

Policies and Principles

Core Principle of Our Sustainability: "Care for the natural environment"

The ORIX Corporate Sustainability Policy states "Care for the natural environment" as one of our core principles that should be implemented in all aspects of our business.

Care for the natural environment

As detailed in our Environmental Policy, we measure and minimize our environmental impacts and look to provide solutions to society's environmental issues through our business. ORIX takes a precautionary approach, as set out in the Rio Declaration, to environmental challenges, meaning we act proactively to manage environmental risks and do not use lack of full scientific evidence as a reason to postpone reasonable actions to prevent environmental damage.

Environmental Policy and Goals

Environmental Policy

ORIX Group strives to understand the needs of customers and society, contributing environmental and energy solutions through business. We will continue to adapt to changes brought by business expansion and growth.

Goals

- 1. Provide new ecological services that contribute environmental and energy solutions.
- 2. Understand the impact of business activities on the environment, comply with environmental laws and regulations in order to reduce environmental impact.
- 3. Raise employee awareness and knowledge in order to respond to environmental issues based on the nature of each business.
- 4. Provide and disclose information on matters required by environmental laws and regulations.

Addressing Climate Change

Confronting climate change is a key theme that must be addressed on a global scale. Ongoing global warming in the absence of effective countermeasures will cause drastic climate change that will significantly impact the global environment. Against this backdrop, carbon neutral initiatives to reduce GHG emissions to virtually zero have swiftly been gaining traction worldwide. ORIX is contributing to this effort by actively implementing initiatives to mitigate climate change-related risks and help transition to a decarbonized society, and has announced its support for the Task Force on Climaterelated Financial Disclosures (TCFD)* in October 2020.

^{*} The Financial Stability Board established the Task Force on Climate-related Financial Disclosures (TCFD) at the request of the G20. The task force considers how to manage climate-related information disclosure, as well as matters concerning financial institutions. TCFD published its final report in June 2017, encouraging companies and other entities to disclose climate change-related risks and opportunities.

Environment

Goals and Progress

Material Issues

- 1 Set GHG emissions reduction goals.
- 2 Continue to lead in renewable energy investment and production.
- **3** Quantify and reduce our climate change-related risks and continue to implement TCFD recommendations.
- 4 Continue to promote a circular economy and reduce and appropriately manage waste.
- **5** Formulate an exit strategy for existing exposure to high environmental risk business areas and create bright-line exclusion criteria in any new investing or lending.
- **6** Work with our stakeholders to promote a healthier environment through goods and services that help mitigate adverse environmental impacts.

Key Goals

- For ORIX Group GHG (CO₂) emissions, (1) reduce emissions by 50% compared to the fiscal year ended March 31, 2020 by the end of the fiscal year ending March 31, 2030, and (2) achieve net zero emissions by the end of the fiscal year ending March 31, 2050.
- For investment and credit balance in GHG (CO₂) emitting industries*, (1) reduce the balance by 50% compared to the fiscal year ended March 31, 2020 by the end of the fiscal year ending March 31, 2030, and (2) achieve a zero balance by the end of the fiscal year ending March 31, 2040.
- * Refers to fossil fuel mining, palm oil plantations, and forestry financed by ORIX Group overseas subsidiaries.

Initiatives

With the aim of reaching our GHG (CO₂) emissions reduction goals, we will consider reducing emissions by switching fuels used at our two coal-biomass co-fired power plants, which accounted for more than 70% of our emissions in the fiscal year ended March 31, 2020. However, if it is deemed difficult to achieve a 50% reduction by the end of the fiscal year ending March 31, 2030, we are considering closing the facilities. As a result, we recorded an impairment of 19.6 billion JPY in the fiscal year ended March 31, 2022.

▶ ▶ ▶ P. 40 GHG (CO₂) Emissions Reduction

2 The generation capacity of our renewable energy business as of March 31, 2022 is 3.3 GW. We expect to expand it to 7.0 GW* by March 31, 2025.

*1.0 GW of which is scheduled to be sold, so ORIX's holdings will be 6.0 GW.
 ▶ ▶ P. 42 Promoting the Renewable Energy Business

In November 2021, we began disclosing information in line with the TCFD information disclosure framework, and conducted scenario analysis of our Environment and Energy, Real Estate and Auto businesses, which are particularly relevant to climate change. In 2022, we conducted further scenario analyses for the Aircraft and Ships, Finance (Japan/United States), and Life Insurance (asset management) businesses. Regarding Scope 3 (GHG emissions in the value chain), in addition to the Auto, Aircraft and Ships, and Real Estate businesses which we disclosed last year, in 2022 we also roughly estimated the scale of emissions from the power generation and electric power retail business in the Environment and Energy segment, as well as emissions from investees and borrowers (Category 15).

- ►► ► P. 33 Information Disclosure Based on TCFD Recommendations
- ▶ ▶ P. 39 Scope 3 Value Chain GHG Emissions and ORIX's Businesses
- 4 We are promoting a business that supports waste recycling and processing, as well as a business that facilitates the reuse, recycling, and proper processing of unwanted goods.
- ▶ ▶ ▶ P. 44 Promoting the Circular Economy and Reducing Waste
- **5** Our local subsidiaries in the Asia and Australia segment are considering what standards to use when determining which industries to target for reducing their credit balance in industries that have a high environmental impact.
- 6 Each of our business segments strives to provide environmentally friendly products and services.
 - P. 17 Contributing to Social Themes Through Our Business Activities
 Contributing to Society through Our Business Activities

Note: The content of "Goals and Progress" is the same as that on P.8.

Information Disclosure Framework / Governance, Strategy, Risk Management, and Metrics and Goals

We disclose climate change-related information in line with the four TCFD pillars, as follows:

Governance

Board Oversight of Climate-related Risks and Opportunities The Board of Directors provides leadership and guidance for ORIX Group's sustainability. It oversees climate-related risks and opportunities and determines ESG-related material issues and key goals.

At the Board of Directors meeting in 2022, we reported on the implementation of TCFD scenario analysis and calculation of Scope 3 emissions as Group-wide themes. In addition, we reported on the sustainability promotion policies of each business unit, the global trend towards more stringent regulations, and requests from business partners.

