

GHG EMISSION REPORT OF IRIS Fabrics Limited

Address: Zirani Bazar, Kashimpur, Gazipur.



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1. Introduction

This GHG inventory estimates the GHG emission such as CO₂ emitted by IRIS Fabrics Limited for its operational purpose. The factory is situated at Zirani Bazar, Kashimpur, Gazipur. This inventory is prepared to quantify their annual CO₂ emission which will help them to incorporate carbon cost in decision making as well as to identify cost saving opportunities. The GHGs has been calculated based on the energy consumption and production process from the year of 2021, 2022 and 2023.

Table- 1.1: Energy Consumption Pattern from January 2021 to December 2021.

SL No.	Month	Purchased Electricity (KWH)	Solar Energy (KWH)	Natural Gas Consumption (m ³)	Diesel Consumption (Liter)	Octane (Liter)
1	Jan-21	495401	0	677375	17308	1298
2	Feb-21	538133	0	618068	15731	1432
3	Mar-21	494833	0	567857	17394	1454
4	Apr-21	567525	0	628427	18939	1210
5	May-21	463435	0	525108	15064	1469
6	Jun-21	686185	0	534890	17076	1845
7	Jul-21	473940	0	495385	9959	1225
8	Aug-21	609835	6157	574534	14791	1655
9	Sep-21	511248	12952	624411	8809	1775
10	Oct-21	514329	14322	604228	15065	1492
11	Nov-21	537972	13038	537526	12781	1342
12	Dec-21	497583	10820	668400	11311	1283
Total		6390419	57289	7056210	174228	17480

Table- 1.2: Energy Consumption Pattern from January 2022 to December 2022.

SL No.	Month	Purchased Electricity (KWH)	Solar Energy (KWH)	Natural Gas Consumption (m ³)	Diesel Consumption (Liter)	Octane (Liter)
1	Jan-22	658849	11981	531469	16262	1480
2	Feb-22	479484	14255	566035	12998	1767
3	Mar-22	504357	17662	515511	14754	1311
4	Apr-22	703956	14706	507867	18196	339
5	May-22	245242	14441	517032	14612	170
6	Jun-22	503824	11619	545496	7161	190

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SL No.	Month	Purchased Electricity (KWH)	Solar Energy (KWH)	Natural Gas Consumption (m ³)	Diesel Consumption (Liter)	Octane (Liter)
7	Jul-22	438439	13123	466848	18931	170
8	Aug-22	462820	14323	560505	25167	175
9	Sep-22	448080	10738	614769	16805	175
10	Oct-22	390658	12930	458200	21303	175
11	Nov-22	293585	12066	539208	17763	175
12	Dec-22	436345	10046	459325	17554	175
Total		5565639	157890	6282265	201505	6302

Table- 1.3: Energy Consumption Pattern from January 2023 to December 2023.

SL No.	Month	Purchased Electricity Non-Renewable (KWH)	Purchased Electricity-Renewable (KWH)	Solar Energy (KWH)	Natural Gas Consumption (m ³)	Diesel Consumption (Liter)	Octane (Liter)
1	Jan-23	1475476	5500000	8,530	561214	20296	175
2	Feb-23			11,543	485168	17640	175
3	Mar-23			13,465	430378	16539	175
4	Apr-23			15,728	420961	16860	175
5	May-23			15,942	589722	19475	175
6	Jun-23			9,753	551317	20838	254
7	Jul-23			14,870	534746	20856	175
8	Aug-23			10,817	557204	18487	185
9	Sep-23			12,379	521305	19282	175
10	Oct-23			12,794	476942	18116	175
11	Nov-23			12,580	552886	22111	175
12	Dec-23			9,256	548228	31032	175
Total		1475476	5500000	147657	6230070	241532	2189

Calculation of GHG Emission: As mentioned there are three type of emission which is Scope-1, Scope-2 and Scope-3.



Total Quality. Assured.

2. Scope 1 (direct emissions)

Emissions are those from activities owned or controlled by the organization. Examples of Scope 1 emissions include emissions from combustion in owned or controlled boilers, furnaces and vehicles and emissions from chemical production in owned or controlled process equipment.

3. Scope 2 (Indirect Emission)

Emissions are those released into the atmosphere that are associated with your consumption of purchased electricity, heat, steam and cooling. These indirect emissions are a consequence of your organization’s energy use but occur at sources you do not own or control.

4. Scope 3 (other indirect)

Emissions are a consequence of your actions that occur at sources you do not own or control and are not classed as Scope 2 emissions. Examples of Scope 3 emissions are business travel by means not owned or controlled by your organization, waste disposal, materials or fuels your organization purchases.

