
| Transition | Policies | Regulations on $CO_2$ emissions | - Decrease in demand for petroleum products<br>- Carbon tax imposition<br>- Sales network shrinkage<br>- Increase in fuel procurement costs<br>- Regulatory changes and resource constraints, etc.<br>- Increased costs due to fuel conversion and equipment renewal | - Increase in demand for environmentally friendly products such as next-generation/alternative fuels and renewable energy<br>- Increase in profits by capturing aftermarket dealers<br>- Increase in investment opportunities in decarbonization technologies | Medium to long term | Large | Mitigation measures<br>- Expand sales of next-generation/alternative fuels<br>- Developing supply and logistics networks to diversify the products handled<br>- Strengthening of the renewable energy business<br>- Strengthening storage battery related business<br>- Fuel conversion for coal-fired power plants, etc.<br>- Expansion of the energy service business |
| | | Change in energy mix | - Lack of procured power source<br>- Increase in procurement costs<br>- Increased PV output curtailment | - Industrial LP gas- Temporary increase in LNG demand<br>- Expansion of regulated power supply related business<br>- Expansion of the renewable energy business<br>- Increasing business opportunities due to regional diversification of power sources | Medium to long term | Medium | |
| | Markets | Changes in energy demand | - Increase in electricity procurement price<br>- Increase in market procurement prices | - Increase in customer numbers due to industry restructuring<br>- Increase in demand for power<br>- Expansion of EV-related business | Medium to long term | Medium | Mitigation measures<br>- Maintaining and expanding the customer base<br>- Capital investments for fuel conversion of existing infrastructure<br>- Infrastructure consolidation<br>- Strengthening electricity sales business<br>- Development of new electric power services<br>- Reused battery business<br>- Strengthening EV-related/dealer business<br><br>Adaptation measures<br>- Capital investments for fuel conversion of existing infrastructure<br>- Infrastructure consolidation<br>- Engaging in dialogue and coexisting with local communities |
| | | Changes in customers' behaviors | - Increase in costs of maintaining stockpiles<br>- Increase in costs such as developing new electricity services<br>- Deterioration of brand image | - Increasing demand for environmentally friendly facilities and highly efficient equipment<br>- Increased opportunities to propose energy service businesses<br>- Increasing demand for self-consumption PV | Medium to long term | Medium | |
| | | Progress of next-generation technologies | - Decrease in demand for petroleum product-related maintenance fields<br>- Sales network shrinkage<br>- Supporting diverse energy supplies<br>- Rising regulatory risks | - Expansion of hydrogen-related business<br>- Expand sales of marine ammonia fuel<br>- Increasing the environmental value of biomass power plants<br>- Reduction in biomass power generation costs | Medium to long term | Medium | |

| Category | | | Risks | Opportunities | Time span | Degree of impact | Response policies |
|---|---|---|---|---|---|---|---|
| Physical | Acute | Increasingly serious extreme weather | - Risk of damage to company equipment<br>- Increase in disaster response costs<br>- Decrease in sales revenue because of increased risk of power outages | - Increased demand for LP gas as a resilience function<br>- Increased opportunities to utilize disaster response Car-Life Stations<br>- Increasing demand for large storage batteries<br>- Expanding facility maintenance business to strengthen resilience | Short to long term | Medium | Adaptation measures<br>- Capital investment in compliance with local government and laws and regulations<br>- Capital investment to increase resilience<br>- Strengthening large-scale disaster countermeasures and risk management<br>- Initiatives for regionally distributed energy<br>- Developing emergency response services |
| | Chronic | Temperature rise | - Revenues fall with reduced demand for electricity and fuel during the winter | - Increased demand for regulated power sources to level out demand | Medium to long term | Medium to small | Mitigation measures<br>- Diversification of products handled in response to decreasing demand<br>- Review of power source portfolio<br>- Expanding supply and demand trading business |

