

# Carbon Neutrality Report

(Reporting Period: FY2022)



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# 1 Our commitment and basic information

## **[1.1] Carbon neutrality claims**

In “YAMATO NEXT100” the grand design for our medium- to long-term management announced in January 2020, the Yamamoto Group set out “Sustainability initiatives: Management incorporating environment and society.” Setting a long vision of “Connecting and Delivering the Future via Green Logistics” for the environment, we identified four materialities of Energy & Climate, Atmosphere, Resource Conservation & Waste, and Resilience of Companies & Society. Announcing “Sustainable Medium-Term Plans 2023” in January 2021, we formulated the goals and plans for each materiality of environment and society in order to realize the long-term visions of environment and society that were set in “Yamato NEXT100” and achieve “Net-Zero emissions (climate neutrality) by 2050.”

Considering that we take the initiative to achieve these environmental and social visions and the long-term goal for our Net-Zero emissions of GHGs by 2050, in April 2022, Yamato Transport Co., Ltd. will start to achieve carbon neutrality for TA-Q-BIN, TA-Q-BIN Compact and EAZY (or parcel delivery services). Under verification of BSI Group Japan K.K., we claim that carbon neutrality of the parcel delivery services is achieved in accordance with ISO 14068-1:2023 by March 31, 2023 and is maintained by the long-term target year of FY2050.

Representative Director,  
Executive Officer and President  
Yutaka Nagao

## **[1.2] Outline of carbon neutrality claims**

This document is a carbon neutrality report which claims that the carbon neutrality of TA-Q-BIN, TA-Q-BIN Compact and EAZY services in FY2022 in the life cycle including the scopes of 1, 2 and 3 is achieved and is to be maintained by the long-term target year of FY2050. This carbon neutrality report describes the details of achievement of carbon neutrality for the Services. BSI Group Japan K.K., a third-party organization verified that quantification of the carbon footprints of the Services, establishment and implementation of the carbon neutrality management plan and offsetting unabated GHG emissions were made in accordance with ISO 14068-1:2023.

Entity making carbon neutrality claims in alignment with ISO 14068-1:2023 declaration:	Yamato Transport CO., LTD.
Products subject to claiming ISO 14068-1:2023	3 delivery services (TA-Q-BIN, TA-Q-BIN Compact and EAZY)
Functions of the Services	<ul style="list-style-type: none"> <li>·TA-Q-BIN services: To deliver each packed parcel under size 60 to 200 (within 200 cm with a total of a length, width and height and with up to a weight of 30 kg) 365 days a year and deliver it to a designated location in Japan on the following day, excluding some areas. The Services include Cool TA-Q-BIN (chilled or frozen), Golf TA-Q-BIN and Ski-TA-Q-BIN.</li> <li>·TA-Q-BIN Compact: To deliver each dedicated packing (a length of 20 cm, a width of 25 cm and a height of 5 cm) 365 days a year and deliver it to a designated location in Japan on the following day, excluding some areas.</li> <li>·EAZY: To deliver goods ordered through an on-line shop or by other means to a customer in diversified ways, for instance, delivering them face-to-face delivery, leaving them at a front door or in a delivery box.</li> </ul>
Important activities for functioning of the Services	<p>Following activities related to delivery services</p> <ul style="list-style-type: none"> <li>·Parcel reception at an agency or a delivery locker</li> <li>·Parcel collection</li> <li>·Parcel reception or sorting at a delivery depot</li> <li>·Transportation from a delivery depot to a hub terminal</li> <li>·Parcel sorting at a hub terminal (for starting point or relay point)</li> <li>·Transportation between hub terminals</li> <li>·Parcel sorting at a hub terminal (for arrival point)</li> <li>·Parcel sorting at a delivery depot</li> <li>·Delivery</li> <li>·Handover at an agency or delivery locker</li> <li>·IT system and call center</li> <li>·Procurement and disposal of raw materials such as materials involved in parcel transport by delivery services</li> </ul> <p>*For more information, see a flowchart of life cycle in <b>[Appendix A]</b>.</p>
Methodology for quantification of carbon footprints of the Services	<p>ISO 14067:2018 (Greenhouse gases – Carbon footprints of products – Requirements and guidelines for quantification)</p> <p>ISO 14040:2006 (Environmental management – Principles and framework for life cycle assessment)</p>
Conformity assessment method	Verification of independent third-party organization (BSI Group Japan, K.K.)
Verification completion date	January 29, 2024
Base period	April 1, 2021 to March 31, 2022 (FY2021)
The first reporting period (achieved)	April 1, 2022 to March 31, 2023 (FY2022)
Person responsible for assessment and provision of data necessary for declaration	Fukuda Yasushi, Executive Officer (Responsible for Green innovation development)
Base carbon footprint	0.00136t CO <sub>2</sub> e/parcel (1.36kg CO <sub>2</sub> e/parcel)

Carbon footprint in the first reporting period	0.00128t CO <sub>2</sub> e/parcel (1.28kg CO <sub>2</sub> e/parcel)
Results of Calculation of Carbon Footprints	【Appendix B】
Certificate for Amortization of Carbon Credits	【Appendix C】
Verification Opinion Statement	【Appendix D】

### 【1.3】 Reporting period

Based on the viewpoints of data aggregation and fiscal years, a reporting period is set as one year (from April 1 to March 31 in the next year). In line with the Carbon Neutrality Pathway and Management Plan in Chapter 3, Yamato Transport Co., Ltd. commits to achieving and maintaining carbon neutrality of the Services through GHG emission reduction, removal and offsetting in the reporting period of each year.

This carbon neutrality report summarizes that Yamato Transport Co., Ltd. has calculated the amount of emissions generated during April 1, 2022 and March 31, 2023, confirmed the amount and offset the unabated GHG emissions.

## 2 Carbon Footprint for the base period

### 【2.1】 Subject

#### 【Subject】

3 delivery services (TA-Q-BIN, TA-Q-BIN Compact and EAZY)

#### 【Rationales for the selection of the subjects】

TA-Q-BIN services are the main services of Yamato Transport Co., Ltd. that started in 1976. The services are the main sources of GHG emissions of the entity and can be managed in a long term.

The 3 delivery services covered by this carbon neutrality report account for about 80% of FY2022 operating profits of Yamato Transport Co., Ltd. The total GHG emissions of Yamato Group is 3,075,902t CO<sub>2</sub>e, while a total of emissions from the 3 delivery services is 2,464,448t CO<sub>2</sub>e. The carbon footprints of the Services are equivalent to approximately 80% of the GHG emissions from business activities of Yamato Group and makes up the main sources of the GHG emissions in Yamato Group.

The operation of the relevant services is directly managed by the company, so the

improvement of the operation towards the reduction of the GHG emissions can be planned and implemented for the future.

On the other hand, the Services such as Nekopos and Kuroneo DM in the other area account for nearly 10% of the whole operating revenue. The GHG emissions from these services were excluded from those subject to carbon neutrality due to that the current business models might be changed during this reporting period and it was estimated to be hard for us to monitor or manage the amount of the relevant GHG emissions in the same boundary from a long-term perspective.

Other services include international freight forwarding and contract logistics, but the scope of provision of the services remains flux. For the same reason, the GHG emissions from these services were excluded from those whose carbon neutrality should be achieved for the product category.

In order to combine sustainable growth with sustainable society development as an effort for the whole of business activities including those for the 3 delivery services, Yamato Group is promoting environment-responsible management, setting its environment visions. Toward the realization of “net result zero for its scope 1, 2 by 2050” and “Reducing greenhouse gas (GHG) emissions by 48% compared to FY2020 by 2030,” we are promoting measures for the reduction of the GHG emissions such as introduction of EVs and solar power generation equipment that is linked to the facilities strategy in the structural reform of network operations, based on the risks and opportunities that are generated from climate change.

**【Calculation period】**

・FY2021: April 1, 2021 to March 31, 2022

**【Carbon Footprint for the base period (for one parcel)】**

・FY2021: 0.00136 t CO<sub>2</sub>e/parcel (1.36 kg CO<sub>2</sub>e/parcel)

**FY2021 GHG emissions (Total) (t CO<sub>2</sub>e)**

**2,570,761**

Calculation of the carbon footprints of the Services covered all of the important activities satisfying the functional units of the Services, including the activities of Yamato Transport Co., Ltd. and those subcontracted by the Company. Based on this calculation target, the three items whose data collection is difficult, as shown in **【2.3】**, were excluded from this calculation under the assumption that they have a minor effect on the whole of the carbon footprints.

## **[2.2] Definition of boundary**

**[Life cycle stages subject to the calculation]** (See **[Appendix A]**)

- Parcel reception at an agency or a delivery locker
- Parcel collection
- Parcel reception or sorting at a delivery depot
- Transportation from a delivery depot to a hub terminal
- Parcel sorting at a hub terminal (at a starting point or relay point)
- Transportation between hub terminals
- Parcel sorting at a hub terminal (at an arrival point)
- Transportation from a hub terminal to a delivery depot
- Parcel sorting at a delivery depot
- Delivery
- Handover at an agency or a delivery locker
- IT system and call center
- Procurement and disposal of raw materials such as materials involved in parcel transport by delivery services

## **[2.3] Exclusions from the quantification of the carbon footprint**

Based on the above assumption, calculation of the carbon footprints of the Services covers all of important GHG emissions, but excludes only the following items whose actual value is difficult to identify and calculate.

- The upstream GHG emissions of electric power from renewable energy sources were converted to an emission factor derived from fossil fuel, but It was evaluated to be difficult to grasp the environmental impact resulting from the construction of capital goods. For this reason, the relevant emissions are deemed to be excluded from the calculation.
- Disposal of packing materials by final consumers is deemed to be excluded in the case where it is difficult to identify the weight of the materials to be disposed of.
- In consideration of data collection workload, the items having a minor effect on the whole of the carbon footprints are deemed to be excluded, as long as that can be reasonably estimated.

## **[2.4] Quantification methodologies, data to be used and emission factors**

**[Methodology]**

- ISO 14067:2018
- ISO 14040:2006

All of the calculated GHG emissions were converted to t CO<sub>2e</sub> based on the values of 100-year global warming potential (GWP) that were published by the Intergovernmental Panel on Climate Change.

**[Data to be used]**

Activity data are basically collected on the basis of primary data (physical amounts). If it is difficult to collect the primary data (physical amounts), the relevant data are collected on the basis of primary data (monetary values). If it is difficult to acquire primary data, secondary data specified by our company are used.

The amount of copy paper used in parcel sorting is calculated on the basis of an assumed scenario due to that it is difficult to measure an actual input of copy paper.

**【Emissions unit values】**

- IDEA Ver3.1
- Ministry of the Environment DB Ver3.2
- GLIO

**【How to use secondary data】**

- The amount of GHG emissions was calculated with the use of the same database without taking into account the increase/decrease of the GHG emissions that is caused by variation in the value of emission intensity.
- For activity data on physical amounts, IDEA Ver3.1 was in principle used. The GHG emissions from transportation for raw material procurement were calculated based on a scenario set for purchased products.
- For activity data on monetary values, GLIO was in principle used. The GHG emissions from transportation for raw material procurement were calculated with the use of emission factors on a consumer price basis.
- Due to a large influence of corporate goods prices increases on the activity data during FY2021 and FY2022, the activity data were corrected with the use of the corporate goods price index concerning costs paid in FY2022 and on the basis of costs paid in FY2021.
- For waste data, the Ministry of the Environment DB Ver3.2 was in principle used. The amounts of incinerated, buried and collected waste were calculated with the use of IDEA Ver3.1.
- Environmental impact resulting from transportation of waste was calculated from the Ministry of the Environment DB Ver3.2.