Execution Framework for Assessing and Managing Climate-related Risks and Opportunities

The Group CEO will chair the Sustainability Committee. Committee members include people in charge of segments most directly related to ESG, and other participants will attend as needed so the committee can flexibly accommodate an evolving agenda.

The committee will also call on external experts as necessary.

The Sustainability Committee will discuss specific measures to achieve goals as well as conflicts arising between short-term earnings and long-term growth. It will also hold discussions on measures to reduce climate change risk based on TCFD recommendations, share information on developments in Japan and internationally that are relevant to sustainability, and discuss matters to report to the Board of Directors.

Please refer to page 14 for the status of initiatives by the Sustainability Committee in 2022, and to pages 17 to 30 for the status of initiatives in each business unit.

Strategy

Climate-related Risks and Opportunities the Organization Has Identified

Climate-related risks and opportunities include physical risks and opportunities brought about by the increase in natural disasters associated with climate change. They also include transition risks and opportunities associated with the transition to a decarbonized society resulting from more stringent climate-related regulations and changes in corporate and consumer preferences.

We expect the following will materially impact ORIX Group:

• Physical Risks and Opportunities

ORIX is exposed to physical risks including higher costs due to business suspension and preventive measures or repairs for damage to operating facilities and offices, higher operating and construction expenses resulting from higher temperatures, higher credit costs from damage to customers, and loss of asset value from damage to investees.

• Transition Risks and Opportunities

ORIX is exposed to transition risks including business suspension, loss of asset value, stranded assets due to more stringent regulations, higher costs associated with carbon emissions, higher credit costs due to deterioration in customer performance, and decreased corporate value of high GHG-emission investees. Associated opportunities include increasing demand for renewable energy.

Scenario Analysis

In addition to the Environment and Energy, Real Estate, and Auto businesses, which we disclosed last year, we also conducted scenario analyses for the Aircraft and Ships, Finance (Japan/United States), and Life Insurance (asset management) businesses. Also, we replaced the assumptions in the transition risk analysis from a scenario of 2°C or lower to a scenario of 1.5°C.

Please refer to page 34 for scenario analysis assumptions and pages 35 to 38 for analysis results.

Risk Management

The Investor Relations and Sustainability Department has started discussions with the Credit and Investment Management Headquarters on establishing a climaterelated risk management framework.

Metrics and Goals

Metrics and Goals Used to Assess and Manage Relevant Climate-related Risks and Opportunities

ORIX identified the following four key goals related to climate:

- Reduce ORIX Group GHG (CO₂) emissions by 50% by the fiscal year ending March 31, 2030 compared to the fiscal year ended March 31, 2020.
- Reduce ORIX Group GHG (CO₂) emissions to net zero by the fiscal year ending March 31, 2050.
- Reduce investment in and lending to industries* that emit GHG (CO₂) by 50% by the fiscal year ending March 31, 2030 compared to the fiscal year ended March 31, 2020.
- Reduce investment in and lending to industries* that emit GHG (CO₂) to zero by the fiscal year ending March 31, 2040.
- * Refers to fossil fuel mining, palm oil plantations, and forestry financed by ORIX Group overseas subsidiaries.

Please refer to pages 40-41 for GHG (CO₂) Emissions Reduction.

Scope 1, 2 and 3 GHG Emissions

Please refer to page 46 for Scope 1 and 2 GHG emissions. Please refer to page 39 for Scope 3 GHG emissions.

ORIX Group companies Robeco and ORIX Asset Management also disclose information as per TCFD recommendations. Please refer to their respective reports for further details:

Robeco
Robeco
Rix Asset Management

Strategy and Scenario Analysis-Assumptions

4°C Scenario

The average global temperature at the end of the 21st century is about 4°C higher than preindustrial levels. Government policies of each country in addition to corporate and consumer preferences remain the same. For example, coal use continues, renewable power generation gains limited traction, carbon pricing is not introduced, demand for energy-saving real estate remains limited, electric vehicles do not become widespread, and the shift away from ownership-based vehicle usage stalls. The physical effects of climate change become apparent and can be felt directly.

1.5°C Scenario

The average global temperature increase at the end of this century can be kept at 1.5°C compared to pre-industrial levels. Aggressive government decarbonization policies move forward, corporate and consumer tastes change, and society shifts. There will be no significant change from the current physical impact of climate change.



Reference scenarios: Transitional: Stated Policies Scenario (STEPS)*¹ (IEA WEO 2021), Physical: RCP*²8.5 (IPCC AR5)

Reference scenarios: Transitional: Net Zero Emissions by 2050 (NZE)*1, (IEA WEO 2020), Physical: RCP*22.6 (IPCC AR5)

*1 A scenario presented in World Energy Outlook 2021 published by the International Energy Agency (IEA) in 2021.

*2 Representative concentration pathways. Models for estimating temperature rise presented in the Intergovernmental Panel on Climate Change Fifth Assessment Report (IPCC AR5). The models suggests that a larger RCP value will result in a greater rise in temperature.

Strategy and Scenario Analysis

Environment and Energy Business: We expect the 4°C scenario to reduce sales and incur recovery costs due to flood damage at power plants. Meanwhile, we expect the 1.5°C scenario to increase business opportunities from the expansion of the renewable energy market, although there is substantial risk of an accelerated move away from our coal-fired power plant assets and higher costs from the introduction of carbon pricing.