Analysis based on the 4°C scenario

| Category | | | Risks | Opportunities | Time span | Degree of impact | Response policies |
|---|---|---|---|---|---|---|---|
| Transition | Policies | Regulations on $CO_2$ emissions | - Decrease in demand for petroleum products<br>- Carbon tax imposition<br>- Sales network shrinkage<br>- Increase in fuel procurement costs<br>- Increased costs due to fuel conversion and equipment renewal | - Increase in demand for environmental products, including alternative fuels and renewable energy<br>- Increase in profits by capturing aftermarket dealers<br>- Increase in investment opportunities in decarbonization technologies | Medium to long term | Medium | Mitigation measures<br>- Expand sales of next-generation/alternative fuels<br>- Developing supply and logistics networks to diversify the products handled<br>- Strengthening of the renewable energy business<br>- Strengthening storage battery related business<br>- Fuel conversion for coal-fired power plants, etc.<br>- Expansion of the energy service business |
| | | Change in energy mix | - Lack of procured power source<br>- Increase in procurement costs<br>- Increased PV output curtailment | - Expansion of hydrogen-related business<br>- Increase in demand for disaster prevention measures using LP gas<br>- Expansion of regulated power supply related business<br>- Expansion of the renewable energy business<br>- Increasing business opportunities due to regional diversification of power sources<br>- Increased opportunities to propose energy service businesses | Medium to long term | Medium | |
| | Markets | Energy Changes in demand | - Increase in electricity procurement price<br>- Increase in market procurement prices | - Increase in customer numbers due to industry restructuring<br>- Increase in demand for power<br>- Expansion of EV-related business | Medium to long term | Medium | Mitigation measures<br>- Maintaining and expanding the customer base<br>- Strengthening added value of existing businesses<br>- Strengthening electricity sales business<br>- Strengthening EV-related/dealer business |
| | | Progress of next-generation technologies | - Decline in brand image<br>- Increased maintenance costs for supply facilities | - Business transformation of Fleet CS<br>- Increasing demand for biofuels | Medium to long term | Medium | |
| Physical | Acute | Increasingly serious extreme weather | - Risk of damage to company equipment<br>- Increase in disaster-response costs<br>- Sales decrease due to supply interruption and power outage<br>- Decrease in customers due to hollowing out of disaster-prone areas | - Increased demand for LP gas as a resilience function<br>- Increased opportunities to utilize disaster response Car-Life Stations<br>- Increasing demand for large storage batteries<br>- Expanding facility maintenance business to strengthen resilience | Medium term | Medium | Adaptation measures<br>- Capital investment in compliance with local government and laws and regulations<br>- Capital investment to increase resilience<br>- Strengthening large-scale disaster prevention measures, risk management, and facility maintenance<br>- Initiatives for regionally distributed energy<br>- Developing emergency response services |
| | Chronic | Temperature rise | - Revenues fall with reduced electricity demand in winter<br>- Procurement prices rise with increased electricity demand in the summer | - Increased demand for regulated power sources to level out demand | Medium to long term | Medium | Mitigation measures<br>- Development of new services in response to changes in winter fuel demand<br>- Developing supply and logistics networks to diversify the products handled<br>- Review of power source portfolio<br>- Expanding supply and demand trading business |

■ Financial Impact Assessment

The Itochu Enex Group understands the importance of disclosing climate-related financial information and we strive to disclose more information in accordance with the TCFD recommendations. Estimations of financial impact involve many potential risks, uncertainties and assumptions, and actual results may differ materially from each scenario due to changes in important factors. Moving forward, we will aim to improve the precision of the analysis.

[Major financial impacts of transition risks]

① Cost increase resulting from the introduction of a carbon tax

The Itochu Enex Group has established a plan to reduce our $CO_2$ emissions by 50% by 2030. In the case where the plan is accomplished, the cost representing the impact of carbon taxes levied on the remaining CO2 emissions is expected to have some impact on the Group, according to the estimate based on the IEA WEO 2022, but We will address this risk by further reducing our environmental impact and enhancing environmentally friendly businesses in our efforts to achieve carbon neutrality.

Preconditions (carbon prices specified in the IEA WEO 2022)

| Carbon Tax | Unit | Price in 2030 | | |
|---|---|---|---|---|
| | | 1.5°C scenario | Below 2°C scenario | 4°C scenario |
| | USD/CO2-t | 90-140 | 40-135 | 28-90 |

*Lower limit in the 1.5 °C/below 2 °C scenario: Emerging markets and developing countries that have pledged net zero emission

*Upper limit in the 1.5 °C/below 2 °C scenario: Emerging countries that have pledged net zero emissions

*Lower limit in the 4 °C scenario: ChinaUpper limit in the 4 °C scenario: The European Union (EU)

② Decline in demand for petroleum resulting from progress in electrification and growing environmental awareness

According to the Net Zero Emission by 2050 scenario (NEZ) by the International Energy Agency (IEA) (WEO 2022), final consumption of oil-derived energy in 2030 will be 19.2% lower than the 2021 level. The Group’s petroleum product sales to the Japanese market will be lower and may compress its profits. However, the Group is continuously working to increase sales of many different alternative fuels, next-generation fuels and other low-carbon products that it has long been handling. It will aim to achieve a profit growth that will surpass the decrease in demand for petroleum products.