**【Secondary data (Scenario)】**

- For a transport distance, a vehicle type and a load factor in the stage of raw material procurement, an averaged load factor of 10-ton trucks and the absence of return cargos were assumed based on the assumption of a 500-km land transport distance.
- It was assumed that waste (whose disposal method is unknown) would be incinerated due to that it is difficult to grasp the actual situation of the disposal method.
- It was assumed that waste (recycled amount) would be paper waste (recycled) because much of the waste in the operation is assumed to be applicable to paper waste.



- Valuables were excluded from the calculation based on the relevant scope and purpose of the calculation.
- It is assumed that 3 pieces of A5 are used per roll box pallet for transportation in the sorting process. The number of transported roll box pallets was multiplied by the number of pieces (3) of A5 copy paper and a weight (2 g) of one piece of copy paper. Based on the result of the multiplication, the input of copy paper was calculated.
- Due to a large influence of corporate goods price increases on the activity data during FY2021 and FY2022, the activity data were corrected with the use of a corporate goods price index concerning costs paid in FY2022 and on the basis of costs paid in FY2021.

## **[2.5] Calculation uncertainty and variability**

### **【Scenario of transportation for raw material procurement】**

The GHG emissions from transportation for raw material procurement were calculated on the basis of the aforementioned scenario. The rate of procurement transportation is 0.60% in FY2021. In the transportation scenario, the relevant emissions become half on the assumption of a land transportation distance of 250 km. The size of the GHG emissions is 0.00411 kg CO<sub>2</sub>e in FY2021. It can be understood that the total of the GHG emissions have little influence on the result of calculation based on the transportation scenario as described in [2.1].

### **【Electric power from renewable energy sources】**

The amount of electric power from renewable energy sources was 61,381 MWh in FY2021. As described in the scenario, due to the fact that it is difficult to grasp the activities of raw material procurement in the production of electric power from renewable energy sources, the GHG emissions from the relevant activities were calculated, using a Japanese average of upstream emission factor in power generation based on the Ministry of the Environment DB Ver3.2. The environmental impact resulting from the construction of capital goods was derived in a simulated manner, using an equation of IDEA emission factor (national average of emissions factors in 2018) – (Emission factor by electric company + the Ministry of the Environment DB Ver3.2) based on the IDEA's emission factor, the Ministry of the Environment DB Ver3.2 and an emission factor by electric company. If the environmental impact in the upstream process of power generation is taken into account, the FY2021 GHG emissions from the use of electric power from renewable energy sources become equivalent to 0.004313 kg CO<sub>2</sub>e. When the GHG emissions only from the upstream process is compared with the calculated result in the scenario, the GHG emissions is increased by about 94%, but is found to negligibly contribute to the total GHG emissions.

### **【Waste (recycled)】**

Since it is difficult to specify which waste type can be recycled, the GHG emissions from the waste were calculated on the assumption that a type of waste is paper waste, as described

in the scenario. With incineration of paper waste, the GHG emissions from the waste accounted for 0.35% of the total GHG emissions in FY2021. Collected data on paper waste are close to the actual situation, while the GHG emissions from the waste has a minor effect on the total emission. Consequently, it is considered to be appropriate to calculate it based on the set scenario.

## **【2.6】 Details of carbon footprints of the Services**

- For a flowchart of life cycles of the Services, see **【Appendix A】**.
- For the results of carbon footprint calculation of the Services, see **【Appendix B】**.

# **3 Management Plan**

## **【3.1】 Organization for carbon neutrality management**

Under the following system, the Yamato Group's environmental policies are established and its environmental measures are reviewed.

### Management system of the Yamato Group:

The Yamato Group has established an environmental management system under the supervision of its Board of Directors, with the Environmental Committee as the main decision-making body; which deliberates, makes decisions and supervises with regard to environmental issues, including climate change. The President of Yamato Holdings serves as a chairperson of the Environmental Committee, and reports important matters discussed by the Environmental Committee to the Board of Directors, as the overall supervisor responsible for the Environmental Management System. For example, in FY2021, environmental policies, including climate change mitigation and adaptation, have been approved by the Environmental Committee and resolved by the Management Committee and the Board of Directors. The Management Committee and the Board of Directors also deliberates on identification of material issues and vision, long-term targets including reducing GHG emissions, and medium-term environmental plans (targets and strategies). On the other hand, the Board of Directors of Yamato Transport Co., Ltd. with a logistics business resolves a plant for purchase of low-carbon vehicles and other matters.

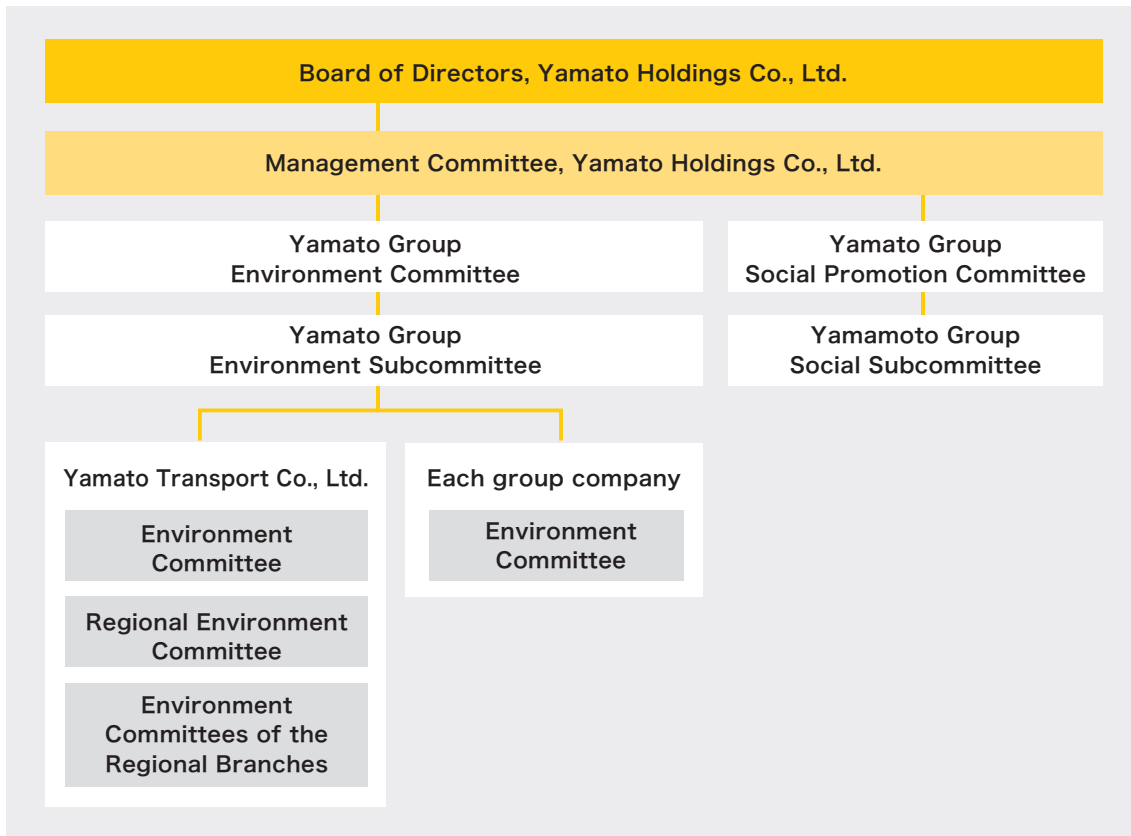


Fig. 1 Environmental Management System Diagram of Yamato Group

In order to implement a plan for reduction of GHG emissions in the Yamato Group, the Green innovation development department of Yamato Transport Co., Ltd. is responsible for the whole strategy for reduction of GHG emissions. In 2021, the Yamato Group established the Green Innovation Development Department that implements the measures for reduction of GHG emissions. The Department makes a reduction plan, implements the plan and verify the effectiveness of the plan, thereby making efforts to achieve carbon neutrality.

Management system for demonstration of carbon neutrality of the 3 delivery services:

In order that the 3 delivery services subject to the declaration of this carbon neutrality report continuously achieve carbon neutrality, the Green Innovation Development Department of Yamato Transport Co., Ltd. implements the measures for reduction of GHG emissions and manages the following processes necessary for carbon neutrality as a dedicated department, in collaboration with the Sustainability Promotion Department of Yamato Transport Co., Ltd. responsible for the whole strategy for reduction of GHG emissions. Yamato Group Environment Subcommittee ([1] Energy, climate and air) also checks the progress of related measures, revises the management plan, and shares the result of calculating carbon footprints and the analysis of the result.

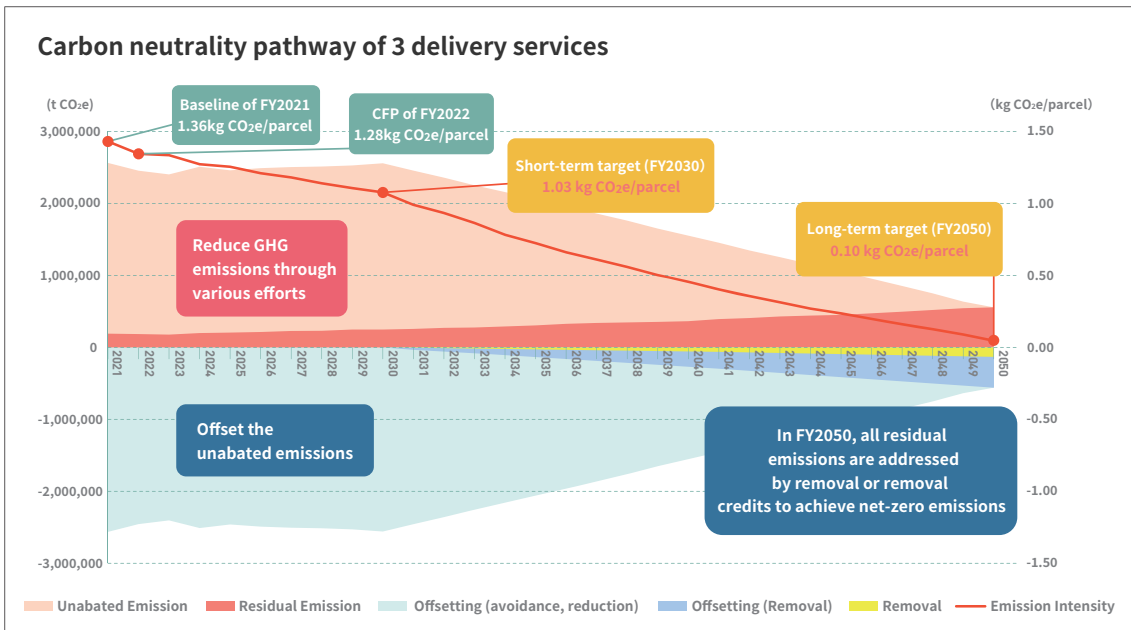
[Execution of processes necessary for demonstration of carbon neutrality]

- Calculating carbon footprints that cover the reporting period
- Implementing the management plan, checking the progress of the plan and revising it
- Implementing offsets
- Preparing the carbon neutrality report that covers the reporting period
- Implementing a third-party verification
- Maintaining carbon neutrality claims

### [3.2] Carbon neutrality pathway and targets

On the basis of a base year of FY2021 and in line with the following carbon neutrality pathway, Yamato Transport Co., Ltd. aims to reduce the all GHG emissions of the Services by FY2050 or a long-term target year except residual GHG emissions, thereby making efforts to achieve Net-Zero through the activities for removal of all of those including the residual emissions and the use of removal carbon credits.

