

Sustainability Report

Third-Party Verification	409
Method of Calculating Greenhouse Gas Emissions Data	412
Honors for Daikin	416

THIRD-PARTY VERIFICATION

To ensure reliability of the content of this report, Daikin had a third-party verification conducted for data on greenhouse gas emissions, water use, waste water, waste emissions, and chemical substances emissions.

Data Covered by Verification

Environmental Impact Data on Business Operations in FY2017

- Scope 1 and Scope 2 greenhouse gas (GHG) emissions, water use, waste water, waste emissions, and chemical substances emissions from business operations of four production bases in Japan of Daikin Industries, Ltd., eight production subsidiaries in Japan, and 47 production subsidiaries overseas.
 - Category 1 (purchased goods and services), 4 (upstream transportation and distribution), 6 (business travel), and 11 (use of sold products) emissions of Scope 3 GHG emissions calculated in line with the GHG Protocol's 'Corporate Value Chain (Scope3) Accounting and Reporting Standard.'
-

Scope of Review

Contribution to CO₂ Emission Reduction through the Use of Products

- Contribution to CO₂ emission reduction through the use of inverter air conditioners sold in emerging countries in fiscal 2017.
- Contribution to CO₂ emission reductions through the use of air conditioners sold in industrialized countries in fiscal 2017.
- Contribution to greenhouse gas emission reductions through fiscal 2017 worldwide sales of air conditioners that use R-32 low global warming potential refrigerant.

Daikin Group Sustainability Report 2018 Independent Verification Report

To: Daikin Industries, Ltd.



Bureau Veritas Japan Co., Ltd.
System Certification Services Headquarters

Bureau Veritas Japan Co., Ltd. (Bureau Veritas) has been engaged by Daikin Industries, Ltd. (Daikin) to conduct an independent verification and review of its environmental data selected by Daikin for inclusion in the Daikin Group Sustainability Report 2018 (the Report), issued under the responsibility of Daikin. The aim of the verification is to consider the reliability and accuracy of environmental data within the Report and to provide a verification opinion based on objective evidence. The aim of the review is to make an independent statement concerning the reliability and accuracy of the environmental data.

1. Verification and Review Outline

1) Environmental impact data generated through business operations in FY2017

Bureau Veritas conducted a verification of the following data.

Data verified	Sites Visited	Verification or Review Methodology
The following data through business operations of four production bases of Daikin, eight production subsidiaries within Japan and 47 production subsidiaries overseas - CO ₂ emissions from energy use - HFCs and PFCs emissions - Water intake and Wastewater - Recycled materials and Waste - VOC emissions	- Daikin Head Office - Daikin Sheet-Metal Co., Ltd. - DAIKIN SUNRISE SETTSU, LTD. - Daikin Shiga Plant - Jiangxi Datang Chemicals Co., Ltd - Daikin Fluoro Coatings (Shanghai) Co.Ltd. - Daikin Fluorochemicals(China) Co.Ltd. - DAIKIN AUSTRALIA PTY. LTD. - Daikin Malaysia Sdn. Bhd. - Daikin Steel Malaysia Sdn.Bhd. - American Air Filter Manufacturing Sdn Bhd - AAF-Limited(United Kingdom) - Daikin Isitma Ve Sogutma Sistemleri San. Tic. A.S.	- Review of documentary evidence produced by Daikin Head Office and the sites visited - Interviews with relevant personnel of Daikin Head Office and the sites visited - Site inspection assessing data monitoring procedure - Comparison between the reported data and the supporting documentary evidence
Release amount of PRTR (**1) chemical substances through business operations of four production bases of Daikin and eight production subsidiaries within Japan (*1) Pollutant Release and Transfer Register system		
The following data through business operations of four production bases of Daikin - CO ₂ emissions from non-energy use - CH ₄ , N ₂ O and SF ₆ emissions		
Categories 1, 4, 6 and 11 of Scope 3 GHG emissions accounted in line with the GHG Protocol's 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard'	- Daikin Head Office	

The verification was conducted using Bureau Veritas' standard procedures and guidelines for external verification of non-financial reporting, based on current best practice. Bureau Veritas refers to the International Standard on Assurance Engagements (ISAE) 3000 in providing a limited assurance for the scope of work stated herein.

