

Nisshinbo Group Greenhouse Gas Emissions Data 2021

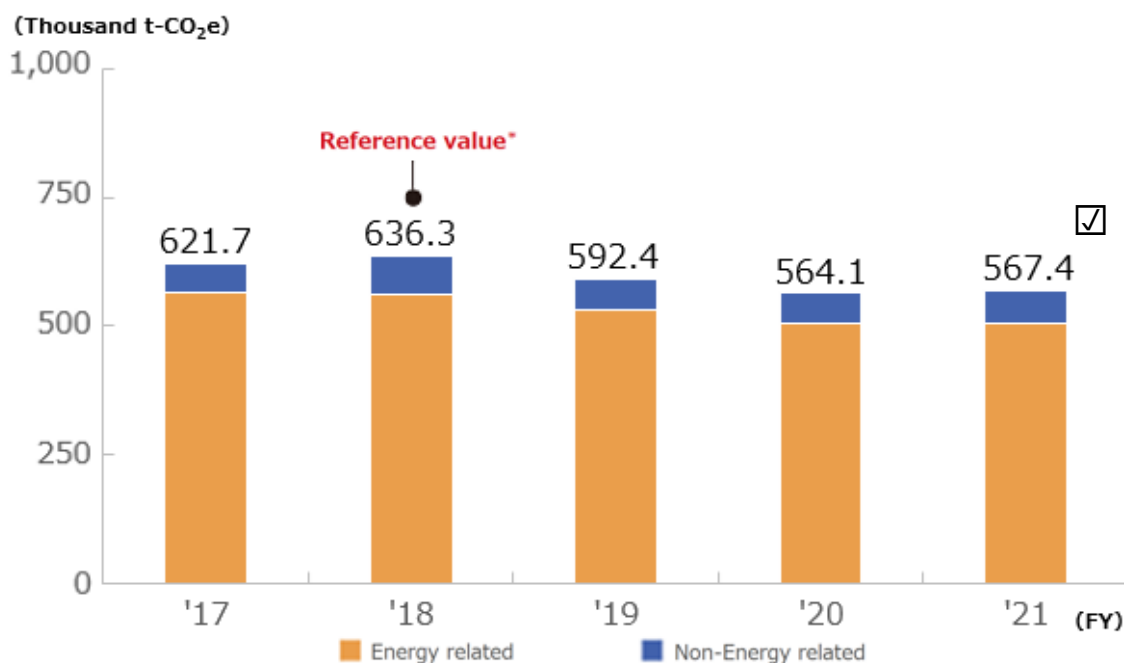
Greenhouse Gas Emissions

The Nisshinbo Group's actual greenhouse gas emissions were approximately 567.4 thousand t-CO₂e, up 1% from the previous fiscal year's greenhouse gas emissions. Decreased greenhouse gas emissions were attributed to the abolition of coal boiler fuels in the Textiles business and the switch from HFCs (hydrofluorocarbons) to HFOs (hydrofluoroolefins) in the Chemicals business. However, the recovery demand from the effects of new coronavirus infections resulted in a slight increase in greenhouse gas emissions for the entire group from the restoration of production.

Perfluorocarbons (PFCs) composed 87% of non-energy related greenhouse gas emissions. The PFCs emissions were mainly from the semiconductor product manufacturing process at Nisshinbo Micro Devices Inc.*

* In January 2022, New Japan Radio Co., Ltd., and Ricoh Electronic Devices Co., Ltd., merged to form Nisshinbo Micro Devices Inc.

Trends in Greenhouse Gas Emissions



* In 2018, we changed our fiscal year-end from March 31 to December 31. As a result, the consolidated fiscal year, which is a transitional period, is an irregular accounting period. For this reason, the period used for reference to FY2018 is adjusted to the period from April 1, 2018 to March 31, 2019, to match the period of other consolidated fiscal years.

Trends in Greenhouse Gas Emissions by Scope

(Thousand t-CO₂e)

			2017	2018 (Reference value)*	2019	2020	2021
Greenhouse Gas Emissions	Scope1	(Energy related + Non-Energy related)	255.0	263.4	243.8	246.7	237.9
		(Energy related)	198.4	187.0	183.1	187.7	173.7
		(Non-Energy related)	56.6	76.3	60.7	59.0	64.2
	Scope2	(Energy related)	366.7	373.0	348.6	317.4	329.4
	Scope1+Scope2	(Energy related + Non-Energy related)	621.7	636.3	592.4	564.1	567.4 <input checked="" type="checkbox"/>

* The same reference values are shown in the graph above for Trends in Greenhouse Gas Emissions.