	Society		Risks and Opportunities	Financial Impact	Countermeasures and Assessment
4°C Sce	Climate change accelerates; disasters	Acute Flooding increases	Risk Flood damage to operating facilities such as power plants	Coal-biomass co-fired power plants and solar power plants Repair costs and loss of power sales opportunities	ORIX expects a relatively large impact, but can proactively mitigate that impact through rapid recovery measures based on in-house operation and maintenance* ¹
nario		Chronic Temperature increases		Solar power plants Lower sales due to reduced power generation	Minor impact
	More stringent regulations in Japan and internationally to decarbonize society	More stringent government policies to reduce coal use	Risk Accelerated move away from coal-fired power generation	Coal-biomass co-fired power plants Incur costs for closure or facility renovation due to fuel conversion	ORIX is considering fuel conversion; such measures and other issues may incur commensurate costs
		Introduction of carbon pricing	Risk Higher costs due to carbon pricing	Coal-biomass co-fired power plants, waste processing facilities, and final disposal sites Rising costs	Impact depends on ability to pass on higher costs into the selling price
.5°C Scenari			Opportunity Increased business prospects resulting from the expansion of the renewable energy market	Expansion of renewable energy business (PPA* ² , biogas, geothermal, and wind power generation, storage batteries, etc.)	_
ō	Corporations increasingly invest in and adopt renewable energy in response to investor and consumer pressure	Expansion of the renewable energy market and renewable power generation	Risk Increased output constraints* ³ resulting from system capacity limitations	Solar power plants Reduced revenue from electric power sales due to output constraints ^{*3}	Online power control* ³ to reduce opportunity loss can mitigate impact
			Risk Increased use of inherently unstable renewable power generation could result in temporary tighter supply and demand	Electric power retailing Unstable wholesale market prices	Power plant ownership potentially mitigates impact

*1 Power plant-related operation, inspection, and maintenance to avert damage.

*2 PPA (Power Purchase Agreement): a third-party service delivery model in which ORIX installs solar power generation infrastructure and storage batteries in facilities such as stores owned by customers, and supplies the power generated by the facilities to those customers.

*3 Electric power companies temporarily restrict the connection from the power generation facility to the power grid to avoid oversupply when power demand is low - power sales are not possible during controlled output suppression.

Information Disclosure Based on TCFD Recommendations / Strategy and Scenario Analysis

Real Estate Business: We expect the 4°C scenario to expose some hotels and inns to flooding risk. Meanwhile, although costs may increase as a result of carbon pricing, we expect the 1.5°C scenario to increase the value of energy-efficient real estate.

	Society		Risks and Opportunities	Financial Impact	Countermeasures and Assessment
4°C Scenario	Climate change accelerates; disasters increase in scale and frequency	Acute Flooding increases	Risk Flood damage to operating facilities	Hotel and inn operation Repair costs and loss of sales opportunities	Business continuity planning (BCP) can mitigate impact by minimizing damage
		Chronie	Risk Increased demand for air conditioning at operating facilities	Hotel and inn operation Real estate investment and development Increased air conditioning costs	Minor impact due to renovation with highly efficient air conditioning and rent increases
		Temperature increases	Risk Longer construction periods due to work interruptions resulting from intense heat on a larger number of days	Condominiums Real estate investment and development Higher construction costs due to longer construction periods	Minor impact due to the use of low-heat concrete that can be poured on days of intense heat
1.5°C Scenario	More stringent regulations in Japan and internationally to decarbonize society	Introduction of carbon pricing	Risk	Condominiums Real estate investment and development Higher construction material costs	Minor impact due to higher sales prices and rent
			Higher costs due to carbon pricing	Hotel and inn operation Higher utility costs	Minor impact due to replacement with highly efficient air conditioning equipment during renovation
	Demand for environmentally responsible real estate will increase, and companies will respond accordingly	Increased demand for energy- and CO2-efficient real estate	Opportunity The value of real estate certified as energy-efficient and decarbonized housing will increase	Condominiums Real estate investment and development Increased unit rent, higher sales prices, and increased property sales	Develop environmentally certified properties and make other investments to decarbonize

Auto Business: We expect the 4°C scenario to increase earnings by increasing disaster recovery demand. Meanwhile, we expect a limited impact from the 1.5°C scenario, although our conventional businesses are exposed to the risk of contraction due to the growing popularity of electric vehicles. We expect the rental car and car sharing businesses to present opportunities for expansion.

	Society		Risks and Opportunities	Financial Impact	Countermeasures and Assessment
4°C Scenario	Climate change accelerates; disasters	Acute	Risk Damage to ORIX offices	Damage to large auction venues; water damage to vehicles owned by ORIX	Minor impact because auction venues are decentralized
	increase in scale and frequency	Flooding increases	Opportunity Disaster recovery demand	Higher earnings due to increased demand for vehicles resulting from reconstruction	Meet supply obligations by ensuring sufficient inventory
1.5°C Scenario	More stringent regulations and government policies in Japan and internationally to decarbonize society	Electric vehicle adoption accelerates	Risk Reduced opportunities for maintenance and fueling due to the popularity of electric vehicles	Reduced maintenance revenue and AMS Card* demand	Adding an electric vehicle charging function to the existing AMS Card will largely mitigate impact
			Risk Falling prices for pre-owned gasoline vehicles	Reduced auto sales revenue	Specifying appropriate residual values will largely mitigate impact
	Consumer preferences change due to heightened environmental awareness Accelerated shift away from ownership-based vehicle usage sharing		Opportunity Increased demand for car rentals and sharing	Expansion of the car rental and sharing businesses due to the rise of the sharing economy	_

* A fuel card that offers the same price at ENEOS, cosmo, Shell, and apollostation service stations.

Information Disclosure Based on TCFD Recommendations / Strategy and Scenario Analysis

Aircraft Business: We expect the 4°C scenario to have an impact on leased aircraft due to weather disasters, although the impact is expected to be limited. Meanwhile, although customer costs are expected to increase due to factors such as carbon pricing in the 1.5°C scenario, the impact is expected to be minor. Demand for high-efficiency aircraft is likely to increase.

	Society		Risks and Opportunities	Financial Impact	Countermeasures and Assessment
4°C Scenario	Climate change accelerates; disasters increase in scale and frequency		Risks Aircraft damage from weather disasters	Customer repair costs and loss of sales opportunities	Aircraft can be moved, so the risk of damage is limited
1.5°C Scenario	More stringent regulations in Japan and internationally to decarbonize society	Introduction of carbon pricing and increased use of SAF* ¹	Risk Increased fuel costs due to carbon pricing/SAF	Increased customer fuel costs	Minimal impact on customers because fuel costs can be added to passenger fares
			Opportunity Increase in aircraft value of high- efficiency aircraft	Expansion of new business	_

Ships Business: We expect the 4°C scenario to have an impact on ships due to weather disasters, although the impact is expected to be minor. Also, construction costs are anticipated to increase in the 1.5°C scenario due to stricter environmental regulations, but the impact is expected to be limited.

