

Return on Environmental Investments

Return on Environmental Investments		FY2020	FY2021	FY2022	FY2023
Total Environmental expense	million yen	6.1	12.9	81.8	108.5
Capital investment		0.0	8.6	75.4	103.6
Operating expense		6.1	4.3	6.5	4.9
Cost saving effect	million yen	929.3	23.8	89.0	88.8
	Data coverage	90	90	90	90

Environmental Violations

Breach of laws and regulations	
	We have never received fines or punishments relating to environmental laws in FY2023.

Energy Consumption

Energy consumption		FY2020	FY2021	FY2022	FY2023
Total non-renewable energy consumption	MWh	23,362,624	32,023,868	38,895,880	43,674,138
Total renewable-energy purchased or generated (wind/solar/biomass/hydroelectric, etc.)	MWh	237	2,130	4,099	5,296
Data coverage	%	90	90	90	90
External assurance					yes

Packaging Materials

Packaging Materials	Coverage		Total Weight	Recycled and/or Certified Material
	%	metric tonnes		%
	Wood/Paper fiber packaging	100.0	48.4	
Metal (e.g. aluminum or steel) packaging	-	-		-
Glass packaging	-	-		-

Plastic Packaging

Plastic Packaging		FY2020	FY2021	FY2022	FY2023
Total weight of all plastic packaging	metric tonnes	43.7	49.4	68.7	31.8
Percentage of recyclable plastic packaging		100	100	100	100
Percentage of compostable plastic packaging	%	0	0	0	0
Percentage of recycled content within your plastic packaging		0	0	0	0
Data coverage	%	80	80	80	80

Waste Disposed

Waste disposed		FY2020	FY2021	FY2022	FY2023
Total waste recycled/reused	metric tonnes	211	261	96	196
Total waste disposed		11,100	13,734	27,316	30,131
-Waste landfilled	metric tonnes	0	0	0	0
-Waste incinerated with energy recovery		0	0	0	0
-Waste incinerated without energy recovery		11,100	13,734	27,316	30,131
-Waste otherwise disposed		0	0	0	0
-Waste with unknown disposal method		0	0	0	0
Data coverage	%	90	90	90	90
External assurance					yes

Food Loss & Waste Impact

Food Loss & Waste Impact		FY2020	FY2021	FY2022	FY2023
a) Total weight of all food loss & waste		13,624.1	1,822.4	401.2	441.1
b) Total weight of food loss & waste volumes used for alternative purposes used for alternative purposes	metric tonnes	7.7	85.1	143.4	196.1
Total discarded (a-b)		13,616.4	1,737.2	257.8	245.0
Food loss & waste intensity		0.149	0.092	0.054	0.041
Data coverage	%	90	90	90	90
External assurance					no

NOx Emissions

Aircraft NOx emissions		FY2020	FY2021	FY2022	FY2023
NOx emissions for passenger transport	Grams/PKT (passenger kilometers transported)	0.205	0.206	0.091	0.079
NOx emissions for cargo transport	Grams/TKT (ton kilometers transported)	0.235	0.157	0.169	0.244
Data coverage	%	100	100	100	100
External assurance					yes

Water Consumption

Water consumption		FY2020	FY2021	FY2022	FY2023
A. Water withdrawal (excluding saltwater)	million m3	0.307	0.269	0.357	0.439
B. Water discharge (excluding saltwater)	million m3	0.307	0.269	0.357	0.439
Total net fresh water consumption (A-B)	million m3	0	0	0	0
Data coverage	%	100	100	100	100
External assurance					yes

※Our business does not manufacture water products, so water withdrawal and wastewater discharge are the same.

Greenhouse Gas Emissions Scope1,2

GHG emissions			FY2020	FY2021	FY2022	FY2023
Direct GHG emissions (Scope1)			5,108,975	7,698,676	9,354,643	10,507,734
Indirect GHG emissions (Scope2)	Location-based	ton	70,311	65,853	61,889	66,407
	Market-based		70,311	65,853	65,050	64,104
Data coverage		%	100	100	100	100
External assurance						yes

Greenhouse Gas Emissions Scope3

GHG emissions			FY2020	FY2021	FY2022	FY2023
Indirect GHG emissions (Scope3)		ton	1,748,770	1,999,233	2,376,414	3,076,686
Data coverage		%	100	100	100	100
External assurance						yes