The data marked with is assured by a third party (Deloitte Tohmatsu Sustainability Co., Ltd.).

[Calculation method]

•Scope1 :

Energy related Greenhouse Gas Emissions = Σ [Fuel Consumption \times CO₂ Emission Factor*¹]

Non-Energy related Greenhouse Gas Emissions = Non-Energy related CO₂ Emissions +
 Σ [Greenhouse Gas Emissions other than CO₂ \times Global Warming Potential*²]

- *1 Emission factors based on the Act on Promotion of Global Warming Countermeasures are used. Coal, however, uses a factor (1.893 t-CO₂/t) calculated based on actual calorific values.
- *2 Global warming potential based on the Act on Promotion of Global Warming Countermeasures.

•Scope2 :

Energy-related Greenhouse Gas Emissions =

$$\Sigma [\text{Purchased Electricity and Purchased Steam Volume} \times \text{CO}_2 \text{ Emission Factor}^{*3}]$$

- *3 Purchased electricity uses, in Japan, adjusted emission factors for each electric company based on the Act on Promotion of Global Warming Countermeasures, and the in foreign countries, the emission factors for each electric company, and if unavailable, the latest country-specific emission factors of IEA Emissions Factors. Purchased steam uses emission factors based on the Act on Promotion of Global Warming Countermeasures.
- *4 For purchased electricity, alternative emission factors by electric power supplier were used until fiscal year 2020 based on the Act on Promotion of Global Warming Countermeasures. For data for past fiscal years after fiscal year 2014, greenhouse gas emissions were retroactively adjusted using the emission factors in *3 above.

[Subject Organizations]

In fiscal year 2021, a total of 102 companies, including Nisshinbo Holdings Inc. and 101 consolidated subsidiaries, were counted.

Independent Practitioner's Assurance of Environmental Data

To improve the reliability of environmental performance data on greenhouse gas emissions (Scope1 and Scope2), the Nisshinbo Group has received independent practitioner's assurance from Deloitte Tohmatsu Sustainability Co., Ltd. in the Japanese version.

Independent Practitioner's Assurance Report

June 15, 2022

Mr. Masahiro Murakami
Representative Director and President,
Nisshinbo Holdings Inc.

Masahiko Sugiyama
Representative Director
Deloitte Tohmatsu Sustainability Co., Ltd.
3-2-3, Marunouchi, Chiyoda-ku, Tokyo

We have undertaken a limited assurance engagement of the Greenhouse gas emissions indicated with for the year ended December 31, 2021 (the "GHG Information") included in the "Nisshinbo Group Greenhouse Gas Emissions Data 2021" (the "Report") of Nisshinbo Holdings Inc. (the "Company").

The Company's Responsibility

The Company is responsible for the preparation of the GHG Information in accordance with the calculation and reporting standard adopted by the Company (indicated with the GHG Information included in the Report). Greenhouse gas quantification is subject to inherent uncertainty for reasons such as incomplete scientific knowledge used to determine emissions factors and numerical data needed to combine emissions of different gases.

Our Independence and Quality Control

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. We apply International Standard on Quality Control 1, *Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements*, and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the GHG Information based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with the International Standard on Assurance Engagements ("ISAE") 3000, *Assurance Engagements Other than Audits or Reviews of Historical Financial Information*, issued by the International Auditing and Assurance Standards Board ("IAASB"), ISAE 3410, *Assurance Engagements on Greenhouse Gas Statements*, issued by the IAASB and the *Practical Guideline for the Assurance of Sustainability Information*, issued by the Japanese Association of Assurance Organizations for Sustainability Information.

The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records. These procedures also included the following:

- Evaluating whether the Company's methods for estimates are appropriate and had been consistently applied. However, our procedures did not include testing the data on which the estimates are based or reperforming the estimates.
- Undertaking site visits to assess the completeness of the data, data collection methods, source data and relevant assumptions applicable to the sites.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement.

Limited Assurance Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the GHG Information is not prepared, in all material respects, in accordance with the calculation and reporting standard adopted by the Company.

The above represents a translation, for convenience only, of the original Independent Practitioner's Assurance report issued in the Japanese language.