	Society		Risks and Opportunities	Financial Impact	Countermeasures and Assessment
4°C Scenario	Climate change accelerates; disasters increase in scale and frequency		Risk Ships getting damaged by weather disasters	Repair costs and loss of opportunities for charter fees	Minor impact because it is expected to remain within the range of market price fluctuations
1.5°C S	More stringent regulations in Japan and internationally to decarbonize society	Mara attingant any ironmontal regulations	Risk Rise in ship purchase price to comply with regulations	Increased construction costs	Limited impact as it can be passed on to charter fees
cenario		Iternationally to decarbonize society More stringent environmental regulations Opportunity Increased demand with new fuels*2		Opportunity Increased demand for ships compatible with new fuels* ²	Expansion of investment opportunities

*1 SAF: Sustainable aviation fuel. Aviation fuel that does not use fossil-derived raw materials and has a lower environmental impact than conventional aviation fuel.

*2 New fuels: Ships are being converted to LNG-fueled ships and zero-emission ships that use hydrogen, ammonia, etc. Zero-emission ships have not yet been put into practical use.

Information Disclosure Based on TCFD Recommendations / Strategy and Scenario Analysis

Finance Business (Japan/United States): We expect the 4°C scenario to expose properties used as collateral, customer offices, and others to risk of damage due to weather disasters, but the impact is expected to be minor. Although customer costs are anticipated to increase in the 1.5°C scenario due to factors such as carbon pricing, the impact is expected to be minor.

	Society		Risks and Opportunities	Financial Impact	Countermeasures and Assessment	
4°C Scenario	Climate change accelerates; disasters increase in scale and frequency		Risk Damage to real estate used as collateral and assets owned by the Group (offices, leased assets, etc.)	Increased credit costs due to damage to real estate used as collateral and owned assets	As a result of trial calculations, the anticipated amount of losses to real estate with disaster risk used as	
			Risk Damage to customers' offices	Increased credit costs due to business suspension of customers and increased repair costs	damage to customers are minor, and the increase in credit costs is negligible	
1.5°C Scenario	More stringent regulations in Japan and internationally to decarbonize society services	Introduction of carbon pricing and shift	Risk Increased customer operating costs due to carbon pricing	Increased credit costs due to deterioration in customer performance	Investing in and lending to carbon- related industries are limited, and the impact is minor	
		to environmentally friendly products and services	Opportunity Expanded investing and lending opportunities for renewable energy businesses	Increase in new investing and lending transactions	_	

Life Insurance Business (Asset Management Division): We expect the 4°C scenario to reduce the corporate value of investees and borrowers that are vulnerable to natural disasters, but the impact is expected to be minor. As the corporate value of investees and borrowers with high GHG emissions is expected to decline in the 1.5°C scenario, we will promote reductions in Scope 3 (emissions from investees and borrowers).

	Soc	iety	Risks and Opportunities	Financial Impact	Countermeasures and Assessment
4°C Scenario	Climate change accelerates; disasters increase in scale and frequency		Risk Decline in corporate value of investees and borrowers vulnerable to natural disasters	Loss of investment income	Investees and borrowers are diversified, so the impact is minor
1.5°C S	More stringent regulations in Japan and t internationally to decarbonize society	Introduction of carbon pricing and shift to environmentally friendly products and services	Risk Decline in corporate value of investees and borrowers with high GHG emissions	Loss of investment income	 Promote reduction of Scope 3 (emissions from investees and borrowers) Promote investing in and lending to businesses and companies that contribute to the transition to a decarbonized society Engagement with existing investees and borrowers, and replacement of investees and borrowers
cenario			Opportunity Expanded investing and lending opportunities for renewable energy businesses	Expansion of investment income	

Scope 3 Value Chain GHG Emissions and ORIX's Businesses

Companies must identify and reduce their GHG emissions to support the transition to a decarbonized society; however, corporate value chains include SMEs that have trouble identifying their GHG emissions. Therefore, SMEs must often rely on large corporations and government agencies for information; yet, methods of engagement and communication can be limited. The concept of the Scope 3 Standard is to fill this information gap and create a pathway to facilitate engagement and dialogue. ORIX is a global, publicly listed company and we recognize that we are in a position to fill this information gap and also encourage and aid companies in our sphere of influence to meet societal expectations for reduced emissions.

In this Sustainability Report, in addition to our Auto, Aircraft and Ships, and Real Estate businesses disclosed last year, we also cover GHG emissions from the power generation and electricity retail business in the Environment and Energy segment as well as from investees and borrowers (Category 15) by applying the GHG Protocol's Scope 3 Standard* in estimating such emissions.



(Note 1) Emissions: 🚺 Large: 500,000 to 3,000,000 tons 🚺 Medium: 10,000 to 500,000 tons 🚺 Small: Less than 10,000 tons

(Note 2) Calculation period: Emissions from business activities for the fiscal year ended March 31, 2022 are estimated in accordance with the GHG Protocol. (Note 3) Numbers in the table indicate Scope 3 categories.

* The ORIX Group's GHG emissions associated with the use of fuel and electricity are direct Scope 1 emissions and indirect Scope 2 emissions. Indirect emissions not included in Scope 1 and Scope 2 emissions are Scope 3 emissions that occur in the value chain of the reporting company. The GHG Protocol is an organization co-sponsored by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). Issued by the GHG Protocol in November 2011, the Scope 3 Standard outlines requirements and guidance for companies to prepare and publicly report a GHG emissions inventory that includes indirect emissions resulting from value chain activities. Scope 3 emissions are classified into 15 activity-based categories.

(Unit: Thousand tons CO₂e)

GHG (CO₂) Emissions Reduction Goals

ORIX has set GHG (CO₂) emissions reduction goals as follows:

- (1) Reduce GHG (CO₂) emissions by 50% compared to the fiscal year ended March 31, 2020 by the end of the fiscal year ending March 31, 2030.
- (2) Achieve net zero GHG (CO₂) emissions by the end of the fiscal year ending March 31, 2050.