The subjects of the carbon neutrality are products, but Yamato Transport Co., Ltd. is committed to ultimately achieving Net-Zero in adherence with the concept of Net-Zero of the organization and in terms of the total of GHG emissions. Net-Zero means that the activities for reduction of the GHG emissions is promoted until the GHG emissions of the Services are reduced only to residual GHG emissions, and after that, the residual GHG emissions are reduced to net zero by the removal of all of the GHG emissions or by offsetting the GHG emissions by removal carbon credits.



Since the subjects of the carbon neutrality are products, a target value is set as emission intensity which means emissions per number of parcel. Yamato Transport Co., Ltd. set both a short-term target (FY2030) and a long-term target (FY2050) in emission intensity. The target was set in line with the target year of the Yamato Group, so that we can contribute to achievement of Net-Zero in 2050, or a world common target, and Japan's reduction target.

### GHG emissions reduction target of Yamato Group

In reference to Japan's overall target "46% GHG emission reduction by FY2030 compared to FY2013," an emission target to be achieved by 2030 was set.

- Reduce the GHG emissions (Scope 1 & 2) to net-zero by 2050.
  - Reduce the GHG emissions (Scope 1 & 2) by 45% compared to FY2021. \*About 479000 t CO<sub>2</sub>e
- \*Converted compared to FY2020

### **Target values of 3 delivery services**

subject	Base value	Target value		Reduction rate	Annual rate	Reduction rate	Annual rate
	2021	2030	2050	2030 (compared to 2021)		2050 (compared to 2021)	
	1,000 t CO <sub>2</sub> e			%			
3 delivery services/ emission intensity	0.00136	0.00103	0.0001	-24.2%	-2.7%	-92.5%	-3.2%
*See the following.							
3 delivery services/ emission amount (after reduction)	2,571	2,564	562	-0.3%	0.0%	-78.1%	-2.7%
3 delivery services/ removal amount	0	0	127	-	-	-	-
3 delivery services/ amount of offsetting by removal credits	0	0	435	-	-	-	-

Due to that all of the current GHG emission reduction measures of the Yamato Group are planned and implemented with the boundaries of the 3 delivery services for the FY2030 short-term target, a target for reduction of the Yamato Group's GHG emissions (total and compared to FY2020) was converted to a value compared to FY2020, and reduction targets for the 3 delivery services were comprehensively set in consideration of variation in the the number of parcels to be delivered in the future and variation in the GHG emissions from delivery services to be subcontracted in the future.

For the FY2050 long-term target, it is planned to remove some of the residual GHG emissions by the introduction of removal measures and offsetting by removal carbon credits. The residual GHG emissions aim to be equivalent to GHG emissions remaining after all of technically and economically feasible measures are taken. We define the residual GHG emissions below assuming that the measures for reduction in SCOPE 1 and 2 GHG emissions are fully implemented to reduce all of unabated GHG emissions first, and then, emissions from long-haul transportation by subcontractors can be reduced after new technologies become available.

[Residual GHG emissions from the Services]

·Definition: GHG emissions from the stage of procurement of materials or electric power, GHG emissions from the stage of waste disposal, and emissions related to air line-haul transportation

- ▶ GHG emissions from the upstream procurement of materials such as packing materials, slips and copy paper
- ▶ GHG emissions from the stage of disposal of waste arising from business activities
- ▶ GHG emissions from the upstream part of a process for production of electric power to be purchased
- ▶ GHG emissions from air trunk transportation and loading of luggage to aircraft

·Total GHG emissions in FY2021: About 198,000 t CO<sub>2</sub>e

·Total GHG emissions in FY2021 (predicted\*): About 562,000 t CO<sub>2</sub>e

\*This is a predicted value that takes into account of fluctuation in the number of parcels handled through the 3 delivery services.

The degree of ambition for the current carbon neutrality pathway and reduction targets is evaluated in line with the following three items.

·Corporate ability to act and corporate responsibility:

- ▶ The long-term targets of the Services meet the achievement of FY2050 Net-Zero in the 1.5°C. The GHG emissions from the Transport Division accounts for about 20% of the total. The relevant GHG emissions are attributable to Scope 3 of many companies. Accordingly, in order to achieve a higher degree of ambition for carbon neutrality, the Yamato Group is required to assume a historic responsibility as a company long providing delivery services, revise and improve the reduction pathway and achieve Net-Zero before FY2050.

·Relation between the carbon neutrality pathway and the global or national climate policy target:

- ▶ The long-term targets contribute to Net-Zero, or a common target in FY2050. They are also consistent with the 1.5°C GHG emission reduction target of the IPCC's latest Synthesis Report (6th Assessment Report).
- ▶ The current mitigation measures focus on the reduction of our GHG emissions. Accordingly, the short-term target for reduction of the GHG emissions contributes to the transportation sector target and the overall target of Japan's climate policy goal. An annual average rate of reduction per unit (2.7%) is consistent with a science-based target, the WB 2°C target of the SBTi.
- ▶ The International Energy Agency (IEA) presented the indicators required to achieve Net-Zero through 2050. The relevant target is also consistent with the FY2030 bus/truck transportation target (15% reduction from 2022 to 2030 or about 2% more reduction per year) of the indicators.

·Change in response to new climate science information:

▶The reduction of GHG emissions in SCOPE 1 and 2 by FY2030 contributes to the 1.5°C scenario, while the GHG emissions reduction in emission intensity is consistent with the 2.0°C scenario. In order to reduce GHG emissions from subcontracted delivery services, the spread of alternative fuel or electrification of vehicles is required in the field of trunk transportation. Consequently, it is necessary to revise the management plan and improve the overall reduction pathway based on the status of alleviation of related technical constraints in each future report year.

### **[3.3] GHG emission reduction measures**

The Yamato Group mainly adopted the following priority measures from FY2020 toward the achievement of the aforementioned reduction targets. The priority measures through FY2030 are as follows:

#### 1. Introduction of EVs

The Yamato Group is actively promoting the replacement of the current vehicles with low-emission vehicles for each transportation method. Introduced low-emission vehicles such as LPG, CNG (natural gas) and hybrid vehicles have already accounted for 70% of the total number of its vehicles. In addition, electric power-assisted bicycles or carts have been heavily used for short-distance transportation in urban areas, thereby abating GHG emissions. The introduction of about 3,750 electric bicycles has been completed since the introduction of electric bicycles in 2002. In the field of middle-distance transportation, the introduction of “HINO DUTRO Z EV” developed jointly with Hino Motors, Ltd., or Japan’s first introduction of small commercial BEV trucks, was started in August 2022. Since then, a total of about 870 EVs including the trucks have been completely deployed. Since June 2023, the Yamato Group has worked toward the development of a highly practical light commercial EV, for instance, verifying whether a new light commercial EV launched in spring 2024 by Honda Motor, Co., Ltd. is practical or not in collection and delivery operations. About 900 new electric small trucks “eCanter,” developed by Mitsubishi Fuso Truck and Bus Corporation, have been gradually introduced to the delivery depots of the whole country. In order to achieve the FY2030 short-term target, it is scheduled that 20,000 EVs will be introduced.

#### 2. Utilization of renewable energy

In order to achieve the FY2030 short-term target, the Yamato Group is committed to raising the rate of use of electric power from renewable energy to 70%. Specifically, we have formulated a plan to install solar power generation equipment to 810 bases, and are promoting a higher use of electric power.

#### 3. Promotion of energy conservation

The Yamato Group is committed to promoting the enhancement of operational efficiency by

the introduction of a low-carbon technology and the optimization of energy management. We are working to visualize operational statuses and enhance the efficiency of transportation based on data by fully leveraging digital technologies, thereby reducing the usage of energy by improving the load factor.

In order to save energy at hub terminals, the Yamato Group is committed to reducing electricity usage by switching from general light bulbs to LED bulbs in buildings. The LED bulbs are said to be able to reduce power consumption by about 85% in comparison with the general light bulbs. As of October 2022, the change from the existing lights to LED lights was completed at more than 1500 delivery depots. It is scheduled that the traditional lights at all sales offices would be switched to LED lights by FY2023.

#### 4. Reduction of dry ice usage

The Yamato Group is committed to introducing transportation materials that do not require dry ice to reduce GHG emissions, improve the quality of delivery services, and realize proper costs of the services. In order to reduce the amount of dry ice for cooling transported goods, transportation equipment used between hub terminals will be changed to mechanical cold boxes that do not require dry ice and use electricity to manage the temperature of the goods. In addition, the current delivery vehicles that partially use dry ice are being changed to a new refrigerator trucks. We are also promoting the development of a thermal insulation material and cold storage agent for aircraft containers that are used for air trunk transportation of chilled and frozen delivery parcels.

In addition to the aforementioned priority measures, we are also proceeding with the following measures in order to promote the introduction of low-carbon technologies and the enhancement of operational efficiency, toward the establishment of low-carbon transportation/offices.

- Continue demonstration tests on EVs or FCVs (including long-distance medium trucks) jointly with other companies.
- Conduct investigation and joint research on autonomous mobility aiming at low-carbon and air pollution control.
- Visualize operational status and enhance transport efficiency based on data, and promoting eco-driving.
- Promote modal shifts: 180 trucks for rail and sea transports (FY2023 target)
- Conduct demonstration tests of a delivery depot that uses 100% renewable energy.
- Consolidate touch points (locations).
- Control the number of operational units and achieve operational efficiency by reviewing consolidated relay points and improving a loading rate of transportation between bases.
- Implement measures for mitigation of climate change in cooperation with partners toward reduction of GHG emissions from the whole value chain (those from subcontracted services),



### **[3.4] Removal plan**

The Yamato Group is planned to introduce removal measures from 2030 onward in addition to GHG emission reduction measures, so as to allow for achievement of Net-Zero, or the FY2050 long-term target.

The removal measures that can be adopted within the system boundaries of the 3 delivery services are limited, so the following actions are excluded.

- Forestation is excluded due to that land use is beyond the system boundary.
- Marine alkalization, marine fertilization and enhanced weathering are excluded due to that land use is beyond the system boundary.
- The use of dry ice derived from DAC (direct air collection) is excluded due to that the usage of dry ice should be reduced to zero under the policy of giving priority to reduction of GHG emissions.
- The use of electric power from BECCS (Bioenergy with Carbon Capture and Storage) is excluded due to that the policy of giving priority to reduction of GHG emissions assumes shift to renewable energy and shift to 100% renewable energy is feasible technically and economically in the long term.

It is currently assumed that the removal measures are measures allowing for the use of biomass cushioning materials. We will start to introduce the biomass cushioning materials from FY2030 onward and gradually increase the amounts of the materials to be introduced. In the case where all of the current cushioning materials are changed to the biomass cushioning materials, about 130,000 t CO<sub>2</sub>e of residual GHG emissions that are applicable to the FY2050 target will be removed according to the plan.