2) Amount of contribution to GHG emission reduction by sold products

Bureau Veritas conducted a review of the following data.

Data Reviewed	Site Visited	Review Methodology
The amount of contribution to CO ₂ emission reduction through the use of inverter air conditioners sold for emerging countries in FY2017	Daikin Head Office	- Review of documentary evidence produced by Daikin Head Office and the departments of the relevant products and services - Interviews with relevant personnel of Daikin Head Office and the departments of the relevant products and services - Comparison between the data used in the calculation of emissions reductions and the supporting documentary evidence
The amount of contribution to CO ₂ emission reduction through the use of air conditioners sold for advanced countries in FY2017 (Base year FY2005)		
The amount of contribution to GHG emission reduction through the change to low global warming potential refrigerant (R32) charged into air conditioners sold in FY2017		

The review was conducted using Bureau Veritas' standard procedures for external review of sustainability reporting.

2. Findings

On the bases of our methodology and the activities described above:

- Nothing has come to our attention to indicate that the reviewed information within the scope of our verification and review is inaccurate and does not provide a fair representation of the performance for the defined period.
- It is our opinion that Daikin has established appropriate systems for the collection, aggregation and analysis of quantitative data within the scope of our verification and review.

Bureau Veritas has implemented a code of ethics across its business which is intended to ensure that all our staff maintain high standards in their day to day business activities. We are particularly vigilant in the prevention of conflicts of interest. Bureau Veritas activities for Daikin are for sustainability reporting verification only and we believe our verification assignment did not raise any conflicts of interest.

GREENHOUSE GAS EMISSIONS VERIFICATION STATEMENT

To: Daikin Industries, Ltd.



**BUREAU
VERITAS**



Bureau Veritas Japan Co., Ltd.
System Certification Services Headquarters

Bureau Veritas Japan Co., Ltd. (Bureau Veritas) was engaged by Daikin Industries, Ltd. (Daikin) to conduct verification of the greenhouse gas (GHG) emissions reported in the Daikin Group CSR Report 2018 for the period of April 1, 2017 through March 31, 2018.

1. Scope of Verification

Daikin requested Bureau Veritas to verify, to a limited level of assurance, the accuracy of the following GHG information:

- 1) Scope 1 and Scope 2 GHG emissions:
 - CO₂ from energy use, HFCs, PFCs: GHG emissions through business operations of four production bases of Daikin, eight production subsidiaries within Japan and 47 overseas production subsidiaries
 - CO₂ from non-energy use, CH₄, N₂O, SF₆: GHG emissions through business operations of four production bases of Daikin
- 2) Categories 1, 4, 6 and 11 of Scope 3 GHG emissions accounted and reported in line with the GHG Protocol's 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard' within the boundaries defined by Daikin for each category.

2. Methodology

Bureau Veritas conducted the verification in accordance with the requirements of the international standard 'ISO 14064-3(2006): Greenhouse gases - Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions'.

As part of Bureau Veritas' assurance, the following activities were undertaken:

- Interviews with relevant personnel of Daikin responsible for the identification and calculation of GHG emissions;
- Review of Daikin's information systems and methodology for collection, aggregation, analysis and review of information used to determine GHG emissions; and
- Audit of a sample of source data to check accuracy of quantified GHG emissions.

3. Conclusion

Based on the verification work and processes followed, there is no evidence to suggest that the GHG emissions assertions shown below:

- are not materially correct and are not a fair representation of the GHG emissions, as per the scope of work;
- are not prepared in accordance with the methodology for calculating GHG emissions established and implemented by Daikin.