ORIX Group GHG (CO₂) Emissions (Baseline Emissions) in the Fiscal Year Ended March 31, 2020*¹

	Emissions	(Scope 1)	(Scope 2)
Environment and Energy Segment - Two coal-biomass co-fired	1,089	1,069	20
power plants	941	939	1
- Waste processing facilities	93	85	8
Real Estate Segment - Operating facilities	85 60	19 16	66 44
Total of other segments - PE Investment segment	93 52	18 14	74 38
Total	1,266	1,107	158

*1 From the calculation of ORIX Group GHG emissions for the fiscal year ended March 31, 2021. The calculation includes emissions from overseas subsidiaries and investees. We also reviewed the method for calculating GHG emissions from treatment of waste plastics at our waste incineration facility in Yorii Town, Saitama Prefecture. The resulting figures represent ORIX Group GHG baseline emissions for the fiscal year ended March 31, 2020.

ORIX Group GHG baseline emissions: 1,266 thousand tons CO₂e (Scope 1 emissions: 1,107 thousand tons CO₂e; Scope 2 emissions: 158 thousand tons CO₂e)

GHG (CO₂) emissions in the fiscal year ended March 31, 2020 were 1,266 thousand tons. The largest part of emissions were from the two coal-biomass co-fired power plants operated by the Environment and Energy Segment accounting for 941 thousand tons, followed by 93 thousand tons from our waste processing facilities. The Real Estate Segment emitted 85 thousand tons, mainly from operating facilities. Of the emissions from the PE Investment Segment, 51 thousand tons were from consolidated investees in our PE investment business.

GHG (CO₂) Emissions

The total Scope 1 and Scope 2 emissions in the fiscal year ended March 31, 2022 were 1,197 thousand tons. Compared to the baseline emissions, this was a decrease of 69 thousand tons. Emissions from the two coalbiomass co-fired power plants amounted to 844 thousand tons, accounting for 70.5% of the total.

ORIX Group GHG (CO₂) Emissions

		(Unit: Thousand tons CO2e)
	FY ended March 31, 2020 (Baseline Emissions)	FY ended March 31, 2022
Scope 1	1,107	1,045
Scope 2	158	152
Total	1,266	1,197

▶ ▶ ▶ P.46 ORIX Group's GHG Emissions

Initiatives to Reduce Emissions

SOCIAL

 Environment and Energy Segment: Coal-biomass cofired power plants^{*2}

Our Environment and Energy Segment operates two coalbiomass co-fired power plants as in-house power sources to provide power to corporate customers as a power producer and supplier. Currently, we are working to reduce CO₂ emissions compared to coal-fired power plants of the same class by using approximately 35% biomass fuel for co-firing.

In the future, we will consider ways to reduce emissions including refitting equipment to move to pure biomass combustion and switching to next-generation fuels such as hydrogen and ammonia. However, if it is deemed difficult to achieve a 50% reduction by the end of the fiscal year ending March 31, 2030, we are considering closing the facilities. As a result, we recorded an impairment of 19.6 billion JPY in the fiscal year ended March 31, 2022.

*2 Soma Coal-Biomass Power Plant (Soma City, Fukushima Prefecture, started operation in April 2018, with generation capacity of 112 MW), Hibikinada Coal-Biomass Power Plant (Kitakyushu City, Fukuoka Prefecture, started operation in December 2018, with generation capacity of 112 MW). GHG (CO₂) Emissions Reduction

Environment and Energy Segment / Waste Processing Facility*

The Environment and Energy Segment's waste processing facility gasifies and melts municipal waste and industrial waste that it receives under contract from waste producers, achieving a high recycling rate. Also, they operate under strict environmental regulations for exhaust gas volume.

ORIX properly disposes of waste as a third-party waste treatment provider. As such, we report GHG (CO₂) emissions from incineration in our own emissions inventory according to the GHG Protocol, an international set of rules for calculating and reporting GHG (CO₂) emissions. We will consider the use of CO₂ capture equipment and other technologies, while paying close attention to discussions about the revision of international GHG calculation and reporting rules, as well as to discussions and trends relevant to the formulation of the carbon pricing rules being advocated by the Japanese government.

Real Estate Segment

We have formulated a plan to make gradual reductions toward a 50% emissions reduction goal by the fiscal year ending March 31, 2030.

Our main reduction initiatives are as follows:

- Make equipment upgrades ahead of schedule at properties we own or operate, and introduce energy-saving equipment, etc. (for properties where we have the authority to renovate facilities)
- (2) Adopt renewable energy at properties we own or operate (install solar panels in logistics facilities developed by ORIX Real Estate, and use renewable energy in those facilities, but if surplus power is generated, supply the environmental value of surplus power to other properties such as office buildings and lodging facilities)
- (3) Use non-fossil certified renewable energy (appropriate for emissions based on electricity usage, which is difficult to reduce in (1) and (2) above) and purchase J-credits (appropriate for emissions based on usage other than electricity)

• PE Investment Segment /

Consolidated Investees in our PE Investment Business In the PE Investment business, we have calculated the CO_2 emissions of 17 consolidated investees, and have started considering measures to reduce emissions. Among these, we are considering specific reduction plans for the three companies that account for the majority of emissions. The main initiatives under consideration are as follows:

- Purchase of electricity derived from renewable energy
- Installing solar panels on the roofs of our facilities
- Transitioning to energy-saving equipment, etc.
- Change to LED lighting
- Replace sales vehicles with hybrid electric vehicles

^{*} ORIX Environmental Resources Management, Yorii Waste Incineration Facility (Yorii Town, Saitama Prefecture, started operations in June 2006, capable of processing 450 tons of waste per day)

Promoting the Renewable Energy Business

Initiatives for Renewable Energy through our Power Generation Business

ORIX operates power generation businesses around the world as a global renewable energy company. As of March 31, 2022, our generation capacity of power plants in operation around the world, including Japan, was 3.3 GW*¹. Elawan and Greenko lead business growth, with Elawan having 9 GW*² (80% share) and Greenko having 18 GW*² (20% share) of generation capacity, including pipeline. As of March 2025, we expect to expand our generation capacity of power plants in operation to 6 GW*¹ (7 GW*¹ before considering sale).

Also, in Japan, we are promoting broader adoption of renewable energy through our business of operation, management, and maintenance of power plants that use renewable energy, the energy storage plant business, and the introduction of a third-party ownership model for solar power generation systems.