Due to that the current absence of feasible removal measures within other system boundary, however, residual GHG emissions (about 430,000 t CO<sub>2</sub>e), which cannot be completely removed, will be offset by removal carbon credits.

In the case where it becomes possible to review other removal means, we are planned to revise the management plan and timely update the fiscal year for introduction of the means, and the removal measures.

### **[3.5] Offset policy**

Offsetting will be implemented in combination with the GHG emission reduction measures in each reporting period, and the removal measures from FY2030 onward as described in **[3.4]**, thereby gradually reducing the use of carbon credits. The amount of GHG emissions to be offset by FY2030, or a short-term target year is scheduled to be all of unabated GHG emissions, while the amount of GHG emissions to be offset by FY2050, or a long-term target year is scheduled to be that of the residual GHG emissions (about 430,000 t CO<sub>2</sub>e) that cannot be completely

removed. The residual GHG emissions will be removed by removal carbon credits.

When it becomes necessary to offset unabated GHG emissions in each reporting period, only the carbon credits that are verified by a third-party organization are selected. When carbon credits are purchased, two types credits, technology-based reduction and avoidance credits are prioritized.

#### Criteria for carbon credits

- Carbon credits from reduction enhancements that GHG emission reductions are real.
- Carbon credits from reduction enhancements that the GHG emission reductions are additional, demonstrated using a robust assessment that shows the activity would not have occurred in the absence of the GHG project and represents climate change mitigation that exceeds regulatory requirements and business as usual.
- Carbon credits conforms to calculation of proper standard values and the method of an accredited carbon credit program to conservatively estimate the amount of the GHG emission reduction or removal (both of them), and can be measured.
- Carbon credits are issued under a carbon credit system with a proper safeguard. The safeguard assures that permanent or cancellation risks are minimized and the same removal is conducted in the case of occurrence of cancellation.
- Carbon credits are certified by an independent third-party organization.

#### Criteria for carbon credit projects

- Carbon crediting programmes that are transparent, with publicly available documented information on the carbon crediting programme project cycle, including registration and verification requirements and procedures.
- Carbon crediting programmes that provide safeguards with regards to impacts on ecosystems, biodiversity, communities, human well-being, human rights and local economies, to avoid adverse impacts where applicable .
- Carbon crediting programmes that identify any Sustainable Development Goals to which each GHG project contributes .
- Carbon crediting programmes that provide information about the governance arrangements which sets out the roles and responsibilities of the organization administering the carbon crediting programme .
- Carbon crediting programmes that include stakeholder consultation requirements and processes for the development of rules and procedures, methodologies, tools and for GHG projects;.
- Carbon crediting programmes that have independent verification of GHG emission reductions or removal enhancements enabling issuance of carbon credits .
- Carbon crediting programmes that issue carbon credits that are:
  - 1) listed in a public registry that provides transparent and traceable information

- concerning the carbon credit's ownership and status (e.g. unsold, transferred, retired);
- 2) issued with unique serial numbers;
- 3) issued under procedures that provide for their permanent retirement;
- 4) traceable back to the relevant GHG project;
- Carbon crediting programmes that have measures for avoiding double counting, e.g. where a GHG emission reduction or GHG removal enhancement is claimed by more than one entity, and for avoiding double claiming between entities and national governments;
- Carbon crediting programmes that have measures to minimize the risk of leakage.

### **[3.6] Evaluation of adverse impacts and countermeasures**

Adverse impacts of the Services' carbon neutrality initiatives on the environment and society were evaluated. As a result, adverse impacts of EV introduction on them were primarily assumed. In order to respond to the impacts, the introduction of EVs with cartridge batteries is being promoted, which can be expected to provide the following positive effects.

In order to revise the management plan and introduce new measures, adverse impacts of the measures on the environment and society will be periodically evaluated through the methods such as environment assessment, while measures allowing for reduction of the impacts will be examined.

• Assumed adverse impacts of EV introduction:

- ▶ Disposal of dead battery waste
- ▶ Decrease of vehicle life due to battery life
- ▶ Increase of power load due to concentration of charging timing on non-operational hours of vehicles

• Countermeasures:

The introduction of EVs with cartridge batteries is being promoted, which can be expected to provide the following positive effects.

- ▶ Separation between batteries and vehicle bodies allows for the secondary use of the battery at delivery depot. This promotes the reuse of the battery and reduces battery waste.
- ▶ Separation between batteries and vehicles allows the vehicle to be used for a longer term without the influence of a battery life.
- ▶ Batteries are separated from vehicles, and replacement batteries are charged also during the operation of the vehicle. This method can disperse charging hours and reduce power loads.

### **[3.7] Revision of the management plan**

Yamato Group's related subcommittees, described in [3.1], will periodically evaluate the progress of the declared target values. Based on the results of the evaluation, the Green Innovation Development Department will revise the carbon management plan every 12 months.

The management and directors, described in [3.1], participate in the committee at each level. At the meeting of the committee, the statuses of response to environmental issues that include the performance for the environmental targets such as the progress of GHG emission reduction, and identification and evaluation of climate-related risks and opportunities, the status of compliance with laws and regulations, the results of audits, plans for the next quarter, and so on, are reported and monitored, and checked and evaluated. Specifically, these matters are reported from the on-site responsible environment committee (four times a year) to the Regional Environment Committee (four times a year), each group company's environment committee (once a year), the Environment Committee deliberating 4 environmental issues (three times a year) and the Yamato Group Environment Subcommittee, and subjected to the top management review of the President and reported to the Board of Directors and checked by the Board.

The Green Innovation Development Department is responsible for demonstrating and verifying carbon neutrality of the 3 delivery services, while quantifying the organization's viewpoints, the actual situation and variation of GHG emissions in the whole life cycle and each process of a product or service through the annual calculation of carbon footprints of the Services. The Department monitors and evaluates the current GHG emission reduction measures and future additional measures by checking planned values against actual values, and reports and reviews a difference between the planned and actual values and necessary measures for correcting the difference at the meeting of its related committee, thereby revising the carbon neutrality pathway and the management plan in each reporting period.

## **4 GHG emission reductions in the First Reporting period**

### **[4.1] Standards and methods for quantification of GHG emission reductions**

GHG emission reductions were calculated based on a comparison between actual GHG emissions in FY2021 and FY2022. In order to calculate the carbon footprints of the Services, the following methodologies were used.

- ISO 14067:2018
- ISO 14040:2006

The data and scenarios that were used to calculate them are shown in Chapter 2.

#### **[4.2] Implemented GHG emission reduction enhancement**

- We planned to newly introduce 500 electric vehicles in FY2022. The number of actually introduced EVs was 331. The reason that the planned EVs were not introduced is that a delay in EV production occurred due to product recall. Such a delay could not be assumed during the dawn of EV age, but the production of EVs is expected to become stable over time. In order to reduce the risk of a gap between planned and actual introductions, Yamato Transport Co., Ltd. will make orders earlier by reviewing internal authorization processes. The annual travel distance of EVs used for collection and delivery was 190,000 km in FY2021, and increased to 1,110,000 km in FY2022 by about 6 times.
- We planned to newly install solar power generation equipment (on-site generation) to 12 buildings in FY2022. The generation equipment was actually installed to 5 of the buildings. The reason that the equipment was not installed to all of the planned buildings is that the manufacturer required a longer time than initially planned to procure materials. The consumption of renewable energy from the solar power generation equipment (private generation and PPA) was about 1,100 MWh in FY2021, and increased to about 1,600 MWh by about 500 MWh.
- Promoting conversion from conventional lighting to all-LED lighting in the buildings of logistics facilities, we planned to introduce all-LED lighting at 932 buildings, and fully installed LED lights to 457 of the buildings. Accordingly, all-LED lighting buildings accounted for 54% out of the total. Due to the changes of implementation plan, introduction of all-LED lighting was not fully achieved as planned. We will improve the progress of conversion of all-LED lighting in the buildings from the conventional lighting by accelerating orders and other measures.
- The rate of consumption of electric power from renewable energy was increased from 10% in FY2021 (61,380,928 kWh) to 19% (123,011,625 kWh).
- Toward the reductions of dry ice usage, a target for shift to 900 refrigerator trucks was set. As a result, the number of refrigerator trucks was actually 1262. The consumption of dry ice was 83,000 tons in FY2021 while it was 74,000 tons in FY2022, which accounts GHG emission reductions by about 9,000 tons.
- The load factor of trucks in line haul transportations was improved from 90.5% in FY2021 to 92.8% in FY2022.

#### **[4.3] Achieved GHG emission reductions: (See [Appendix B])**

In terms of emission intensity, GHG emissions were reduced by 0.00008t CO<sub>2e</sub>/parcel or by 5.9% in comparison with the base year.

The rate of GHG emission reductions exceeded the annual average rate of GHG emission reduction

in the 1.5°C scenario (annual rate of 4.1% in the case of SBTi). As shown from the background described in 3.4, there were no GHG emissions removed due to that the removal measures were not introduced in FY2022.

- Base year (FY2021): 0.00136 t CO<sub>2e</sub>/parcel
- First reporting period (FY2022): 0.00128t CO<sub>2e</sub>/parcel (in consideration of the corporate goods price index)

FY2021 GHG emissions (total) (t CO <sub>2e</sub> )	FY2022 GHG emissions (total) (t CO <sub>2e</sub> )
2,570,761	2,464,448

- Line haul transportation between hub terminals accounts for many of GHG emissions from Yamato Transport Co., Ltd. In this process, Transportation routing and the number of operational trucks were revised, which contributed to reduce the GHG emissions by about 20,000 tons or by 4% per parcel in comparison with the base year.
- Efforts to control the number of operational trucks, also in transportation between a logistics base and delivery depot were made, thereby reducing the GHG emissions by about 10,000 tons or by 5% per parcel in comparison with the base year.
- The usage of dry ice used for cool delivery services was reduced, thereby reducing the GHG emissions by about 20,000 tons
- Efforts to introduce EVs for a collection and delivery process were made, thereby reducing the GHG emissions by about 1% per parcel in comparison with the base year.

#### **[4.4] Calculation uncertainty and variability**

[Scenario of transportation for raw material procurement]

The GHG emissions from transportation for raw material procurement were calculated on the basis of the scenario described in Chapter 2. The rate of procurement transportation is 0.56% in FY2022. In the transportation scenario, the relevant emissions become half of the total on the assumption of a land transportation distance of 250 km. The GHG emissions intensity is 0.00363kg CO<sub>2e</sub> in FY2022. The total of the GHG emissions are as described in [4.3] and the same as in the base year (see [2.5]), so it can be understood that the total of the GHG emissions have little influence on the result of calculation based on the transportation scenario.

[Primary data (data on costs)]

Data on paid costs were calculated on the basis of the scenario described in Chapter 2. The costs were corrected based on the corporate goods price index. As a result, the rates of variation in the costs paid by Yamato Transport and by the subcontractor were +9.55% and +5.14% before correction, and +0.14% and -3.89% after correction, in comparison with FY2021, respectively. On the other hand, the rates of variation in the GHG emissions from our company and from the subcontractor were +5.10% and +2.8% correction, and

-3.93% and -6.01% after correction, in comparison with FY2021, respectively. Since a difference between the rates of variation in the costs is larger than that between those of variation in the costs, it is considered that the primary data corrected based on the corporate goods price index have little influence on the GHG emissions. Consequently, it is understood that a factor for variation in the GHG emissions greatly depends on the content of the activities.