Verified greenhouse gas emissions		
Scope 1 755,094 t-CO ₂ e	Scope 2 698,144 t-CO ₂ e (location-based) 592,983 t-CO ₂ e (market-based)	Scope 3 234,149,008 t-CO ₂ e

The breakdown of Scope 3 emissions are as follows.

Category 1: 2,552,076 t-CO₂e | Category 4: 24,796 t-CO₂e | Category 6: 14,810 t-CO₂e
Category 11: 231,557,326 t-CO₂e

[Statement of independence, impartiality and competence]

Bureau Veritas is an independent professional services company that specializes in Quality, Health, Safety, Social and Environmental management with over 180 years history in providing independent assurance services. No member of the verification team has a business relationship with Daikin, its Directors or Managers beyond that required of this assignment. We conducted this verification independently and to our knowledge there has been no conflict of interest. Bureau Veritas has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day-to-day business activities. The verification team has extensive experience in conducting assurance over environmental, social, ethical and health and safety information, systems and processes.

METHOD OF CALCULATING GREENHOUSE GAS EMISSIONS DATA

Greenhouse gas emissions data are calculated as follows.

(1) Use of fuel at sites (Energy-induced CO₂) Scope 1

- The scope of calculation covers four manufacturing bases of Daikin Industries, eight manufacturing subsidiaries in Japan, and 47 manufacturing subsidiaries overseas.
- However, the following may not be included in calculation: newly consolidated bases, sites that are newly established and that don't yet have a data collection system in place, and sites whose emissions are negligible. As well, for sites where data procurement is difficult, calculation is based on estimates of past data, for example.
- Heat generation per unit, CO₂ emissions coefficient: Based on Environmental Activity Evaluation Program (Eco-Action 21) (1998, Ministry of the Environment); for natural gas in Japan, the coefficient used is based on the Act on the Promotion of Global Warming Countermeasures.

(2) Emissions of HFC and PFC in production processes at sites Scope 1

- The scope of calculation covers four manufacturing bases of Daikin Industries, eight manufacturing subsidiaries in Japan, and 47 manufacturing subsidiaries overseas.
- For estimates of HFC and PFC emissions, material balances and emissions coefficients are set and calculated based on methods stipulated in the Act on the Promotion of Global Warming Countermeasures.
- Global warming coefficients of HFC and PFC: Coefficients provided in the IPCC Fourth Assessment Report.

(3) Non-energy-induced CO₂, CH₄, N₂O, SF₆ emissions in production processes at sites

Scope 1

- The scope of calculation is as follows.
Four manufacturing bases of Daikin Industries (Non-energy-induced CO₂, CH₄, N₂O, SF₆).
- Calculations are based on emissions coefficients stipulated in the Act on the Promotion of Global Warming Countermeasures.
- Global warming coefficients: Coefficients provided in the IPCC Fourth Assessment Report.

(4) Use of electricity and heat at sites (Energy-induced CO₂)

Scope 2

- The scope of calculation covers four manufacturing bases of Daikin Industries, eight manufacturing subsidiaries in Japan, and 47 manufacturing subsidiaries overseas.
- CO₂ emissions coefficients are as follows.

Purchased electricity: In Japan: 0.384kg-CO₂/kWh

Based on Environmental Activity Evaluation Program (Eco-Action 21) (1998, Ministry of the Environment)

Overseas: Based on Report on Survey of Estimates of CO₂ Unit Emissions in Power Generation Fields in Countries of the World (Japan Electrical Manufacturers' Association), or on coefficients confirmed by power companies servicing each site.