[Major financial impacts of transition opportunities]

① Increase in demand for renewable energy

We expect demand for renewable energy and EVs to increase in line with the progress in decarbonization and the shift to a recycling-oriented society. Assuming the expansion of these markets, we expect that profit from operating activities related to the Group's renewable energy business, self-consumption solar power generation business and EV business in 2030 will be far greater than the current level. The Itochu Enex Group will proactively operate growth businesses with high environmental value while we also pursue economic efficiency and convenience in our

efforts to increase our corporate value.

② Increase in demand for alternative fuels

Along with the progress towards a decarbonized circular society, the Group expected to enjoy a profit increase due to a temporary surge in demand for GTL, LNG, LP gas and other fuels with relatively limited CO2 emissions during combustion in the period of the transition from petroleum products and other fuels to next-generation fuels with net zero CO2 emissions towards 2050. In addition, the Group foresees that demand for hydrogen, ammonia, renewable diesel, biomass fuels and the like will continuously increase. The Group will address new business domains and environmental businesses, increase sales of next-generation fuels and take positive actions in peripherally related businesses to work toward continuous growth through environmental protection and economic efficiency.

## 4. Risk Management

Itochu Enex Co., Ltd.'s Risk Management Committee is an advisory body to the Management Advisory Conference which identifies and assesses risks that materially impact our management and businesses as priority risks under the company-wide risk management framework. We discuss and monitor both climate change risks and opportunities and deliberate them from the perspectives of both strategy formulation and the operation of individual businesses, with the Sustainability Committee playing a leading role before the risks and opportunities are reported to the Risk Management Committee, the Management Advisory Conference and the Board of Directors.

In addition, while we have delegated authority to each business division to ensure prompt decision-making, we have adopted a system under which the Project Review Committee examines projects with certain scales and conditions. When considering important investments and loans, we use an ESG due diligence checklist to assess environmental risks including climate change risks and impactsrelated to human rights, the labor environment, safety and health and other issues.

## 5. Metrics and Targets

The Itochu Enex Group aims to reduce our GHG emissions by 50% (from the FY2018 level) by 2030 and achieve carbon neutrality by 2050. We also contribute to society as a whole's reduction of GHG emissions by reducing emissions from the entire supply chain and through our businesses, aiming for zero offset. Moving forward, we will manage progress in the reduction of GHG emissions, report it to the Board of Directors, and disclose information about our progress every fiscal year.

| | 2030 | 2050 |
|---|---|---|
| **Scope1+Scope2** | **GHG emissions from the Itochu Enex Group**<br>**Down 50%**<br>（Compared to FY2018） | **GHG emissions from the Itochu Enex Group**<br>**Carbon neutrality** |
| **Scope 3 emissions and contribution to society as a whole** | **We will contribute to the reduction of society as a whole's GHG emissions by reducing emissions from the entire supply chain and through our businesses, aiming for a zero offset economy.** | |

[GHG emissions and benchmark year]

Scope1+Scope2 Unit : Thousand tons-CO2

| Category | 2018 (Benchmark year) | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| Kerosene | 1 | 1 | 1 | 0 | 1 |
| Diesel | 2 | 2 | 2 | 2 | 2 |
| Gasoline | 3 | 3 | 4 | 4 | 4 |
| Heavy oil | 30 | 31 | 26 | 24 | 28 |
| Coal | 760 | 716 | 742 | 664 | 432 |
| GTL | 0 | 0 | 0 | 1 | 1 |
| LP gas | 2 | 2 | 2 | 2 | 2 |
| City gas・LNG | 20 | 17 | 57 | 29 | 35 |
| Scope 1 (fuels) | 818 | 771 | 833 | 728 | 505 |
| Scope 2 (Electricity・Heat) | 78 | 77 | 65 | 67 | 63 |
| Renewable Energy Certificate/Electricity produced in-house | △3 | △3 | △2 | △2 | △1 |
| TOTAL | 894 | 846 | 896 | 793 | 566 |

Scope3 Unit : Thousand tons-CO2

| Category | 2018 (Benchmark year) | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| Category1<br>e.g.:CO2 emitted in the processes of mining, import, and refining fuel before we procure the products from primary distributors | 4,252 | 3,975 | 3,399 | 3,282 | 3,487 |
| Category3<br>e.g.:CO2 emitted in the processes of producing fuel such as mining, import, transportation for in-house power plants | 128 | 113 | 95 | 76 | 53 |
| Category4<br>e.g.:CO2 emitted by chartered tanker lorries while they are running | 108 | 103 | 64 | 98 | 103 |
| Category6・7<br>e.g.:CO2 emitted by business trips and commuting | 2 | 2 | 2 | 2 | 2 |
| Category11<br>e.g:CO2 emitted when consumers consume gasoline that we have sold | 18,834 | 18,033 | 17,383 | 17,195 | 17,961 |
| TOTAL | 23,324 | 22,227 | 20,979 | 20,653 | 21,607 |

*The ITOCHU Enex Group in the calculation of GHG emissions are parent company + consolidated subsidiaries (For Scope 1 and 2, excluding companies with no more than 10 employees).

