Greenhouse Gas Inventory Report

ISO14064-1:2018

ESG Green Carbon Intelligence

September 18th, 2025

Overview

Basic Information

<table>
<tr><td>Auditor</td><td colspan="3">Sophia Wang</td></tr>
<tr><td>Onsite Calculation Date</td><td colspan="3">Sept. 18th, 2025</td></tr>
<tr><td rowspan="6">Facility Information</td><td colspan="3">Beifa Group Co., Ltd</td></tr>
<tr><td>Site</td><td>Name</td><td>Address</td></tr>
<tr><td>Headquarter</td><td>Beifa Group Co., Ltd</td><td>No. 68, Weiliu Road, XiaoGang, Beilun District, Ningbo, Zhejiang</td></tr>
<tr><td>Bohui</td><td>Ningbo Bohui Stationery Co., Ltd</td><td>2nd Floor, Production Building 1, Block 4, No. 68, Weiliu Road, XiaoGang, Beilun District, Ningbo, Zhejiang</td></tr>
<tr><td>Xinbeifa</td><td>Anhui Xinbeifa Pen City Co., Ltd</td><td>No. 28, New Town Avenue, Economic Development Zone, Lai'an County, Chuzhou City, Anhui Province (Investment Promotion Bureau, 2nd Floor, Development Zone Management Committee)</td></tr>
<tr><td>Beijing Office</td><td>Beifa Group Co., Ltd Beijing Sales Office</td><td>1101-08, 11/F, Building 18, No.88 Liuxiang Road, Fengtai District, Beijing, China</td></tr>
<tr><td>Contact Name</td><td colspan="3">Edison Xiang</td></tr>
<tr><td>Email Address</td><td colspan="3">edisonxiang@beifa.com</td></tr>
<tr><td>Facility Product and Industry</td><td colspan="3">Consumer Durables, Household and Personal Products</td></tr>
</table>

Conclusion

Base Year	2023	**Criteria**	ISO 14064-1:2018 Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals; Standards, guidelines, specifications, etc. used by the organization in accounting for greenhouse gas emissions; System related to greenhouse gas quantification and reporting developed by the organization;
Calculation Scope	All facilities or activities within the reporting boundary of Beifa Group Co., Ltd		
Reporting Boundary	Category 1: Direct GHG emissions Category 2: Indirect GHG emissions from imported energy		
Calculation Conclusion	After calculation, it is confirmed that the quantification, monitoring and reporting of greenhouse gas emissions of the facility partially comply with the relevant requirements of *GHG Protocol*		
Total greenhouse gas emissions within factory boundary	**8,053.7 Tons**		

Greenhouse Gas Emissions Calculation Summary

GHG emissions				
Category 1: Direct GHG emissions	Stationary Combustion	79.37 Tons	Proportion	1.02%
	Mobile Combustion	71.13 Tons	Proportion	0.91%
	Fugitive Sources	174.68 Tons	Proportion	2.24%
	Process Sources	NA	Proportion	NA
	Total	325.18 Tons	Proportion	4.16%
Category 2: Indirect GHG emissions from imported energy	Purchased electricity	7728.51 Tons	Proportion	98.96%
Total		**8,053.7 Tons**		

Auditor	**Sophia Wang**	**Date**	**Sept. 18th, 2025**
Audit Team Leader	**Sophia Wang**	**Date**	**Sept. 18th, 2025**
Approver	**Sophia Wang**	**Date**	**Sept. 18th, 2025**

Calculation Process and Methodology

Statistics and measurement of emission sources

Through reviewing of relevant evidences of energy consumption, the facility's energy management system, and on-site interviewing with administrative personnel, production management personnel and electricians, the audit team confirmed that the statistics and measurement of the types of emission sources are as follows：