*1 Net figures that take into account the Company's ownership ratio. If the individual project is a joint venture, we also consider the investment ratio. *2 Gross figures before taking into account the Company's ownership ratio. Global Expansion of Renewable Energy Business (as of March 31, 2022)



Renewable Energy Business

Elawan Energy S.L. (Elawan)

Elawan, our global renewable energy company headquartered in Spain, develops and operates wind and solar power plants in 11 countries, including Spain and elsewhere in Europe, North America, and South America. Elawan's strengths are in its expertise and functions for integrated handling of development to operation in countries around the world, and we have positioned it as a strategic platform to expand ORIX's renewable energy business globally in the future.

Greenko Energy Holdings (Greenko)

Greenko is one of India's major renewable energy companies, and it operates solar, wind, and hydro power facilities in the country. Greenko is distinguished by its IREP*⁴ business, which combines renewable energy sources such as solar and wind power with pumped storage hydropower generation, in order to supply power derived from renewable energy at the same cost as thermal power plants without being affected by the weather.

^{*4} Acronym for "Integrated Renewable Energy Project". A business in which renewable energy sources such as solar power and wind power are combined with energy storage equipment, so power can be supplied according to demand, in the same way as thermal power generation. Specifically, a portion of the power generated by solar or wind power is stored, then the stored power is discharged to cover for shortages when the output fluctuates or when power is not generated due to weather or other factors.

Promoting the Renewable Energy Business

• Business of Operation, Management, and Maintenance of Power Plants that Use Renewable Energy

ORIX Renewable Energy Management (OREM) operates and manages 84 power plants nationwide with a total power generation capacity of 432 MW (as of March 31, 2022).

OREM uses knowledge cultivated by ORIX in the renewable energy power generation business to carry out maintenance and inspection work that prevents risks at power plants and ensures that normal operation continues. In the event of a failure, OREM reduces power generation loss and minimizes downtime by quickly responding for recovery. We are also working to maximize the amount of power generated through visualization of our power generation status through remote monitoring and data analysis.

Energy Storage Plant Business

We are promoting the development of energy storage plants^{*1} where large storage batteries are installed on the scale of a power plant. Rather than doing conventional installation of batteries in individual homes, commercial facilities, factories, or the like, these batteries can be connected directly to the power grid. They contribute to stabilizing the power grid by charging up when there is a surplus of electricity and discharging when there is a shortage of electricity. In order to further expand the adoption of renewable energy, it is necessary to secure this "flexibility" that stabilizes the power grid, so energy storage plants are expected to become more important in the future.

In July 2022, we established Kinokawa Energy Storage LLC jointly with Kansai Electric Power Co., Ltd. Construction of the energy storage plant began in August 2022 on the premises of Kansai Transmission and Distribution, Inc.'s Kinokawa Substation (Kinokawa City, Wakayama Prefecture). The goal is to build a large grid storage battery with a rated output of 48 MW and a rated capacity of 113 MWh^{*2}, and start operations in 2024.

- *1 Invested jointly with Kansai Electric Power Co., Ltd. in the Ministry of Economy, Trade and Industry's (METI) "FY2021 Project to Support the Introduction of Grid Storage Batteries for Accelerating the Introduction of Supplementary Renewable Energy (Executive body: Sustainable Open Innovation Initiative)".
- *2 Rated output refers to the size of instantaneous output, and rated capacity refers to the duration power is discharged. The rated capacity in this case is equivalent to the daily usage of about 13,000 ordinary households when charging and discharging one cycle per day.

• Third-party Ownership Model for Solar Power Generation Systems (PPA*³ model)

To meet increasing demand from corporations for captive consumption of renewable energy, we are promoting the nationwide rollout of the third-party ownership model for solar power generation systems. Under this business model, a third party is loaned the site or rooftop of the power user, installs a solar power generation system, and supplies the generated power directly to the customer (user). ORIX installs solar power generating equipment and storage batteries on customer-owned facilities, and supplies the energy generated by this equipment to the customer. Customers pay ORIX fees according to the amount of electricity they consume. For customers, this initiative enables them to reduce CO₂ emissions and curb electricity costs without the burden of initial investment. *3 Acronym for "Power Purchase Agreement"

CO₂ Avoided Emissions

CO₂ avoided emissions at our renewable energy businesses totaled approximately 4.3 million t-CO₂ for the fiscal year ended March 31, 2022. The year-on-year increase was more than 1.0 million t-CO₂. The reason for the year-on-year increase was the contribution of Greenko, of which we acquired shares in the fiscal year ended March 31, 2021, and Elawan, which we acquired in the fiscal year ended March 31, 2022.

Breakdown by country, region, and generation type is as follows.

CO₂ Avoided Emissions through the Renewable Energy Business

(Unit: Thousand tons CO₂)

	Wind Power	Solar Power	Geothermal Power	Hydro Power	Biomass	Total
India	1,289	641	0	364	0	2,294
Japan	0	424	0	0	254	678
U.S.A.	176	42	381	0	0	599
China	5	142	0	0	0	147
Others	200	48	259	64	0	571
Total	1,670	1,297	640	428	254	4,289

►► P. 47 CO₂ Avoided Emissions through the Renewable Energy Business

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Promoting the Circular Economy and Reducing Waste

ORIX is working to promote the circular economy and reduce waste through various businesses.

Environment and Energy Business

We are promoting a business that supports waste recycling and processing, as well as a business that facilitates the reuse, recycling, and proper disposal of unwanted goods.

Collection Pickup Transportation	Proper disposal network	Building a network to efficiently collect waste from all over Japan		Cross-regional intermediary volume 47,000 tons/year
	Recycling plant	Items that can be reused are sold to second-hand dealers, while those that cannot be reused are dismantled and recycled as materials		Materials processed at our in-house recycling plant 15,000 tons/year
Reuse Recycling Waste Recycling	Waste recycling plant	Complete recycling of waste at an advanced waste processing facility		Amount of waste melted 117,000 tons/year
Renewable Energy	Biogas power	Methane fermentation of waste and use		Waste methane fermentation processing volume 6,000 tons/year
	generation facility	as power generation source		Power generation capacity 1.6 MW
Proper disposal	Final disposal site	Items that cannot be recycled are properly disposed as waste		Final disposal volume 115,000 tons/year

(Data for the fiscal year ended March 31, 2022)





Waste Recycling Plant (ORIX Environmental Resources Management, Yorii Waste Incineration Facility)



Biogas Power Generation Facility (ORIX Environmental Resources Management, Yorii Biogas Plant) Promoting the Circular Economy and Reducing Waste

Auto Business

ORIX Auto leverages its expertise in vehicles in businesses that utilize second-hand vehicles.