Purchased heat: 0.068kg-CO₂/MJ

Based on Environmental Activity Evaluation Program (Eco-Action 21) (1998, Ministry of the Environment)

For Kashima Plant, 0.05 kg-CO₂/MJ (surveyed value by site)

(5) Purchased products and services (Energy-induced CO₂)

Scope 3

- Scope of calculation covers components and materials purchased for air conditioners, water heaters, oil hydraulic products, and fluorochemical products produced in Japan, China, Thailand, Malaysia, Belgium, the Czech Republic, and the U.S.
- For each, purchased amount is multiplied by CO₂ emission coefficient.
- CO₂ emission coefficient is based on CFP Program Basic Database Ver. 1.01 (data in Japan), by the Japan Environmental Management Association for Industry, and the Inventory Database for Environment Analysis, by the National Institute of Advanced Industrial Science and Technology, and the Japan Environmental Management Association for Industry
- For chemicals, approximately 80% of the highest volume ones were selected, and a 100% value estimate calculation was done.

(6) Transport and transmission (Upstream) (Energy-induced CO₂)

Scope 3

- Scope of calculation covers transport, including imports, of products and parts (compressors) sold in Japan by Daikin Industries.
- For calculation method, transport in ton-kilometers (transport amount X transport distance) is multiplied by CO₂ conversion coefficient.
- CO₂ conversion coefficient:
Within Japan: Based on Act on the Promotion of Global Warming Countermeasures.
From overseas to Japan: Based on simple calculation tool for logistics CO₂ emissions, by Policy Research Institute for Land, Infrastructure, Transport and Tourism.

(7) Business trips (Energy-induced CO₂)

Scope 3

- Scope of calculation covers business trips in Japan and overseas by employees of Daikin Industries and its consolidated subsidiaries in Japan.
- Transportation cost is multiplied by CO₂ emission coefficient. Transportation cost is cost of travel minus lodging, daily allowance, and other expenses that can be excluded.
In Japan: Transportation cost X emission coefficient per amount paid (Air flight: Domestic).
Overseas: Transportation cost X emission coefficient per amount paid (Air flight: International).
- CO₂ emission coefficient is based on the database of emission unit values (Ver. 2.0) of the Report on Emissions Unit Values for Calculation of Greenhouse Gas Emissions, etc., by Organizations Throughout the Supply Chain, by the Ministry of the Environment and the Ministry of Economy, Trade and Industry. Emission coefficient uses the most expensive air flights.

(8) CO₂ emissions in use of products sold in Japan (Energy-induced CO₂)

Scope 3

- Scope of calculation covers CO₂ emissions from the use of residential air purifiers, central air conditioners, residential water heaters, residential air conditioners, factory air conditioners, and air conditioners for buildings, stores, and offices sold in Japan, ASEAN, China, Hong Kong, Taiwan, Australia, the EU, and the U.S.
- Calculation method: Annual electricity consumption X product lifecycle X electricity CO₂ emission coefficient X products sold.
- Annual electricity consumption and others are as follows.
Annual electricity consumption: Catalog values for room air conditioners, assumed conditions of actual use for other products.
Product lifecycle: 10 years for room air conditioners, water heaters, and air purifiers, 13 years for other products.
Electricity CO₂ emission coefficient:
In Japan: 0.348 kg-CO₂/kWh;
based on Environmental Activity Evaluation Program (Eco-Action 21) (1998, Ministry of the Environment).
Overseas: Based on Report on Survey of Estimates of CO₂ Unit Emissions in Power Generation Fields in Countries of the World (The Japan Electrical Manufacturers' Association), or on "Methodology for Ecodesign of Energy-related Products (COWI, VHK)."
- Up to 80% of the total sales volume, in order of highest selling products, was calculated, and a 100% value estimate calculation was done.

(9) Refrigerant leakage in use of products sold in Japan

Scope 3

- Scope of calculation covers refrigerant leakage during use of refrigeration and air conditioning equipment sold in Japan, ASEAN, China, Hong Kong, Taiwan, Australia, the EU, and the U.S.
- Calculation method: Annual leakage rate X product lifecycle X global warming coefficient of refrigerant X products sold in fiscal 2014.
- Annual leakage rate and others are as follows.
Annual leakage rate: Revisions of Emission Coefficient, Etc. During Use of Refrigeration and Air Conditioning Equipment, by Manufacturing Industries Bureau, Ministry of Economy, Trade and Industry, March 17, 2009.
Product lifecycle: 10 years for residential products, 13 years for commercial refrigeration and air conditioning equipment.
Global warming coefficient of refrigerant: Coefficients provided in the IPCC Fourth Assessment Report.
- Up to 80% of the total sales volume, in order of highest selling products, was calculated, and a 100% value estimate calculation was done.