Classification of Emission Sources	Emission Source	Site	Discharge Facilities	Measurement Method	Types of Greenhouse Gases Emitted
Stationary Combustion	LPG	Headquarter	Canteen	Calculation was based on statistical data	CO_2, CH_4, N_2O
Stationary Combustion	LPG	Bohui	Canteen	Calculation was based on statistical data	CO_2, CH_4, N_2O
Stationary Combustion	LPG	Headquarter	Workshop	Calculation was based on statistical data	CO_2, CH_4, N_2O
Stationary Combustion	LPG	Bohui	Workshop	Calculation was based on statistical data	CO_2, CH_4, N_2O
Stationary Combustion	Coal-to-liquids	Xinbeifa	Workshop	Calculation was based on statistical data	CO_2
Mobile Combustion	Diesel oil	Headquarter	Deisel engine vehicles	Calculation was based on statistical data	CO_2, CH_4, N_2O
Mobile Combustion	Diesel oil	Bohui	Deisel engine vehicles	Calculation was based on statistical data	CO_2, CH_4, N_2O
Mobile Combustion	Petrol	Xinbeifa	Deisel engine vehicles	Calculation was based on statistical data	CO_2, CH_4, N_2O
Mobile Combustion	Petrol	Headquarter	Petrol engine vehicles	Calculation was based on statistical data	CO_2, CH_4, N_2O
Mobile Combustion	Petrol	Bohui	Petrol engine vehicles	Calculation was based on statistical data	CO_2, CH_4, N_2O
Mobile Combustion	Petrol	Xinbeifa	Petrol engine vehicles	Calculation was based on statistical data	CO_2, CH_4, N_2O
Fugitive Sources	R22、R23、R32、R134a、R410a	Headquarter	Refrigeration Equipment/Split-Type and Central Air Conditioner	Calculation was based on statistical data	$HFCs$

Classification of Emission Sources	Emission Source	Site	Discharge Facilities	Measurement Method	Types of Greenhouse Gases Emitted
Fugitive Sources	R22、R23、R32、R134a、R410a	Bohui	Refrigeration Equipment/Split-Type and Central Air Conditioner	Calculation was based on statistical data	$HFCs$
Fugitive Sources	R22、R23、R32、R134a、R410a	Xinbeifa	Refrigeration Equipment/Split-Type and Central Air Conditioner	Calculation was based on statistical data	$HFCs$
Fugitive Sources	R22、R23、R32、R134a、R410a	Beijing Office	Refrigeration Equipment/Split-Type and Central Air Conditioner	Calculation was based on statistical data	$HFCs$
Purchased Electricity	Purchased Electricity	Headquarter	Enterprise Electricity Use	Calculation was based on statistical data	CO_2, CH_4, N_2O
Purchased Electricity	Purchased Electricity	Bohui	Enterprise Electricity Use	Calculation was based on statistical data	CO_2, CH_4, N_2O
Purchased Electricity	Purchased Electricity	Xinbeifa	Enterprise Electricity Use	Calculation was based on statistical data	CO_2, CH_4, N_2O
Purchased Electricity	Purchased Electricity	Beijing Office	Enterprise Electricity Use	Calculation was based on statistical data	CO_2, CH_4, N_2O

Activity Data and Its Sources

Classification of Emission Sources	Emission Source	Site	Discharge Facilities	Activity data	Unit	Measurement Method
Stationary Combustion	LPG	Headquarter	Canteen	13,540.00	kg	The calculation was based on usage of LPG and purchased invoices Calorific Value Used: 50242 kJ/kg
Stationary Combustion	Coal-to-liquids	Xinbeifa	Canteen	4,417.80	L	The calculation was based on usage and purchased invoices
Stationary Combustion	LPG	Headquarter	Workshop	6,075.00	kg	The calculation was based on usage of LPG and purchased invoices Calorific value used: 50242 kJ/kg
Stationary Combustion	LPG	Xinbeifa	Workshop	2,085.00	kg	The calculation was based on usage of LPG and purchased invoices Calorific value used: 50242 kJ/kg
Mobile Combustion	Petrol	Headquarter	Petrol engine vehicles	17,266.03	L	The calculation was based on refueling volume and invoices Calorific value used: 43124 kJ/kg Density of petrol: 0.74 kg/L
Mobile Combustion	Petrol	Bohui	Petrol engine vehicles	1,294.15	L	The calculation was based on refueling volume and invoices Calorific value used: 43124 kJ/kg Density of petrol: 0.74 kg/L
Mobile Combustion	Petrol	Xinbeifa	Petrol engine vehicles	5,396.65	L	The calculation was based on refueling volume and invoices Calorific value used:43124 kJ/kg Density of petrol: 0.74 kg/L
Mobile Combustion	Diesel Oil	Bohui	Deisel engine vehicles	2,850.46	L	The calculation was based on refueling volume and invoices Calorific value used: 42705 kJ/kg Density of diesel oil: 0.84
Mobile Combustion	Diesel Oil	Xinbeifa	Deisel engine vehicles	3,400.79	L	The calculation was based on refueling volume and invoices Calorific value used: 42705 kJ/kg