Scope 3 Category		Emissions in the reporting year (Metric tons CO2e)	Emissions calculation methodology and exclusions			
1	Purchased Goods and Services	971,358	This data was calculated by multiplying the maintenance parts cost, subcontracting cost, and sales cost by the coefficient from the Ministry of the Environment's emission factor data [DB_V3-2], which were Emission Intensity Database for Calculating Greenhouse Gas Emissions, etc. of Organizations through Supply Chains (Ver.3.2).			
2	Capital Goods	560,416	This data was calculated by multiplying the amount invested in aircraft by a factor from the Ministry of the Environment's emission factor data [DB_V3-2], which was the Emission Intensity Database for Calculating Greenhouse Gas Emissions, etc. of Organizations through Supply Chains (Ver. 3.2).			
3	Fuel-and-energy-related-activities (not included in Scope 1 or 2)	1,413,156	This data was calculated by multiplying the total amount of fuel and electricity purchased by a factor from the IDEA Ver. 2.3 emission factor data provided by SuMPO (Sustainable Management Promotion Organization).			
4	Upstream transportation and distribution	1,597	This data was calculated by multiplying the amount of fuel used for new aircraft airlift by a factor from the Ministry of the Environment's emission factor data [DB_V3-2], which were Emission Intensity Database for Calculating Greenhouse Gas Emissions, etc. of Organizations through Supply Chains (Ver. 3.2).			
5	Waste generated in operations	39,437	This data was calculated by multiplying the amount of waste processed by type by a factor from the Ministry of the Environment's emission factor data [DB_V3-2], which was the Emission Unit Database for Calculating Greenhouse Gas Emissions, etc. of Organizations through Supply Chains (Ver. 3.2).			
6	Business travel	6,445	This data was calculated by multiplying the number of days of out-of-town transportation and overnight stays from employee business trip records by a factor from the Ministry of the Environment's Emission Factor Data [DB_V3-2], which was Emission Intensity Database for Calculating Greenhouse Gas Emissions, etc. of Organizations through Supply Chains (Ver. 3.2).			
7	Employee commuting	8,375	This data was calculated by multiplying the number of employees and their scheduled working hours by their work type and by city category by the coefficient from the Ministry of the Environment's emission factor data [DB_V3-2], which were Emission Intensity Database for Calculating Greenhouse Gas Emissions of Organizations through Supply Chains (Ver. 3.2).			
8	Upstream leased assets	0	This data is not accounted for in this category because emissions from aviation fuel consumption during the operation of the leased aircraft are included in Scope 1.			
9	Downstream transportation and distribution	0	If there are aircraft sold or disposed of, emissions from fuel consumption during transportation are included in Scope 1, so this data is not accounted for in this category.			
10	Processing of sold products	0	This is not applicable as the Company does not process products for sale.			
11	Use of sold products	0	No aircraft were sold this year and therefore are not reported in this category.			
12	End of life treatment of sold products	0	Since we are not a manufacturer, emissions from the disposal of sold aircraft are not included in the scope of this report.			
13	Downstream leased assets	75,902	This data was calculated by multiplying the amount of fuel used per year by the amount of fuel used by aircraft leased to other companies by a factor from the Ministry of the Environment's emission factor data [DB_V3-2], which were Emission Intensity Database for Calculating Greenhouse Gas Emissions, etc. of Organizations through Supply Chains (Ver.3.2).			
14	Franchises	0	There are no franchises in the Company, so there is no accounting for them.			
15	Investments	0	The Company is not a financial institution and does not make investments to make a profit; therefore, it is not recorded.			
External assurance						yes

Climate-Related Management Incentives

Who is entitled to benefit from this incentive?	Type of incentive	Incentivized KPIs: Please provide a description of the KPI and how it is incentivized
Chief Executive Officer (CEO)		Incentivized KPI for Emissions reduction
<ul style="list-style-type: none"> Representative Director, President and CEO Representative Director, Executive Vice President Member of the Board 	Monetary	In addition to fixed basic remuneration, remuneration for CEO and directors consists of bonuses linked to performance and share remuneration for long-term incentives so that they can function as a sound incentive for the company's sustainable growth. Every year, managements disclose their environmental and CSR/SDGs commitments and evaluate them according to their achievements. The Target is the reduction of CO2 emissions, CO2 emissions reduced by 10% or more in FY2019 CO2 emissions of less than 11.09 million tons
Business Unit Managers		Incentivized KPI for Emissions reduction
All ANA Group management	Monetary	All managers are evaluated by setting quantitative targets for CO2 emissions as performance goals, called MBOs. (MBO: Management By Objective).The level of achievement is reflected in their performance assessment and is related to their salary.
Employees		Incentivized KPI for Energy reduction
All ANA Group employees.	Monetary	As an item for evaluating the performance of each group company, a competition called the "ANA Energy Conservation Awards" is being held for companies within the group. This is a competition for energy reduction, and the results are grasped using an environmental data collection/analysis system called "ANA Eimisi". In order to ensure fairness among business establishments, the amount of energy reduction and the reduction rate is each grand prize, and the top three business establishments are commended by the EPO (ESG Promotion Officer). Reduction of CO2 emissions intensity is set as an item in the performance evaluation of each Group company; the extent of CO2 emissions reduction achieved thus has an impact on every employee's bonus.