HONORS FOR DAIKIN

Awards for 2017

Overall CSR (Including SRI)

Daikin Industries, Ltd.

- Chosen for inclusion in the Morningstar Socially Responsible Investment Index



- Chosen for inclusion in the MSCI Japan ESG Select Leaders Index



- Chosen for inclusion in the MSCI Japan Empowering Women Index (WIN)



- Daikin's Sustainability Report 2017 won the Review Board Special Award of Excellence in the Environmental Communication Awards.



- Won the Best IR Award as selected by the Japan Investor Relations Association

Daikin Middle East and Africa FZE

- Was awarded the Dubai Chamber CSR Label by the Dubai Chamber of Commerce and Industry



Daikin (China) Investment Co., Ltd.

- Won the Sustainable Best Practices Award from the Shanghai Daily

Environmental Honors

Daikin Industries, Ltd.

- Received a rating of "A-" in climate performance by the Carbon Disclosure Project (CDP), an international NGO
- FY 2017 Energy Conservation Grand Prize
 - Received the Director-General Prize of Agency for Natural Resources and Energy, for achieving a ZEB-type office using state-of-the-art air conditioning technologies and optimal management
 - Received the Chairman Prize of Energy Conservation Center, Japan (ECCJ) for the VRV Q Series for replacement use
 - Received the Chairman Prize of Energy Conservation Center, Japan (ECCJ) for the HEXAGON Force air-cooled heat-pump modular chiller



Daikin Airconditioning India Pvt. Ltd.

- Received the Most Energy Efficient Air Conditioners Award from the Government of India

Goodman Global Group, Inc.

- Earned LEED Gold certification for office buildings in DTTP under the LEED green building certification system



Honors for Customer Satisfaction

Daikin Industries, Ltd.

- Daikin's risora residential air conditioner won a iF Design Award and a Good Design Award.



- The cocotas multi-cassette-type air conditioner for small spaces was selected a Good Design Best 100 in the Good Design Awards.



**GOOD
DESIGN**

- Won an Award of Excellence in the Service and Hospitality Awards sponsored by the Japan Institute of Information Technology (JIIT)



**Service & Hospitality
Award**

- For the third consecutive year, received the Directors Award in the Corporate Telephone Answering Contest sponsored by the Japan Telecom Users Association (JTUA). First company in the manufacturing industry to be selected a Gold Ranked Company



Human Resource Honors

Daikin Industries, Ltd.

- Granted Nadeshiko Brand designation for the fifth time, and the fourth consecutive year, by the Ministry of Economy, Trade and Industry



- Awarded the highest level of certification (L-boshi certification) from Japan's Ministry of Health, Labor and Welfare for being a company that shows excellence in promoting the talents of women in the workplace



- Awarded the highest rating, 5 stars, in the NIKKEI Smart Work survey conducted by Nikkei Inc., which assesses companies based on the adoption of diverse, flexible work practices

NIKKEI
Smart Work

Best13 ★★★★★ 2018

Daikin (China) Investment Co., Ltd.

- Won the China Model Human Resources Hiring Company Prize in awards sponsored by 51job, China's leading human resource solutions provider

Daikin Compressor Industries, Ltd.

- Received a Prime Minister's Industry Award (Safety Management category)



Daikin Malaysia Sdn. Bhd.

- Won a Gold Class 1 Award from the Malaysian Society for Occupational Safety and Health (MSOSH)

Daikin Applied (UK)

- Awarded Gold level in the Better Health at Work Awards