						Density of diesel oil: 0.84
Fugitive Sources	R134a	Headquarter	Refrigeration Equipment/Split-Type and Central Air Conditioner	1.71	kg	According to the total amount of refrigerant in refrigeration equipment and the fugitive rate Fugitive rate: 5.5% GWP-100: 1530
Fugitive Sources	R410a	Headquarter	Refrigeration Equipment/Split-Type and Central Air Conditioner	1,101.32	kg	According to the total amount of refrigerant in refrigeration equipment and the fugitive rate Fugitive rate: 5.5% GWP-100: 2256
Fugitive Sources	R410a	Xinbeifa	Refrigeration Equipment/Split-Type and Central Air Conditioner	10.93	kg	According to the total amount of refrigerant in refrigeration equipment and the fugitive rate. Fugitive rate: 5.5% GWP-100: 2256
Fugitive Sources	R22	Headquarter	Refrigeration Equipment/Split-Type and Central Air Conditioner	263.51	kg	According to the total amount of refrigerant in refrigeration equipment and the fugitive rate. Fugitive rate: 5.5% GWP-100: 1960
Fugitive Sources	R22	Xinbeifa	Refrigeration Equipment/Split-Type and Central Air Conditioner	29.95	kg	According to the total amount of refrigerant in refrigeration equipment and the fugitive rate. Fugitive rate: 5.5% GWP-100: 1960
Fugitive Sources	R23	Headquarter	Refrigeration Equipment/Split-Type and Central Air Conditioner	0.30	kg	According to the total amount of refrigerant in refrigeration equipment and the fugitive rate. Fugitive rate: 5.5% GWP-100: 14600
Fugitive Sources	R32	Headquarter	Refrigeration Equipment/Split-Type and Central Air Conditioner	80.50	kg	According to the total amount of refrigerant in refrigeration equipment and the fugitive rate. Fugitive rate: 5.5% GWP-100: 771
Fugitive Sources	R32	Xinbeifa	Refrigeration Equipment/Split-Type and	29.92	kg	According to the total amount of refrigerant in refrigeration

			Central Air Conditioner			equipment and the fugitive rate. Fugitive rate: 5.5% GWP-100: 771
Purchased Electricity	Electricity	Headquarter	Grid Electricity Purchased	8,167,714.00	kWh	Calculation was based on statistical data and purchased electricity payment invoices
Purchased Electricity	Electricity	Xinbeifa	Grid Electricity Purchased	5,177,409.00	kWh	Calculation was based on statistical data and purchased electricity payment invoices
Purchased Electricity	Electricity	Beijing Office	Grid Electricity Purchased	15,000.00	kWh	Calculation was based on statistical data and purchased electricity payment invoices
Photovoltaic Electricity	Electricity	Headquarter	Purchased PV Electricity	1,842,853.00	kWh	As a form of green power, photovoltaic electricity has an emission factor of zero.

Greenhouse Gas Emission Structure and Calculation Results

Measurement method			Greenhouse Gas Emission=Activity data×Emission factor×GWP				
Category	**Classification of Emission Sources**	**Emission Sources**	**Activity data**	**Unit**	**∑ Emission factor× GWP**	**Unit**	**Types of Greenhouse Gases Emitted（tCO2）**
Scope 1: Direct GHG emissions	Stationary Combustion	LPG	8,160.00	kg	3.173	kg CO_2e/kg	25.89
	Stationary Combustion	LPG	13,540.00	kg	3.173	kg CO_2e/kg	42.96
	Stationary Combustion	Coal-to-liquids	4,417.80	L	Calculate based on the chemical reaction equation		10.52
	Mobile Combustion	Diesel Oil	6,251.25	L	2.7002	kg CO_2e/L	16.88
	Mobile Combustion	Petrol	23,956.83	L	2.2645	kg CO_2e/L	54.25
Scope 2: Indirect GHG emissions from imported energy	Fugitive Sources	R134a	1.71	kg	84.15	kg CO_2e/kg	0.14
	Fugitive Sources	R410a	1,112.25	kg	124.05	kg CO_2e/kg	137.98
	Fugitive Sources	R22	293.46	kg	107.8	kg CO_2e/kg	31.63
	Fugitive Sources	R23	0.30	kg	803	kg CO_2e/kg	0.24
	Fugitive Sources	R32	110.42	kg	42.405	kg CO_2e/kg	4.68
	Purchased Electricity	Purchased Electricity（Headquarter and Bohui）	8,167,714.00	kWh	0.5153	tCO_2e/MWh	4,208.82
	Purchased Electricity	Purchased Electricity（Anhui Xinbeifa）	5,177,409.20	kWh	0.6782	tCO_2e/MWh	3,511.32
	Purchased Electricity	Purchased Electricity（Beijing Office）	15,000.00	kWh	0.558	tCO_2e/MWh	8.37
	Photovoltaic Electricity	PV Electricity	1,842,853.00	kWh	0	tCO_2e/MWh	0
Total							**8,053.70**