Financial Risks of Climate Change

<p>Risks driven by changes in regulation</p> <p>Currency JPY</p> <p>Brief description of the most significant risk and methods used to manage this risk</p> <p>The ANA Group complies with ICAO's CORSIA. ICAO has updated its baseline for offset calculation to 85% of 2019 results in 2022, which means that offset obligations may occur in 2025. Meanwhile, the ANA Group has set an environmental target of '2050 Net Zero' and has developed a transition scenario to 2030 in order to achieve the target. In order to comply with CORSIA and achieve its environmental targets, the ANA Group will mainly use SAF and will replace 10% of its fuel consumption with SAF in 2030, and offset the amount it cannot reduce by purchasing credits, which will have a financial impact. As a financial risk assessment, the amount of SAF and credits required in five and ten years' time was assumed, assuming a 3% increase in production in 2030 compared to 2019. The SAF price was assumed to be 2.5-3 times the jet fuel price, while the credit price was based on the EU ETS market price of EUR 90-100 per tonne, and the optimal cost was calculated based on both.</p> <p>Estimated financial implications of the risk before taking action</p> <p>166,138,735,500</p> <p>Average estimated time frame (in number of years) for financial implications of this risk</p> <p>5</p> <p>Estimated costs of these actions</p> <p>15,876,000,000</p>

<p>Risks driven by change in physical climate parameters or other climate-change related developments</p> <p>Currency JPY</p> <p>Brief description of the most significant risk and methods used to manage this risk</p> <p>The number of disasters typhoons, torrential rains, and heavy snowfalls caused by climate change is increasing, occurring three to four times a year and causing approx. 1,400 flight cancellations per year. The impact of these disasters is estimated to be in the order of 10 billion yen. Recovery due to canceled flights, damaged aircraft, and loss of airport operational monitoring equipment is costly, and a single disaster can take four to six days to recover from. We have a Business Continuity Plan (BCP) that outlines our policies and procedures for recovery in the event of a disaster. We spend approx. JPY 100 million annually on mock drills to put this BCP into practice, including JPY 6 million for personnel and JPY 6 million for equipment maintenance. We have calculated the risk, assuming that the business will expand by 3% by 2030 and that the financial impact can be reduced by restarting operations in the shortest possible time (three to four days) by adapting the BCP.</p> <p>Estimated financial implication of the risk before taking action</p> <p>13,533,000,000</p> <p>Average estimated time frame (in number of years) for financial implications of the risk</p> <p>5</p> <p>Estimated costs of these actions</p> <p>8,789,000,000</p>

Financial Opportunities Arising from Climate Change

<p>Currency JPY</p> <p>Brief description of Financial Opportunities Arising from Climate Change</p> <p>To promote the use of SAF, we have been strengthening procurement contracts and promoting the development of SAF production. In 2022, we launched "ACT FOR SKY," a group of volunteers from different industries involved in SAF technology development, manufacturing, and distribution, to promote the commercialization of domestically produced SAF.</p> <p>We also have concluded a contract with 1PointFive in the U.S. to provide development support for DAC, a technology that directly removes CO2, to accelerate the reduction of CO2 emissions. We are also promoting lobbying activities. In 2023 the government has set an obligation to supply SAF to manufacturers, and a resolution has been passed to provide government support for SAF production. This is expected to enhance the supply of SAF and stabilize its price, thereby increasing our corporate value and revenues.</p> <p>Based on FY 2018-2019 sales, we expect a 0.1%-0.5% increase in revenues, a range of 2 billion yen to 10 billion yen in revenue growth.</p> <p>Please estimate the annual financial positive implications of this opportunity</p> <p>2,000,000,000</p> <p>Estimated time frame (in number of years) for positive financial implications of this opportunity</p> <p>5</p> <p>Please estimate the current annual costs associated with developing this opportunity</p> <p>1,000,000,000</p>