[Electricity from renewable energy sources]

The amount of electricity from renewable energy is 123,012 MWh in FY2022. As described in the scenario, due to that it is difficult to grasp the activities of raw material procurement in the production of electric power from renewable energy sources, the GHG emissions from the relevant activities were calculated, using a Japanese average of upstream emission factor in power generation based on the Ministry of the Environment DB Ver3.2. The environmental impact resulting from the construction of capital goods was derived in a simulated manner, using an equation of IDEA emission factor (national average of emissions factors in 2018) – (Emission factor by electric company + the Environment DB Ver3.2) based on the IDEA's emission factor, the Ministry of the Environment DB Ver3.2 and an emission factor by electric company. If the environmental impact in the upstream process of power generation is taken into account, The GHG emissions in FY2022 from the use of electric power from renewable energy sources becomes equivalent to  $8.48 \times 10^{(-0.60)}$  t CO<sub>2e</sub>. When the GHG emissions only from the upstream process is only compared with the calculated result in the scenario, the GHG emissions is increased by about 94%, but is found to negligibly contribute to the total emission.

[Waste (recycled)]

Since it is difficult to specify which waste type can be recycled, the GHG emissions from the waste were calculated on the assumption that a type of waste is paper waste, as described in the scenario. With incineration of paper waste, the GHG emissions from the waste accounted for 0.27% of the total GHG emissions in FY2022. Collected data on paper waste are close to the actual situation, while the GHG emissions from the waste has a minor effect on the total GHG emissions. Consequently, it is considered to be appropriate to calculate it based on the set scenario.

## 5 Offsetting in the First Reporting period

### 【5.1】 Offset GHG emissions

In order to achieve carbon neutrality, Yamato Transport Co., Ltd. purchased carbon credits and offset unabated GHG emissions. GHG emissions (unabated GHG emissions) that are offset in FY2022 are 2,464,448 t CO<sub>2e</sub>.

Base year (FY2021)	First reporting period (FY2022)	
Amount of GHG emission	Amount of reduction	Amount of GHG emission (offset)
2,570,761t CO <sub>2e</sub>	106,313t CO <sub>2e</sub>	2,464,448t CO <sub>2e</sub>

### 【5.2】 Methodologies for carbon credits

[Methodologies for purchased carbon credits]

All carbon credits, and all carbon credit projects that produced applicable carbon credits were verified according to the VCS (Verified Carbon Standard), fell under the scheme for VER (Verified Emission Reduction), and satisfied the principles described in 【3.5】.

\*The requirements for the credits of the VCS are described in detail at the following URL.

[https:](https://)

[Countermeasures to avoid double counting between government and Yamato Transport]

In order to avoid double counting between the government and Yamato Transport, the Yamato Group commits to procuring credits that conform to the Paris Agreement. A corresponding adjustment mechanism that corresponds to Article 6 of the Paris Agreement has not been established yet, so the purchased credits for the reporting period have not been subjected to corresponding adjustment. When the corresponding adjustment mechanism is established in the future and credits corresponding to the mechanism become available, Yamato Transport will move to the procurement of the credits applicable to the mechanism.



### [5.3] Details of carbon credit projects

	Project name	Country	Type	Verification organization	Project ID	Project type	Methodology	Year of production	Quantity (t CO <sub>2</sub> e)	Date of retirement	Retirement registry URL	Serial number
1	Hunan Xiangtan Landfill Gas Power	China	Landfill gas	VCS	<a href="#">2299</a>	Waste handling and disposal	<a href="#">ACM0001</a>	2019	24,000	18/10/23	<a href="#">Link-1</a>	10297-200649915-200673914-VCS-VCU-997-VER-CN-13-2299-29012019-31122019-1
2	Sanya Landfill Gas Power	China	Landfill gas	VCS	<a href="#">2337</a>	Waste handling and disposal	<a href="#">ACM0001</a>	2019-2020	100,000	18/10/23	<a href="#">Link-1</a> <a href="#">Link-2</a>	10313-201442542-201479450-VCS-VCU-997-VER-CN-13-2337-01012020-31122020-0 10291-200165744-200228834-VCS-VCU-997-VER-CN-13-2337-22032019-31122019-0
3	Bundled Solar by ACME	India	Solar power generation	VCS	<a href="#">1753</a>	Energy industries (renewable/non-renewable sources)	<a href="#">ACM0002</a>	2018-2019	612,206	18/10/23	<a href="#">Link-1</a> <a href="#">Link-2</a> <a href="#">Link-3</a> <a href="#">Link-4</a> <a href="#">Link-5</a> <a href="#">Link-6</a> <a href="#">Link-7</a> <a href="#">Link-8</a> <a href="#">Link-9</a>	8996-59157355-59172737-VCS-VCU-997-VER-IN-1-1753-01032018-31122018-0 9031-62282899-62300286-VCS-VCU-997-VER-IN-1-1753-01012019-31122019-0 7251-380987634-381085654-VCU-034-MER-IN-1-1753-01012018-28022018-0 7251-380985456-380987633-VCU-034-MER-IN-1-1753-01012018-28022018-0 8996-59189225-59204607-VCS-VCU-997-VER-IN-1-1753-01032018-31122018-0 8996-59859009-59859808-VCS-VCU-997-VER-IN-1-1753-01032018-31122018-0 8996-59210789-59227275-VCS-VCU-997-VER-IN-1-1753-01032018-31122018-0 8996-59172738-59189224-VCS-VCU-997-VER-IN-1-1753-01032018-31122018-0 8996-59227276-59657354-VCS-VCU-997-VER-IN-1-1753-01032018-31122018-0
4	Solar Power by Adani Green Energy	India	Solar power generation	VCS	<a href="#">1815</a>	Energy industries (renewable/non-renewable sources)	<a href="#">ACM0002</a>	2018-2019	500,000	18/10/23	<a href="#">Link-1</a> <a href="#">Link-2</a>	8378-12411456-12596934-VCS-VCU-997-VER-IN-1-1815-01102018-31122018-0 8377-11202841-11517361-VCS-VCU-997-VER-IN-1-1815-01012019-31012019-0
5	Ghani Solar Renewable Power by Greenko Group	India	Solar power generation	VCS	<a href="#">1792</a>	Energy industries (renewable/non-renewable sources)	<a href="#">ACM0002</a>	2018	61,451	18/10/23	<a href="#">Link-1</a>	8497-25891527-25952977-VCS-VCU-997-VER-IN-1-1792-01072018-31122018-0
6	Solar Power by Mytrah Energy	India	Solar power generation	VCS	<a href="#">1784</a>	Energy industries (renewable/non-renewable sources)	<a href="#">ACM0002</a>	2017-2019	350,000	18/10/23	<a href="#">Link-1</a> <a href="#">Link-2</a> <a href="#">Link-3</a>	7238-379342789-379375855-VCU-034-APX-IN-1-1784-19062017-31122017-0 7237-379151162-379218094-VCU-034-APX-IN-1-1784-01012018-31122018-0 10452-217995560-218245559-VCS-VCU-997-VER-IN-1-1784-18032019-31122019-0
7	Renewable Solar Power by ReNew Solar Power	India	Solar power generation	VCS	<a href="#">1851</a>	Energy industries (renewable/non-renewable sources)	<a href="#">ACM0002</a>	2018-2019	500,000	18/10/23	<a href="#">Link-1</a> <a href="#">Link-2</a>	7245-379769967-379969966-VCU-034-APX-IN-1-1851-01012018-25102018-0 10705-241134796-241434795-VCS-VCU-997-VER-IN-1-1851-01012019-24122019-0
8	Bundled Wind Power by Mytrah Group	India	Wind power generation	VCS	<a href="#">1728</a>	Energy industries (renewable/non-renewable sources)	<a href="#">ACM0002</a>	2017	145	18/10/23	<a href="#">Link-1</a> <a href="#">Link-2</a>	7638-416174282-416174398-VCU-034-APX-IN-1-1728-01012017-2412017-0 7048-366330283-366330310-VCU-034-APX-IN-1-1728-01012017-2412017-0
9	Bundled Solar by SolarArise	India	Solar power generation	VCS	<a href="#">1782</a>	Energy industries (renewable/non-renewable sources)	<a href="#">ACM0002</a>	2019	41,769	18/10/23	<a href="#">Link-1</a> <a href="#">Link-2</a> <a href="#">Link-3</a>	10732-245349933-245354932-VCS-VCU-997-VER-IN-1-1782-01012019-31122019-0 10732-245356483-245361251-VCS-VCU-997-VER-IN-1-1782-01012019-31122019-0 10732-245412935-245444934-VCS-VCU-997-VER-IN-1-1782-01012019-31122019-0
10	Bugoye Hydropower	Uganda	Hydro power generation	VCS	<a href="#">1199</a>	Energy industries (renewable/non-renewable sources)	<a href="#">AMS-1.D</a>	2017-2019	96,000	18/10/23	<a href="#">Link-1</a> <a href="#">Link-2</a> <a href="#">Link-3</a> <a href="#">Link-4</a> <a href="#">Link-5</a> <a href="#">Link-6</a> <a href="#">Link-7</a>	10870-253578820-253599750-VCS-VCU-997-VER-UG-1-1199-01012018-31122018-0 10871-253627243-253639197-VCS-VCU-997-VER-UG-1-1199-01012019-06102019-0 10872-253654898-253663540-VCS-VCU-997-VER-UG-1-1199-01012017-31122017-0 10870-253599751-253627242-VCS-VCU-997-VER-UG-1-1199-01012018-31122018-0 10871-253639198-253642868-VCS-VCU-997-VER-UG-1-1199-01012019-06102019-0 10872-253663541-253674893-VCS-VCU-997-VER-UG-1-1199-01012017-31122017-0 10871-253642869-253654823-VCS-VCU-997-VER-UG-1-1199-01012019-06102019-0
11	Murat HEPP	Turkey	Hydro power generation	VCS	<a href="#">1344</a>	Energy industries (renewable/non-renewable sources)	<a href="#">ACM0002</a>	2020	10,000	18/10/23	<a href="#">Link-1</a>	13287-489255119-489265118-VCS-VCU-262-VER-TR-1-1344-01012020-30092020-0
12	Renewable Wind Power by Axis Wind Farms	India	Wind power generation	VCS	<a href="#">2052</a>	Energy industries (renewable/non-renewable sources)	<a href="#">ACM0002</a>	2018-2019	129,405	18/10/23	<a href="#">Link-1</a> <a href="#">Link-2</a>	8601-33480546-33605842-VCS-VCU-1491-VE R-IN-1-2052-02032018-31122018-0 8600-33476438-33480545-VCS-VCU-1491-VE R-IN-1-2052-01012019-30112019-0
13	Solar by Giriraj Renewables	India	Solar power generation	VCS	<a href="#">1786</a>	Energy industries (renewable/non-renewable sources)	<a href="#">ACM0002</a>	2019	13,064	18/10/23	<a href="#">Link-1</a>	9729-128128746-128141809-VCS-VCU-997-VE R-IN-1-1786-01042019-31122019-0
14	Andhra Lake Phase II	India	Wind power generation	VCS	<a href="#">1481</a>	Energy industries (renewable/non-renewable sources)	<a href="#">ACM0002</a>	2018	26,408	18/10/23	<a href="#">Link-1</a>	8322-8410300-8436707-VCS-VCU-279-VER-IN-1-1481-01012018-31122018-0
<b>Total</b>									<b>2,464,448</b>			

## 6 Activities towards the Future

### [6.1] The next reporting period

In this carbon neutrality report, Yamato Transport Co., Ltd. claims the achievement of carbon neutrality for the first reporting period FY2022 and the commitments by FY2050 which is long-term target year concerning carbon neutrality of 3 delivery services. In the next reporting period, the achievement of carbon neutrality in the second reporting period will be demonstrated and verified by following steps. Data on emissions is to be collected and compiled from April 2024 onward after the completion of the previous fiscal year, confirm amount of GHG emission reduction, revise the management plan, and offset the GHG emissions. After that, it is scheduled that the verification by a third-party is made from August 2024 onward.