Emission Factor Sources

Activity data	Unit	Source
3.173	kg CO2e/kg	<IPCC 2006 Volume II, Chapter II>, Table 2.2
0.53078	kg CO2e/L	UK GOV GHG EF-V1.0-2025/06 —WTT- fuels
2.2645	kg CO2e/L	<IPCC 2006 Volume II, Chapter III>, Table3.2.1
2.7002	kg CO2e/L	<IPCC 2006 Volume II, Chapter III>, Table3.2.2
5.5%	% of initial charge/year	<IPCC 2006 Volume III, Chapter VII>, Table7.9
0.5153	tCO2e/MWh	<Announcement on the Release of 2022 CO_2 Emission Factors for Electric Power> https://www.mee.gov.cn/xxgk2018/xxgk/xxgk01/202412/t20241226_1099413.html
0.6782	tCO2e/MWh	<Announcement on the Release of 2022 CO_2 Emission Factors for Electric Power> https://www.mee.gov.cn/xxgk2018/xxgk/xxgk01/202412/t20241226_1099414.html
0.558	tCO2e/MWh	<Announcement on the Release of 2022 CO_2 Emission Factors for Electric Power> https://www.mee.gov.cn/xxgk2018/xxgk/xxgk01/202412/t20241226_1099415.html

Zhejiang Province: 0.5153 tCO2e/ MWh

Anhui Province: 0.6782 tCO2e/ MWh

Beijing: 0.5580 tCO2e/ MWh

GWP (Global warming potential)		
CO2	1	<IPCC Sixth Assessment Report 6 P1842 Table 7.SM.7>
CH4	27.9	
N2O	273	
HFC-23	14600	
HFC-32	771	
HFC-134a	1530	
HFC-410a	2255.5	
HFC-227ea	3600	

Data Quality Management

In accordance with relevant company procedures, emission sources and activity data shall be collected, and records related to GHG verification shall be retained for a period of three years. The quality of the GHG inventory shall be managed by respective functional departments, with specific responsibilities as follows:

1. Verification of Collected Data: Confirm the correctness of data sources and the accuracy of the data
2. Calculation of Inventory Data: Verify the appropriateness of selected emission factors, the correctness of calculation methodologies and formulas, and the accuracy of unit conversions.
3. Review of Inventory Reports: Ensure the Completeness of the report, the correctness of the format, and the accuracy of data and related information.

Uncertainty Analysis

The uncertainty of various data points in the greenhouse gas inventory, including emission factors, has been assessed. It is recognized that activity data collection involves measurement errors, introducing a degree of uncertainty. Similarly, emission factors, primarily sourced from databases such as the IPCC, also carry inherent uncertainty.

To mitigate the uncertainty of the calculated results, this report prioritizes the use of primary data wherever feasible.

The uncertainty assessment in this report employs a qualitative analysis method. This involves rating and scoring the activity data, emission factors, and instrument calibration. These scores are then aggregated into an overall rating through a weighted calculation based on the contribution of each source to the total emissions.