* GHG emissions were calculated using the GHG Protocol, which was developed under the initiative of World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD).

*In calculating GHG emissions, CO2 originating from energy is the subject of data collection.

*The figures are rounded to the nearest unit (1,000 t-CO2e).

*Review of GHG emissions data: In FY2023, the Group revised the scope of calculation of GHG emissions data for the period between FY2018 and FY2021

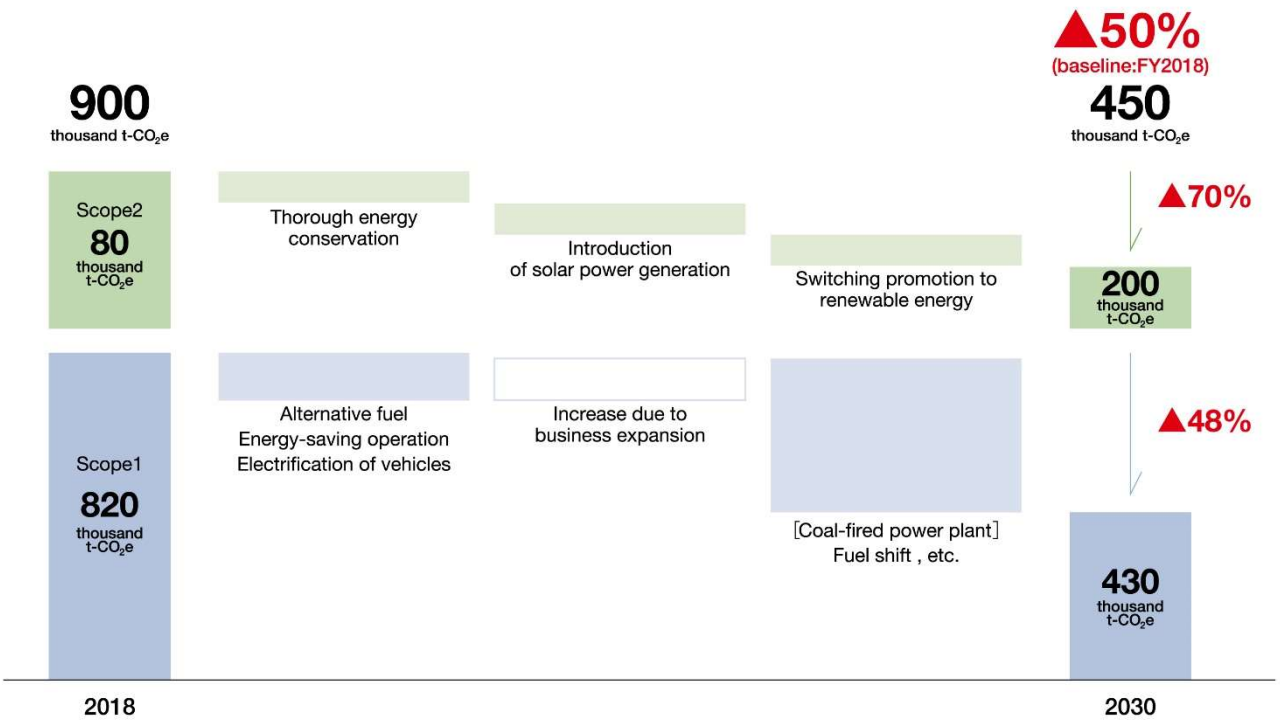
*Calculation of Scope 2 emissions derived from electricity: The basic emission factors for individual electricity utilities are used for FY2018 to FY2020 whereas adjusted emission factors for individual electricity utilities are used for FY2021 and later.

*ITOCHU ENEX Co., Ltd. has received third-party verification of the total Scope 1, total Scope 2 and Scope 1 and 2 GHG emissions for FY2018 (benchmark year) from independent third party Deloitte Tohmatsu Sustainability Co., Ltd. for data regarding the ITOCHU ENEX Group's Scope 1 and 2 GHG emissions in the benchmark year (FY2018).

*Third-party verification of the total Scope 1, total Scope 2 and Scope 1 and 2 GHG emissions for FY2023 has been received from independent third party Deloitte Tohmatsu Sustainability Co., Ltd. for ENEX REPORT 2023.

*The scope of the calculation of Scope 3 emissions only includes categories that materially impact our businesses.

[Transition Image towards Achieving the 2030 Reduction Target]



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