We are also involved in the distribution of used vehicles through the purchase of vehicles from corporate and individual customers and through vehicle sales agency services, in addition to the vehicles that we have provided through the leasing and rental car businesses. Among them, our lease and rental vehicles are highquality used vehicles which we maintain and inspect regularly. All used vehicles undergo rigorous inspections, and only the vehicles that meet our standards are offered for lease or sale at retail stores.

We hold auctions for other used vehicles at our own bidding venues nationwide and sell them to other companies. Vehicles that we cannot resell are dismantled and recycled as parts.



Rental Business

ORIX Rentec does thorough quality control, such as performing the same operation checks and precision checks as for rental products, to maintain second-hand goods resulting from expiration or cancellation of rental contracts, including PCs, servers, measuring instruments, and analytical instruments. In addition to selling these products directly to corporate and individual customers at reasonable prices, we also hold regular auctions and sell to second-hand sales companies through our website.

We also provide asset purchase services for ICT equipment, including PCs and servers owned by customers. Using the know-how that we have acquired through our rental business, we appraise and purchase idle assets that arise such as when replacing equipment or relocating offices, in order to help customers reduce the time and cost involved in disposing of such products. Purchased equipment that can be reused is resold to second-hand dealers. For equipment that is difficult to resell, we outsource processing to Group company ORIX Eco Services and recycle or properly dispose of said equipment.

Early

Outsource

processing

ORIX Eco

Services

Recycling/

proper

disposal

Purchase service for used ICT

equipment for corporations

Used equipment

Sale

Second-

hand sales

company

Domestic and

international

distribution

 \frown

:::

General

corporations/

individuals

Reuse

Sale

Real Estate Business

ORIX Hotel Management has put up posters and other signage aimed at raising awareness of food waste reduction at 14 of its lodging facilities that have restaurants and other dining facilities. In order to reduce food loss, we procure ingredients without waste, provide a volume of food matching the amount required when serving buffets, and promote the recycling of discarded food with the aim of achieving a recycling rate of 50%* by the fiscal year ending March 31, 2025.

Since 2019, ORIX Aquarium has stopped using plastic straws in its café on its premises and uses paper straws instead. We are gradually adopting environmentally friendly materials, such as switching from plastic bags to paper bags at our shops and from plastic cups to paper cups at our cafés. Furthermore, in order to reduce food waste at our cafés, we are striving to realize lean ingredient procurement and cooking methods.

* Targets for implementation rate of recycling, etc. from "Basic Policy on Promoting Recycling, etc. of Recyclable Food Resources" based on the Food Waste Recycling Act announced on July 12, 2019. (Reference: Ministry of Agriculture, Forestry and Fisheries)



Food waste reduction education signage (image)

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(Unit: t-CO2e)

Environmental Performance Data

ORIX Group's GHG Emissions

	FY ended March 31, 2018	FY ended March 31, 2019	FY ended March 31, 2020	FY ended March 31, 2021	FY ended March 31, 2022
Scope 1	235,249	907,345	1,138,566	987,771	★ 1,044,892
Scope 2	157,463	146,469	112,444	151,055	🛨 151,980
Scope 1 & 2 Total	392,711	1,053,814	1,251,010	1,138,826	★ 1,196,872

Scope 1 (Direct GHG emissions occurring from sources that are owned or controlled by the company (fuel consumption, industrial processes))

Combustion of fuels including fuel oil, diesel, gasoline, city gas, coal, biomass, and waste, use of limestone for desulfurization treatment Scope 2 (Indirect GHG emissions from purchased energy consumed by the company (electricity use,

heat, and steam))

Electricity use and heat (steam, cold water, warm water)

Scope and Method

[Calculation Period]

From April 1 to March 31 each fiscal year

[Calculation Scope]

Through FY ended March 31, 2020: Consolidated ORIX Group companies in Japan (excluding investees in our PE Investment business) FY ended March 31, 2021 onwards: Consolidated ORIX Group companies (Japan and overseas, excluding a limited number of overseas offices)

[Target Activities]

GHG Protocol direct emissions (Scope 1) and indirect emissions (Scope 2)

[Calculation Method]

- GHG emissions (converted to CO₂) are calculated based on the GHG protocol and the "Ministerial Ordinance Concerning Calculation of Greenhouse Gas Emissions Associated with Business Activities of Specified Emitters" (calculated based on Group GHG calculation guidelines).
- GHG emissions, including CO₂ from non-energy sources, methane (CH₄), and dinitrogen monoxide (N₂O), are calculated based on company rules concerning the management of environmental information.
- We use the emissions factors under Japan's Mandatory Greenhouse Gas Accounting and Reporting System in principle.
- Scope 2 emissions are market-based emissions, and post-adjustment emissions factors are used as emissions factors related to
 electricity consumption at offices in Japan. For emissions factors related to electricity consumption at overseas offices, power
 company-specific emission factors are used when available, and otherwise the International Energy Agency's CO₂ emissions factors
 from electricity generation by country are used.
- Scope 2 emissions include emissions (10 thousand t-CO₂e) related to power purchases from ORIX Group power generation companies (intra-Group transactions).
- Notes: Change in emissions factors: Beginning from data for the fiscal year ended March 31, 2022, we have changed the calculation for emissions related to electricity consumption to the market-based method.
 - Emissions from coal-biomass co-fired power plants: ORIX operates two coal-biomass co-fired power plants in Japan. One is Soma Coal and Biomass Power Plant in Soma City, Fukushima Prefecture, which started operations in April 2018. The other is Hibikinada Coal and Biomass Power Plant in Kitakyushu City, Fukuoka Prefecture, which started operations in December 2018. Each of these power plants has a total generating capacity of 112MW. Emissions from these two plants for the fiscal year ended March 31, 2022 were 844 thousand t-COre.