Physical Climate Risk Adaptation

<p>Currency JPY</p> <p>Description of context-specific plan to adapt to physical climate risks in existing and/or new operations</p> <p>"Situation"</p> <p>With the scheduled airline business at the core of its operations, the Company's airline business accounts for approximately 90% of its sales, of which more than 55% are generated in Japan, East Asia, and Southeast Asia, which are vulnerable to typhoons and heavy rainfall. The Company's core aviation business accounts for about 90% of its sales. There is a risk that it will become difficult to maintain service rates in accordance with changes in weather patterns such as typhoons and heavy rainfall due to the effects of climate change. In addition, economic downturns and declining customer revenues due to natural disasters could adversely affect the domestic, East Asian, and Southeast Asian economies. In addition, there is a risk that economic downturns and declines in passenger revenues due to natural disasters could lead to a decline in demand for air travel in Japan, East Asia, and Southeast Asia. We also consider that in new operations, the slowdown in the economy and flow of people due to natural disasters will affect business.</p> <p>"Issue"</p> <p>We recognize the need to reduce the impact of natural disasters on sales and operations by reducing demand for air travel.</p> <p>"Action"</p> <p>In FY2021, as in the previous year, the Flight Operations Department will continue to monitor weather conditions at all airports and destinations, constantly analyzing how flights may be affected. By further improving the accuracy of information gathering and making early decisions on whether or not to operate flights, we are minimizing the impact on our customers and management. In addition, aircraft are evacuated from airports in bad weather at an early stage to prevent damage to the aircraft, and aircraft rotation, crew handling, and flight schedules are reviewed in advance after the weather recovers. In addition, as part of our business continuity management, we have a BCP (Business Continuity Plan) that outlines policies and procedures to ensure the health and safety of our customers and all ANA Group executives and employees, minimize the impact on management and society, and restore operations as quickly as possible in the event that a large-scale disaster disables ANA Group flight monitoring facilities. (The ANA Group has a Business Continuity Plan (BCP) that outlines policies and procedures to ensure the health and safety of all officers and employees, minimize the impact on management and society, and restore operations as quickly as possible.</p> <p>"Results/response costs."</p> <p>Due to the recovery of production volume after COVID-19, sales in fiscal 2023 increased by 20.4% compared to the previous year. Although an increase in flight cancellations due to climate change is expected in the future, the company will continue to take BCP measures and review them to reduce risks to the overall business.</p> <p>Personnel expenses of 6 million yen for annual BCP implementation drills and 88 million yen for facility maintenance and management and other expenses, totaling 94 million yen per year.</p> <p>Estimated time frame (in number of years) to implement relevant adaptation measures for existing operations and/or new operations</p> <p>3years</p> <p>Subject to FY2023-2025 ANA Group Corporate Strategy, published on February 15, 2023 (As reference 1.3.3.3)</p>

Emissions Reduction Targets

Target Type and Metric : Absolute targets

Scope covered by the target	Target Timeframe	Baseline year emissions covered and as a % of total base year emissions	% reduction target from base year	SBTi?
Scope1,2,3 combined	Base Year	Base year emissions /met. ton. CO2e	2.2% reduction	Yes
	FY 2019	13978394		
	Target Year	Percentage of total base year emissions		
	FY 2030	100%		

Additional comments

We have two certified targets.

(1) emission targets for air transportation (intensity) and (2) emission targets for energy used in operations other than air transportation.

In case of,(1) accounts for 98-99% of total emissions in (1)+(2).

(1) Air transportation targets (SCOPE1 and 3):

Reduction of emission intensity: 29% reduction by FY2030 based on 2019 (absolute amount: 2% reduction in total amount/assumed growth rate of 3%)

(2) Non-air transportation targets (SCOPE1 and 2):

Reduction in total volume: Based on 2019, 27.5% reduction by FY2030

As shown in (1) and (2), the emission intensity and the absolute emission targets are available, so we calculated the total reduction in (1) as specified and combined it with (2) to calculate the values as absolute targets.

Specific Fuel Consumption for Passenger Transport

Unit	FY2020	FY2021	FY2022	FY2023
Liters/100 passenger-kilometers	16.60	15.10	6.30	5.10
Data coverage %	100	100	100	100
External assurance				yes

Specific Fuel Consumption for Cargo Transport

Unit	FY2020	FY2021	FY2022	FY2023
Liters/TKT (ton kilometers transported)	0.168	0.231	0.249	0.459
Data coverage %	100	100	100	100
External assurance				yes

Fleet GHG Intensity

GHG Intensity Ratio for passengers (Kg CO2eq per passenger-kilometer)	FY 2020	FY 2021	FY 2022	FY 2023
	0.318	0.343	0.151	0.123
Unit	kg CO2e / Pkm			

GHG Intensity Ratio for cargo (Kg CO2eq per tonne-kilometer)	FY 2020	FY 2021	FY 2022	FY 2023
	0.596	0.57	0.636	1.131
Unit	kg CO2e / tkm			

Air Fleet Decarbonization

% SAF use (Kg CO2eq per passenger-kilometer)	FY 2020	FY 2021	FY 2022	FY 2023
	0.121	0.053	0.068	0.004
External assurance				yes

Fleet Age

The average age of our fleet	9.62
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Fleet Age (Years)	% of total fleet in respective age group	% of planes in respective age group upgraded in the past 2 years
> 13years	19	0
7-13 years	44	40
< 7 years	38	15