		FY2022												FY2023												FY2024							
		March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October
First reporting period	Target period	[Shaded]																															
	Development and implementation of management plan	[Shaded]																															
	Data collection and calculation in the target period													[Shaded]																			
	Offset													[Shaded]																			
	Third-party organization verification (PAS 2060: 2014)													[Shaded]																			
	Third-party organization verification (ISO 14068-1:2023)													[Shaded]																			
Second reporting period	Target period													[Shaded]																			
	Implementation of management plan													[Shaded]																			
	Revision of management plan																									[Shaded]							
	Data collection and calculation in the target period																									[Shaded]							
	Offset																									[Shaded]							
	Third-party organization verification (ISO 14068-1:2023)																									[Shaded]							

Fig. 3 Schedule for first and second reporting periods

### [6.2] Management of this carbon neutrality report and maintenance of the claims

After this carbon neutrality report and its related supporting documents are listed, the Green Innovation Development Department, which is responsible for carbon neutrality management, will manage a list of the report and documents and electronically store it for 6 years.

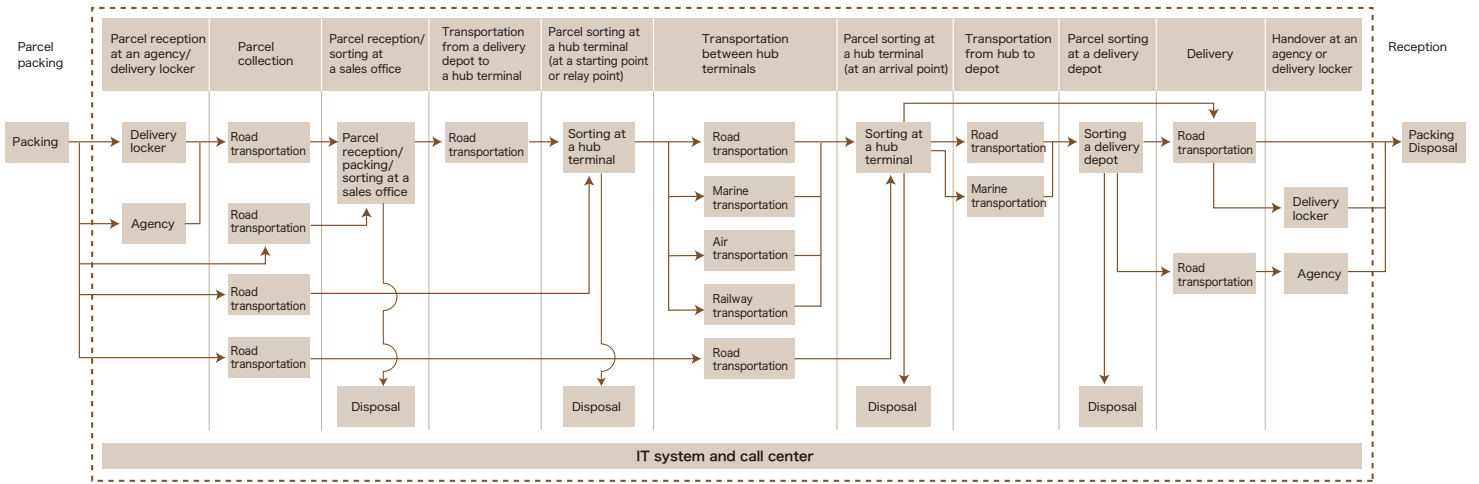
In the case where a change or event affecting the effectiveness of the carbon neutrality claims occurs, the Department identifies the current status of the carbon neutrality

management, and then, revises this carbon neutrality report and the claims as needed. The following cases that may makes the claims invalid are assumed.

- Case resulting from business environment: Case in which the lifecycles and carbon footprints of the 3 delivery services under the declaration are significantly changed due to the change of the delivery business during the commitment period or in which it becomes difficult to quantify the carbon footprints in the future due to suspension or cessation of the delivery business, etc.
- Case resulting from calculation: Case in which a significant defect that the carbon footprints in the first reporting period are not equal to the amount of procured credits and cannot be completely offset by the credits is found in the calculation described in this carbon neutrality report.
- Case resulting from external environment: Case in which a forced GHG emission reduction target is applied during the commitment period, etc.

In the case of a change in the claims and in the content of the demonstration, the carbon footprints will be recalculated, and the content will be revised, in accordance with the same requirements as in this carbon neutrality report and within three months after the change, thereby maintaining the effectiveness of the claims with an announcement of the revised carbon neutrality report. If it is difficult to quantify the carbon footprints in the future or the status of the carbon neutrality cannot be maintained, this carbon neutrality report and the claims will be withdrawn.

## [Appendix A] Flowchart of lifecycles of the Services



## 【Appendix B】 Results of Calculation of Carbon Footprints

1. Definition of Subject	
1.1 Subject	One parcel under delivery services (TA-Q-BIN, TA-Q-BIN Compact and EAZY)
1.2 Purpose of calculation	Verification of carbon neutrality claims of delivery services by ISO 14068-1:2023
1.3 Calculation unit	Per parcel under delivery services (TA-Q-BIN, TA-Q-BIN Compact and EAZY)
1.4 Elements of product	In-house activities and subcontracted activities
1.5 Calculation period	<ul style="list-style-type: none"> <li>·April 2021 to March 2022 (FY2021)</li> <li>·April 2022 to March 2023 (FY2022)</li> </ul>
1.6 Characterization factor	Global warming potential    IPC2013 GWP100a
1.7 Presence or absence of comparative assertion	Absence
1.8 Interpretation of comparative assertion	<ul style="list-style-type: none"> <li>·The relevant results of calculation of the carbon footprints satisfy the purpose of calculation. The carbon footprints were calculated based on the requirements for quality of collected data. The presence of uncertainty in the calculated results as shown in the analysis of uncertainty must be taken in account.</li> </ul>

2 Product Life Cycle Stage and Exclusion Standards	
2.1 Life cycle stage to be calculated for carbon footprints	<ul style="list-style-type: none"> <li>·Parcel reception at an agency or in a delivery locker</li> <li>·Parcel collection</li> <li>·Parcel reception and sorting at a delivery depot</li> <li>·Transportation from a delivery depot to a hub terminal</li> <li>·Parcel sorting at a hub terminal (at a starting point or relay point)</li> <li>·Transportation between hub terminals</li> <li>·Parcel sorting at a hub terminal (at an arrival point)</li> <li>Transportation from a hub terminal to a delivery depot</li> <li>·Parcel sorting at a delivery depot</li> <li>·Delivery</li> <li>·Handover at an agency or delivery locker</li> <li>·IT system and call center</li> <li>·Procurement and disposal of raw materials such as materials involved in parcel transport by delivery services</li> </ul>
2.2 Cut-off criteria	<ul style="list-style-type: none"> <li>·The upstream GHG emissions of electric power from renewable energy sources were converted to an emission factor derived from fossil fuel, but it was determined to be difficult to grasp the environmental impact resulting from the construction of capital goods. For this reason, the relevant power is deemed to be excluded from the calculation.</li> <li>·Disposal of packing materials by final consumers is deemed to be excluded in the case where it is difficult to identify the weight of the materials to be disposed of.</li> <li>·In consideration of data collection man-hours, the items that have a minor effect on the CFPs are deemed to be excluded, as long as that can be reasonably estimated.</li> </ul>

3 Calculation Policy and Method	
3.1 Referenced standards	<ul style="list-style-type: none"> <li>·ISO 14067: 2018</li> <li>·ISO 1404: 2006</li> </ul>

3.2 Requirements for quality of collected data	<ul style="list-style-type: none"> <li>·Collected data were as of August 31, 2023. The collected data will be valid until the data aggregation method or management method changes or evidence is lost.</li> <li>·Data on electric power etc. whose collection is difficult for calculation of functional units are deemed to be activity data of the relevant product without being allocated.</li> </ul>
3.3 Methods for data collection	<ul style="list-style-type: none"> <li>·Activity data are basically collected on the basis of primary data (physical amounts). If it is difficult to collect the primary data (physical amounts), the relevant data are collected on the basis of primary data (monetary values). If it is difficult to acquired primary data, secondary data specified by our company are used.</li> <li>·The amount of copy paper used in parcel sorting is calculated on the basis of an assumed scenario due to that it is difficult to measure an actual input of copy paper.</li> </ul>
3.4. Secondary data (Emission factors)	<ul style="list-style-type: none"> <li>·IDEA Ver3.1</li> <li>·Ministry of the Environment DB Ver3.2</li> <li>·GLIO</li> </ul>
3.5 Secondary data (Scenario)	<ul style="list-style-type: none"> <li>·For a transport distance, a vehicle type and a loading rate in the stage of raw material procurement, an averaged loading rate of 10-ton trucks and the absence of return cargos were assumed on the assumption of a 500-km land transport distance.</li> <li>·It was assumed that waste (whose disposal method is unknown) would be incinerated due to that it is difficult to grasp the actual situation of the disposal method.</li> <li>·It was assumed that waste (recycled amount) would be paper waste (recycled) because much of the waste is assumed to be applicable to paper waste.</li> <li>·Valuables were excluded from the calculation based on the relevant scope and purpose of the calculation.</li> <li>·It is assumed that 3 pieces of A5 are used per roll box pallet for transportation in the sorting process. The number of transported roll box pallets was multiplied by the number of pieces (3) of A5 copy paper and a weight (2 g) of one piece of copy paper. Based on the result of the multiplication, the input of copy paper was calculated.</li> <li>·Due to a large influence of corporate goods price increases on the activity data during FY2021 and FY2022, the activity data were corrected with the use of a corporate goods price index concerning costs paid in FY2022 and on the basis of costs paid in FY2021.</li> </ul>
3.6 Allocation	<ul style="list-style-type: none"> <li>·The GHG emissions of the whole of the relevant process were allocated according to the number of parcels to be delivered, thereby calculating the amount of emissions per functional unit.</li> </ul>
3.7 Important unit processes	Parcel collection, transportation between hub terminals, delivery
3.8 Handling of electric power	For an emission factor of electric power from renewable energy, an upstream power emission factor in the Ministry of the Environment DB Ver3.2 was used on the assumption that an emission factor at the use of electric power is 0 based on an emission factor by electric company, due to the absence of correct emission factors before the process from raw material procurement to production of electric power.
3.9 How to use secondary data	<ul style="list-style-type: none"> <li>·The amount of GHG emissions was calculated without taking into account the increase/decrease of the GHG emissions that is caused by variation in the GHG emissions unit values, so was calculated with the use of the same database.</li> <li>·For data on physical amounts, IDEA Ver3.1 was in principle used. The GHG emissions from transportation for raw material procurement were calculated based on a scenario set for purchased products.</li> <li>·For data on monetary values, GLIO was in principle used. The GHG emissions from transportation for raw material procurement were calculated with the use of emissions unit values on a consumer price basis.</li> </ul>