Third-Party Assurance

- Since the fiscal year ended March 31, 2017, we have continuously received independent assurance for our GHG emissions disclosure.
- ◆ For fiscal year ended March 31, 2022, KPMG AZSA Sustainability Co., Ltd. has provided independent assurance for our GHG emissions. (★Items subject to third party assurance)

Third-Party Assurance

Independent Assurance Report

To the Representative Executive Officer, President and Chief Executive Officer of ORIX Corporation

We were engaged by ORIX Corporation (the "Company") to undertake a limited assurance engagement of the environmental performance indicators marked with \star (the "Indicators") for the period from April 1, 2021 to March 31, 2022 included in its Sustainability Report 2022 (the "Report") for the fiscal year ended March 31, 2022.

The Company's Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the "Company's reporting criteria"), as described in the Report.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with the 'International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information' and the 'ISAE 3410, Assurance Engagements on Greenhouse Gas Statements' issued by the International Auditing and Assurance Standards Board. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing the Company's responsible personnel to obtain an understanding of its policy for preparing the Report and reviewing the Company's reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical procedures on the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company's reporting criteria, and recalculating the Indicators.
- Visiting Agatsuma Bio Power Co., Ltd. and Soma Energy Park LLC selected on the basis of a risk analysis.
- Evaluating the overall presentation of the Indicators.

Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Report are not prepared, in all material respects, in accordance with the Company's reporting criteria as described in the Report.

Our Independence and Quality Control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Control I, we maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

/s/ Kazuhiko Saito Kazuhiko Saito, Partner, Representative Director KPMG AZSA Sustainability Co., Ltd. Tokyo, Japan October 19, 2022

This is a copy of the Independent Assurance Report and the original copies are kept separately by the Company and KPMG AZSA Sustainability Co., Ltd.

CO₂ Avoided Emissions through the Renewable Energy Business

(Unit: t-CO ₂)								
	FY ended March 31, 2022	Scope and Concept [Calculation Period]						
Wind Power Generation	1,670,000	[Calculation Scope]						
Solar Power Generation	1,297,000	affiliated companies)						
Geothermal Power Generation	640,000	 Calculations are performed by multiplying the reduce amount of activity among customers or society as a whol due to ORIX Group's renewable energy business activities b CO₂ emissions factors. Operating Margin Grid Emission Factors by country an region from "The IFI Dataset of Default Grid Factors v3.2" ar used for emissions factors. We calculated CO₂ avoided emissions based on ou ownership ratio. 						
Hydropower Generation	428,000							
Biomass Power Generation	254,000							
Total	4,289,000							

ORIX Group's CO2 Avoided Emissions for Past Years

(Unit: t-CO₂)

		FY ended March 31, 2018	FY ended March 31, 2019	FY ended March 31, 2020	FY ended March 31, 2021
	Wind Power Generation	573,100	739,900	1,157,900	1,324,000
	Solar Power Generation	428,700	499,900	540,900	720,000
	Geothermal Power Generation	544,700	1,073,600	949,500	845,400
Environment and	Hydropower Generation	0	0	88,800	112,500
Energy Business	Biomass Power Generation	46,000	43,000	43,700	241,400
	Electricity Supply	0	0	31,500	49,500
	ESCO Services	93,700	93,500	100,800	118,800
	Other Environment and Energy Business	700	800	100	22,300
Auto Business		142,200	157,000	171,100	188,100
Other businesses		7,700	10,800	9,100	5,500
Total		1,836,800	2,618,500	3,093,400	3,627,500

Notes: Calculation scope includes only the renewable energy business from the fiscal year ended March 31, 2022 onwards. Also, emissions factors have been reviewed.

Please refer to Sustainability Report 2021 for the scope and concept of calculation for past years.

ORIX Corporation Water Usage and Waste Disposal Volume

Water Usage	Water withdrawal Water discharge	Approx. 249,000 m ³ Approx. 248,000 m ³	
Scope and Meth	nod		
[Calculation Period Fiscal year ended N	d] 1arch 31, 2022		
[Calculation Scope ORIX Corporation	9]		
 [Calculation Method Most of the water reflected in the water and use rainwater Wastewater is dist the amount of water 	bd] er withdrawal is purchased vater withdrawal figure bec . No other sources such as scharged into the sewage s ter withdrawal.	d from utilities. However, appr ause some buildings where OI surface water or groundwater a system at all locations, and the	rox. 2,000 m ³ of rainwater use is RIX Corporation is a tenant collect re used for water withdrawal. amount is essentially the same as

 For locations where actual water usage could not be ascertained, it was estimated using a basic unit average calculated by a green building industry association based on water usage and floor space of locations. In this calculation, the water intake and wastewater amounts are assumed to be the same.

Notes:

- The scope of data calculation for water usage encompasses, in principle, locations for which disclosure is required under the Act on the Rational Use of Energy. All locations owned and managed by ORIX Corporation are covered. 111 locations use water.
- The water usage for the fiscal year ended March 31, 2021 was as follows.
- Water withdrawal: approx. 197,000 m³, Water discharge: approx. 197,000 m³, Rainwater use: approx. 7,000 m³ (107 locations)

Waste Disposal Volume 661 tons

Scope and Method

[Calculation Period]

Fiscal year ended March 31, 2022

Calculation Scope]

[ORIX Corporation's industrial waste*1

*1 The waste subject to calculation is the industrial waste generated from business activities as defined in the Japanese law "The Waste Management and Public Cleaning Act," such as cinder, sludge, waste oil, waste acid, waste alkali, waste plastics and other specified waste.

[Calculation Method]

- Emissions are calculated using the industrial waste manifests*² issued by ORIX Corporation.
- *2 A document describing the type and quantity of industrial waste that, under the Waste Management and Public Cleaning Act, must be issued by a business that generates industrial waste and entrusts the disposal of such waste to another company.

Notes:

- ORIX Corporation moved its headquarters in May 2021. Therefore, the amount of waste temporarily increased for the fiscal year ended March 31, 2022.
- The amount of industrial waste generated in the fiscal year ended March 31, 2021 was 173 tons.