Evaluation Criteria for Uncertainty of Greenhouse Gas Quantification

<table>
<tr><th>Data Type</th><th>Data Level</th><th colspan="6">Data Quality Level</th></tr>
<tr><td rowspan="2">Activity Data</td><td>Level</td><td colspan="2">X=6</td><td colspan="2">Y=3</td><td colspan="2">Z=1</td></tr>
<tr><td>Type</td><td colspan="2">1.Automated Continuous Measurement</td><td colspan="2">2.Periodic Measurement(e.g., Meter Reading, Procurement Documents)</td><td colspan="2">3.Self-Estimation</td></tr>
<tr><td rowspan="2">Emission Factor</td><td>Level</td><td>A=6</td><td>B=5</td><td>C=4</td><td>D=3</td><td>E=2</td><td>F=1</td></tr>
<tr><td>Type</td><td>1.Coefficient Derived from Measurement / Mass Balance</td><td>2.Empirical Factor for Identical Processes or Equipment</td><td>3.Manufacturer-Provided Factor</td><td>4.Regional Emission Factor</td><td>5.National Emission Factor</td><td>6.International Emission Factor</td></tr>
<tr><td rowspan="2">Correction</td><td>Level</td><td colspan="2">L=6</td><td colspan="2">M=3</td><td colspan="2">S=1</td></tr>
<tr><td>Type</td><td colspan="2">1.Calibration was performed in accordance with regulations, and the results are within the allowable error.</td><td colspan="2">2.Calibration was performed as required, however, the results were out of tolerance; while in other cases, calibration was not possible, although the data source remains verifiable.</td><td colspan="2">3.Calibration was not performed as required by procedures.</td></tr>
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Data Level	Average Score Range
Level 1	≧5.0
Level 2	<5.0,≧4.0
Level 3	<4.0,≧3.0
Level 4	<3.0,≧2.0
Level 5	<2.0
Data quality is classified into a five-tiered system, where a lower tier number indicates higher data quality.	

Quantitative Uncertainty of Greenhouse Gases in This Calculation

Emission Resources	AD score	EF Score	Correction Score	Average Score	Emission Ratio	Weight ratio score
LPG（Canteen）	3	6	6	5	0.55%	0.03
LPG（Workshop Heating）	3	6	6	5	0.33%	0.02
Coal-to-liquids（Canteen）	3	3	6	4	0.03%	0.001
Petrol	3	6	6	5	0.66%	0.03
Diesel Oil	3	6	6	5	0.22%	0.01
Fugitive Emissions-R22	3	5	1	3	0.36%	0.01
Fugitive Emissions-R23	3	5	1	3	0.003%	0.00009
Fugitive Emissions-R32	3	5	1	3	0.04%	0.001
Fugitive Emissions-R134a	3	5	1	3	0.0005%	0.00001
Fugitive Emissions-R410a	3	5	1	3	0.05%	0.002
Purchased Electricity（Headquarter）	3	4	6	4.33	69.40%	3.01
Purchased Electricity（Anhui Xinbeifa）	3	4	6	4.33	28.14%	1.22
Purchased Electricity（Beijing Office）	3	4	6	4.33	0.11%	0.005
Total						4.34
Data Level						**Level 2**

List of Supporting Documents

Serial Number	Documents
1	1-Headquarter-2024 Beifa Electricity Invoice
2	2-Headquarter-2024 Beifa Water Invoice
3	3-Headquarter-2024 Fuel Cost Summary
4	4-Headquarter-2024 Canteen Gas Usage Summary
5	5-Headquarter-2024 Utilities Summary
6	6-Headquarter-2024 Dormitory Personnel Access Log
7	7-Headquarter-2024 Liquefied Gas and MD40 Rust Remover
8	8-Headquarter-2024 LPG Invoices Summary
9	9-Headquarter-2024 Employee Attendance Days
10	10-Headquarter-2024 Headquarters Refrigerant Inventory
11	11-Bohui-2024 Bohui Employee Attendance Summary
12	12-Bohui-2024 Bohui Truck Fuel Consumption
13	13-Anhui Xinbeifa-2024 Anhui Beifa Rust Remover
14	14-Anhui Xinbeifa-2024 Workshop Gas Consumption
15	15-Anhui Xinbeifa-2024 Electricity Bill Statement
16	16-Anhui Xinbeifa-2024 Employee Attendance
17	17-Anhui Xinbeifa-2024 Water Fee Ledger
18	18-Anhui Xinbeifa-2024 Gas Invoices
19	19-Anhui Xinbeifa-2024 PV Electricity Invoice
20	20-Anhui Xinbeifa-2024 Pen City AC Usage Statistics
21	21-Anhui Xinbeifa-State Grid Electricity Invoice
22	22-Anhui Xinbeifa-Water Invoices (Jan-Dec 2024)
23	23-Anhui Xinbeifa-2024 PV Electricity Summary
24	24-Anhui Xinbeifa-PV Full Invoice Export Report

25	25-Anhui Xinbeifa-2024 Canteen Fuel Invoices
26	26-Anhui Xinbeifa-2024 Canteen Fuel Annual Summary
27	27-Anhui Xinbeifa-2024 Vehicle Diesel Invoices
28	28-Anhui Xinbeifa-2024 Vehicle Diesel Ledger
29	29-Beijing Office-2024 Electricity Consumption
30	30-Beijing Office-2024 Beijing Attendance

*****End of Report*****