### 3.9 How to use secondary data

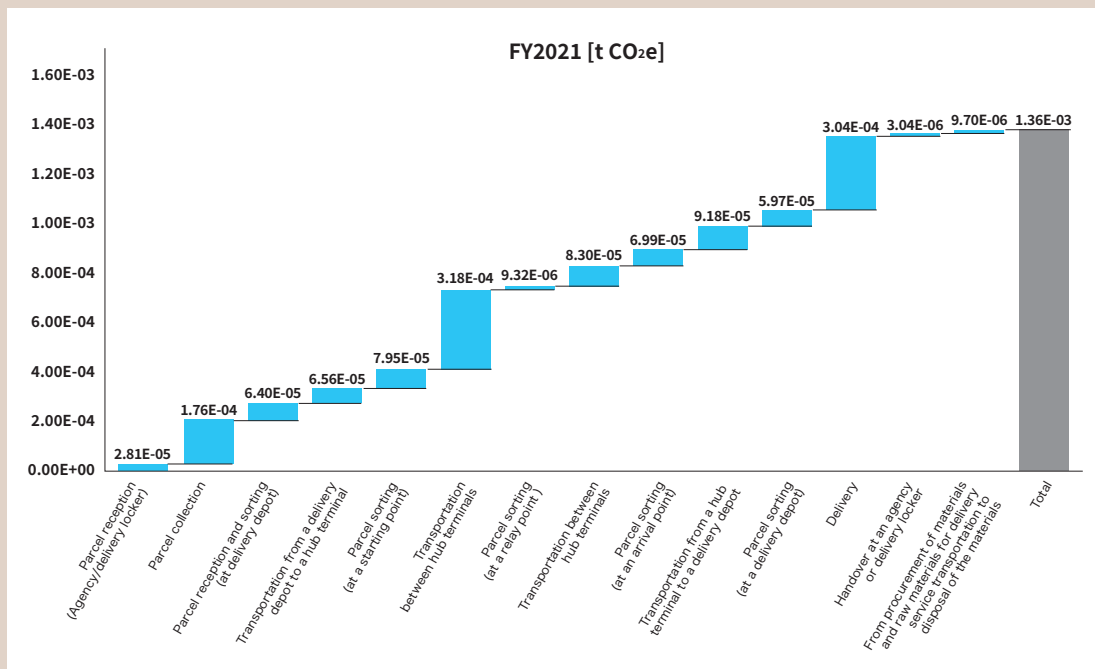
- For waste data, the Ministry of the Environment DB Ver3.2 was in principle used. The amounts of incinerated, buried and collected waste were calculated with the use of IDEA Ver3.1.
- Environmental impact resulting from transportation of waste was calculated from the Ministry of the Environment DB Ver3.2.

## 4 Results of Calculation

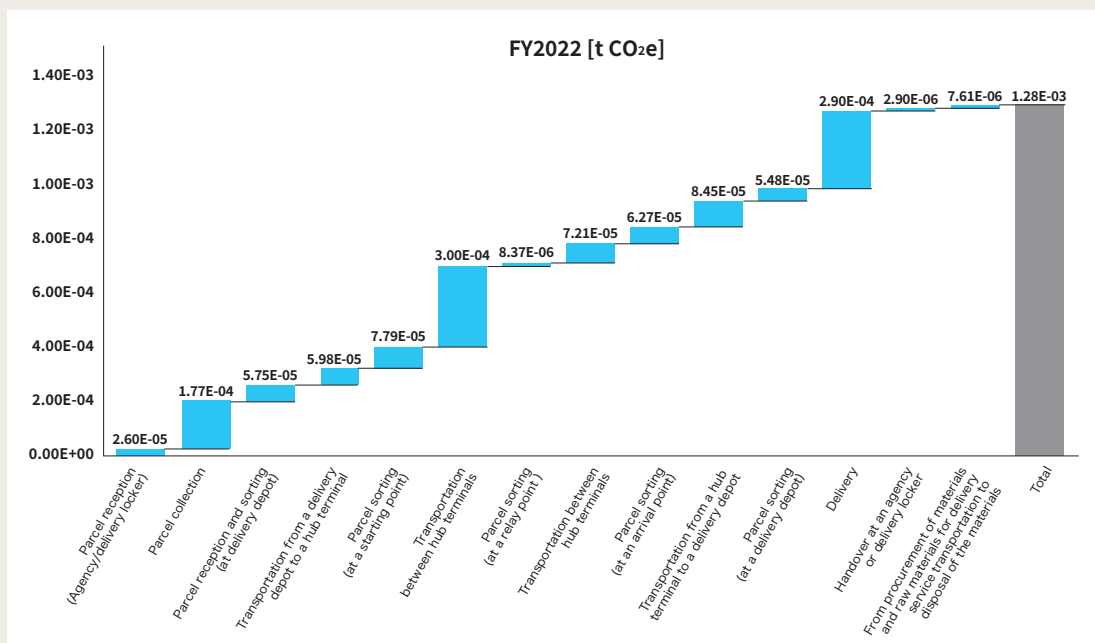
### 4.1 CFP values

- FY2021: 0.00136 [t CO<sub>2</sub>e] (1.36 [kg CO<sub>2</sub>e])
- FY2022 (Corporate goods price index: 0.00128 [t CO<sub>2</sub>e] (1.28 [kg CO<sub>2</sub>e])

### 4.2 Detail of CFP (FY2021)



### 4.3 Detail of CFP (FY2022\_Corporate goods price index)



#### 4.4 Uncertainties on the accuracy of the quantified carbon footprint

##### (1) Scenario of transportation for raw material procurement

The GHG emissions from transportation for raw material procurement were calculated on the basis of the aforementioned scenario. The rates of procurement transportation are 0.60% in FY2021 and 0.54% in FY2022. In the transportation scenario, the relevant emissions become half on the assumption of a land transportation distance of 250 km. The sizes of the GHG emissions are 0.00411 kg CO<sub>2e</sub> in FY2021 and 0.00363 kg CO<sub>2e</sub> in FY2022. It can be understood that the total of the GHG emissions have little influence on the result of calculation based on the transportation scenario as described in [4.1].

##### (2) Primary data (data on costs)

Data on paid costs were calculated on the basis of the scenario described in Chapter 2. The costs were corrected based on the corporate goods price index. As a result, the rates of variation in the costs paid by our company and by the subcontractor were +9.55% and +5.14% before correction, and +0.14% and -3.89% after correction, in comparison with FY2021, respectively. On the other hand, the rates of variation in the GHG emissions from our company and from the subcontractor were +5.10% and +2.82% before correction, and -3.93% and -6.01% after correction, respectively, in comparison with FY2021. Since a difference between the rates of variation in the costs is larger than that between those of variation in the costs, it is considered that the primary data corrected based on the corporate goods price index have little influence on the GHG emissions. Consequently, it is understood that a factor for variation in the GHG emissions greatly depends on the content of the activities.

##### (3) Electric power from renewable energy sources

The amounts of electric power from renewable energy sources were 61,381 MWh in FY2021 and 123,012 MWh in FY2022, respectively. As described in the scenario, due to that it is difficult to grasp the activities of raw material procurement in the production of electric power from renewable energy sources, the GHG emissions from the relevant activities were calculated, using a Japanese average of upstream emission factor in power generation based on the Ministry of the Environment DB Ver3.2. The environmental impact resulting from the construction of capital goods was derived in a simulated manner, using an equation of IDEA emission factor (national average of emissions factors in 2018) – (Emission factor by electric company + the Ministry of the Environment DB Ver3.2) based on the IDEA's emission factor, the Ministry of the Environment DB Ver3.2 and an emission factor by electric company. If the environmental impact in the upstream process of power generation is taken into account, the GHG emissions from the use of electric power from renewable energy sources become equivalent to  $4.31 \times 10^{(-0.6t)}$  CO<sub>2e</sub> in FY2021 and  $8.48 \times 10^{(-0.6t)}$  CO<sub>2e</sub> in FY2022, respectively. When the GHG emissions only from the upstream process is compared with the calculated result in the scenario, the GHG emissions is increased by about 94% in both of the two fiscal years, but is found to negligibly contribute to the total emission.

##### (4) Waste (recycled)

Since it is difficult to determine which waste type can be recycled, the GHG emissions from the waste were calculated on the assumption that a type of waste is paper waste, as described in the scenario. With incineration of paper waste, the GHG emissions from the waste accounted for 0.35% of the total in FY2021 and 0.27% of that in FY2022 (in consideration of the corporate goods price index), respectively. Collected data on paper waste are close to the actual situation, while the GHG emissions from the waste have a minor effect on the total. Consequently, it is considered to be appropriate to calculate it based on the set scenario.



**Reference 1: FY2022 Reduction by Emission Source (in comparison with the base year)**

Process name	FY2021 [t CO <sub>2</sub> e/parcel]	FY2022 (Corporate goods price index) [t CO <sub>2</sub> e/parcel]	Reduction [t CO <sub>2</sub> e/parcel]
	Total	Total	Total
Parcel reception (Agency/delivery locker)	0.00002809	0.00002603	0.00000206
Parcel collection	0.00017591	0.00017726	-0.00000135
Parcel reception and sorting (at delivery depot)	0.00006396	0.00005746	0.00000650
Transportation from a delivery depot to a hub terminal	0.00006564	0.00005985	0.00000580
Parcel sorting (at a starting point)	0.00007955	0.00007787	0.00000168
Transportation between hub terminals	0.00031823	0.00030017	0.00001806
Parcel sorting (at a relay point )	0.00000932	0.00000837	0.00000095
Transportation between hub terminals	0.00008296	0.00007212	0.00001084
Parcel sorting (at an arrival point)	0.00006995	0.00006271	0.00000724
Transportation from a hub terminal to a delivery depot	0.00009178	0.00008450	0.00000728
Parcel sorting (at a delivery depot)	0.00005973	0.00005480	0.00000493
Delivery	0.00030435	0.00029008	0.00001427
Handover at an agency or delivery locker	0.00000304	0.00000290	0.00000015
From procurement of materials and raw materials for delivery service transportation to disposal of the materials	0.00000970	0.00000761	0.00000209
<b>Total</b>	<b>0.00136219</b>	<b>0.00128170</b>	<b>0.00008049</b>

**Reference 2: Results of Calculation of Activities and Emissions from Electricity by market-based approach and location-based approach**

Indirect emissions from energy		Activity data (2021) [kWh]	Activity data (2022) [kWh]	Emissions (2021) (t CO <sub>2</sub> e)	Emissions (2022) (t CO <sub>2</sub> e)
Market-based approach	General electricity	469,841,216	421,696,080	265,747	238,516
	Renewable electricity	61,380,928	123,011,625	0	0
Location-based approach	Electric power	531,222,144	544,707,705	300,465	308,093

\*The result of calculating the activities and emissions on the basis of the market standards was reflected into the CFP values.

# [Appendix C] Certificate for Retirement of Carbon Credits

## 1. Hunan Xiangtan Landfill Gas Power

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 24,000 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Hunan Xiangtan Landfill Gas Power Generation Project

**VCU Serial Number**  
10291-200649915-200673914-VCS-VCU-997-VER-CN-13-2299-29012019-31122019-1

**Additional Certifications**  
COR3A – First Phase, 2021-2023

Powered by 

## 2. Sanya Landfill Gas Power

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 36,909 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Sanya Landfill Gas Power Generation Project

**VCU Serial Number**  
10313-201442542-201479450-VCS-VCU-997-VER-CN-13-2337-01012020-31122020-0

**Additional Certifications**

Powered by 

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 63,091 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Sanya Landfill Gas Power Generation Project

**VCU Serial Number**  
10291-200165744-200228834-VCS-VCU-997-VER-CN-13-2337-22032019-11120019-0

**Additional Certifications**

Powered by 

## 3. Bundled Solar by ACME

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 15,383 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Bundled Solar Photovoltaic Project by ACME

**VCU Serial Number**  
8996-59157355-59172737-VCS-VCU-997-VER-IN-1-1753-01032019-31122019-0

**Additional Certifications**

Powered by 

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 17,388 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Bundled Solar Photovoltaic Project by ACME

**VCU Serial Number**  
90314-62782899-62300786-VCS-VCU-997-VER-IN-1-1753-01012019-31122019-0

**Additional Certifications**

Powered by 

#### 4. Solar Power by Adani Green Energy

 <b>Certificate of Verified Carbon Unit (VCU) Retirement</b> Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 185,479 Verified Carbon Units (VCUs) were retired on behalf of: Yamato Transport Co., Ltd. <b>Project Name</b> Renewable Solar Power Project by Adani Green Energy Limited <b>VCU Serial Number</b> 8378-12411856-12596934-VCS-VCU-997-VER-IN-1-1815-01102018-11172018-0 <b>Additional Certifications</b> Powered by 	 <b>Certificate of Verified Carbon Unit (VCU) Retirement</b> Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 314,521 Verified Carbon Units (VCUs) were retired on behalf of: Yamato Transport Co., Ltd. <b>Project Name</b> Renewable Solar Power Project by Adani Green Energy Limited <b>VCU Serial Number</b> 8377-11202841-11517351-VCS-VCU-997-VER-IN-1-1815-01012019-31012019-0 <b>Additional Certifications</b> Powered by 
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#### 5. Ghani Solar Renewable Power by Greenko Group

 <b>Certificate of Verified Carbon Unit (VCU) Retirement</b> Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 61,451 Verified Carbon Units (VCUs) were retired on behalf of: Yamato Transport Co., Ltd. <b>Project Name</b> Ghani Solar Renewable Power Project by Greenko Group <b>VCU Serial Number</b> 8497-25891527-25952977-VCS-VCU-997-VER-IN-1-1792-01072018-31122018-0 <b>Additional Certifications</b> Powered by 
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## 6. Solar Power by Mytrah Energy

**VERRA**

  
Verified Carbon Standard

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 33,067 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Solar Power Project by Mytrah Energy India Private Limited

**VCU Serial Number**  
7238-379342789-379375855-VCU-034-APX-IN-1-1784-19062017-31122017-0

**Additional Certifications**

Powered by  PX

**VERRA**

  
Verified Carbon Standard

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 65,923 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Solar Power Project by Mytrah Energy India Private Limited

**VCU Serial Number**  
7237-479151162-379218094-VCU-034-APX-IN-1-1784-01012018-31122018-0

**Additional Certifications**

Powered by  PX

**VERRA**

  
Verified Carbon Standard

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 250,000 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Solar Power Project by Mytrah Energy India Private Limited

**VCU Serial Number**  
1045-2-211895660-21824555-VCU-097-VER-IN-1-1784-18032019-31122019-0

**Additional Certifications**

Powered by  PX

## 7. Renewable Solar by ReNew Solar Power

**VERRA**

  
Verified Carbon Standard

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 200,000 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Renewable Solar Power Project by ReNew Solar Power Private Limited

**VCU Serial Number**  
7245-379769967-379869966-VCU-034-APX-IN-1-1851-01012018-25102018-0

**Additional Certifications**

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**VERRA**

  
Verified Carbon Standard

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 300,000 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Renewable Solar Power Project by ReNew Solar Power Private Limited

**VCU Serial Number**  
10705-241134796-241434795-VCU-097-VER-IN-1-1851-01012019-24122019-0

**Additional Certifications**

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## 8. Bundled Wind Power by Mytrah Group

 **Verified Carbon Standard**

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 117 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Bundled Wind Power Project by Mytrah Group

**VCU Serial Number**  
7538-416174282-416174398-VCS-VCU-997-VER-IN-1-1728-01012017-24112017-0

**Additional Certifications**

Powered by 

 **Verified Carbon Standard**

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 28 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Bundled Wind Power Project by Mytrah Group

**VCU Serial Number**  
7048-36830283-368330310-VCS-VCU-997-VER-IN-1-1728-01012017-24112017-0

**Additional Certifications**

Powered by 

## 9. Bundled Solar by SolarArise

 **Verified Carbon Standard**

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 5,000 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Bundled Solar Power Project by SolarArise India Projects PVT. LTD.

**VCU Serial Number**  
10732-245349933-24534932-VCS-VCU-997-VER-IN-1-1762-01012019-31122019-0

**Additional Certifications**

Powered by 

 **Verified Carbon Standard**

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 4,769 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Bundled Solar Power Project by SolarArise India Projects PVT. LTD.

**VCU Serial Number**  
10732-245356483-245361251-VCS-VCU-997-VER-IN-1-1762-01012019-31122019-0

**Additional Certifications**

Powered by 

 **Verified Carbon Standard**

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 32,000 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Bundled Solar Power Project by SolarArise India Projects PVT. LTD.

**VCU Serial Number**  
10732-245412935-245444934-VCS-VCU-997-VER-IN-1-1762-01012019-31122019-0

**Additional Certifications**

Powered by 

## 10. Bugoye Hydropower

  <b>Certificate of Verified Carbon Unit (VCU) Retirement</b> Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 20,831 Verified Carbon Units (VCUs) were retired on behalf of: Yamato Transport Co., Ltd. <b>Project Name</b> Bugoye 13.0 MW Run-of-River Hydropower Project <b>VCU Serial Number</b> 10870-253578820-253599750 VCS-VCU-997-VER-UG-1-1199-01012018-31122018-0 <b>Additional Certifications</b>  Powered by 	  <b>Certificate of Verified Carbon Unit (VCU) Retirement</b> Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 11,955 Verified Carbon Units (VCUs) were retired on behalf of: Yamato Transport Co., Ltd. <b>Project Name</b> Bugoye 13.0 MW Run-of-River Hydropower Project <b>VCU Serial Number</b> 10871-253642099-253654823 VCS-VCU-997-VER-UG-1-1199-01012019-06102019-0 <b>Additional Certifications</b>  Powered by 
  <b>Certificate of Verified Carbon Unit (VCU) Retirement</b> Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 8,643 Verified Carbon Units (VCUs) were retired on behalf of: Yamato Transport Co., Ltd. <b>Project Name</b> Bugoye 13.0 MW Run-of-River Hydropower Project <b>VCU Serial Number</b> 10872-253654898-253663540 VCS-VCU-997-VER-UG-1-1199-01012017-31122017-0 <b>Additional Certifications</b>  Powered by 	  <b>Certificate of Verified Carbon Unit (VCU) Retirement</b> Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 27,492 Verified Carbon Units (VCUs) were retired on behalf of: Yamato Transport Co., Ltd. <b>Project Name</b> Bugoye 13.0 MW Run-of-River Hydropower Project <b>VCU Serial Number</b> 10870-253599751-253627242 VCS-VCU-997-VER-UG-1-1199-01012018-31122018-0 <b>Additional Certifications</b>  Powered by 
  <b>Certificate of Verified Carbon Unit (VCU) Retirement</b> Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 3,671 Verified Carbon Units (VCUs) were retired on behalf of: Yamato Transport Co., Ltd. <b>Project Name</b> Bugoye 13.0 MW Run-of-River Hydropower Project <b>VCU Serial Number</b> 10871-253639198-253642868 VCS-VCU-997-VER-UG-1-1199-01012019-06102019-0 <b>Additional Certifications</b>  Powered by 	  <b>Certificate of Verified Carbon Unit (VCU) Retirement</b> Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 11,353 Verified Carbon Units (VCUs) were retired on behalf of: Yamato Transport Co., Ltd. <b>Project Name</b> Bugoye 13.0 MW Run-of-River Hydropower Project <b>VCU Serial Number</b> 10872-253603541-253674893 VCS-VCU-997-VER-UG-1-1199-01012017-31122017-0 <b>Additional Certifications</b>  Powered by 
  <b>Certificate of Verified Carbon Unit (VCU) Retirement</b> Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 11,955 Verified Carbon Units (VCUs) were retired on behalf of: Yamato Transport Co., Ltd. <b>Project Name</b> Bugoye 13.0 MW Run-of-River Hydropower Project <b>VCU Serial Number</b> 10871-253627243-253639197 VCS-VCU-997-VER-UG-1-1199-01012019-06102019-0 <b>Additional Certifications</b>  Powered by 	

## 11. Murat HEPP



  
**Verified Carbon Standard**

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 10,000 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Murat HEPP

**VCU Serial Number**  
13297-489255119-489265119-VCS-VCU-262-VER-IR-1-1344-01012020-30092020-0

**Additional Certifications**

Powered by  PX

## 12. Renewable Wind Power by Axis Wind Farms



  
**Verified Carbon Standard**

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 125,297 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Renewable Wind Power Project by Axis Wind Farms (Oyulayevskaya) Pte. Ltd.

**VCU Serial Number**  
8601-33480546-33605842-VCS-VCU-1491-VER-IR-1-2052-02022018-31122018-0

**Additional Certifications**

Powered by  PX



  
**Verified Carbon Standard**

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 4,108 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Renewable Wind Power Project by Axis Wind Farms (Oyulayevskaya) Pte. Ltd.

**VCU Serial Number**  
8600-33476438-33480545-VCS-VCU-1491-VER-IR-1-2052-01012019-30132019-0

**Additional Certifications**

Powered by  PX

### 13. Solar by Giriraj Renewables



  
**Verified Carbon Standard**

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 13,064 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Solar Photovoltaic Project by Giriraj Renewables Private Limited

**VCU Serial Number**  
9729-128128746-128141809-VCS-VCU-997-VTR-#-1-1786-01042019-31122019-0

**Additional Certifications**

Powered by 

### 14. Wind Power Andhra Lake Phase II



  
**Verified Carbon Standard**

**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 18 Oct 2023, 26,408 Verified Carbon Units (VCUs) were retired on behalf of:

Yamato Transport Co., Ltd.

**Project Name**  
Wind power project in Maharashtra, India - Andhra Lake Phase - II

**VCU Serial Number**  
8322-8410300-8436707-VCS-VCU-279-VTR-#-1-1481-01012018-31122018-0

**Additional Certifications**

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