This assessment includes Scope 1 and Scope 2 emission calculation. For GHG emission calculation, GHG Protocol emission calculation tools “Stationary-combustion-tool-(Version 4.1” are followed.

5. Scope 1 Emission of the facility:

Table-5.1: Scope-1 Emission in the year of 2021

Category	Amount	Total Emission (Ton CO ₂ e)
Natural Gas (M ³) Combustion.	7056210	12678.1
Diesel (Liter) Combustion	174228	424.5
Octane (Liter) Combustion	17480	54.5
Emission from solar energy	57289	0
Total absolute scope 1 emission		13157.1

Table-5.2: Scope-1 Emission in the year of 2022

Category	Amount	Total Emission (Ton CO ₂ e)
Natural Gas (M ³) Combustion.	6282265	11287.5
Diesel (Liter) Combustion	201505	490.9

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Total Quality Assured.

Octane (Liter) Combustion	6302	19.6
Emission from solar energy	157890	0
Total absolute scope 1 emission		11798

Table-5.3: Scope-1 Emission in the year of 2023

Category	Amount	Total Emission (Ton CO ₂ e)
Natural Gas (M ³) Combustion.	6230070	11193.7
Diesel (Liter) Combustion	241532	588.5
Octane (Liter) Combustion	2189	6.8
Emission from solar energy	147657	0
Total absolute scope 1 emission		11789

6. Scope 2 Emission of the facility:

Table 6.1: Scope-2 emission in the year of 2021

Category	Amount	Total Emission (Ton CO ₂ e)
Indirect emission from Electricity (KWH)	6390419	3355.6
Total scope 2 emission		3355.6

Table 6.1: Scope-2 emission in the year of 2022

Category	Amount	Total Emission (Ton CO ₂ e)
Indirect emission from Electricity (KWH)	5565639	2922.5
Total scope 2 emission		2922.5

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Table 6.1: Scope-2 emission in the year of 2023

Category	Amount	Total Emission (Ton CO ₂ e)
Indirect emission from Non-Renewable Electricity (KWH)	1475476	988.6
Indirect emission from Renewable Electricity (KWH)	5500000	0
Total scope 2 emission		988.6

7. Total Emission (Scope 1 and Scope 2):

Total Scope 1 and Scope 2 emission in 2021: 13157.1 + 3355.6 = **16512.7 Ton CO₂e.**

Total Scope 1 and Scope 2 emission in 2022: 11798 + 2922.5 = **13720.5 Ton CO₂e.**

Total Scope 1 and Scope 2 emission in 2023: 11789 + 988.6= **12777.8 Ton CO₂e.**

Graphical Presentation:

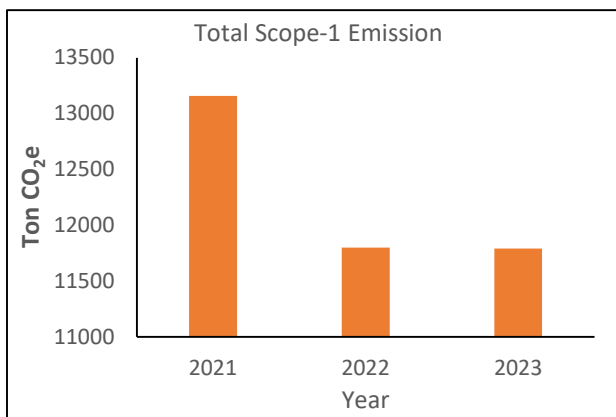


Figure-a : Total scope-1 emissions

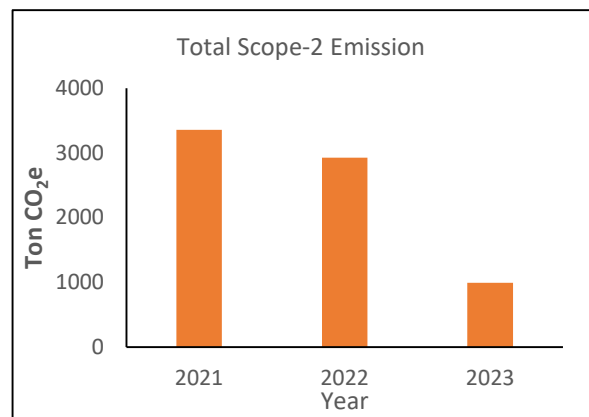


Figure-b : Total scope-2 emissions

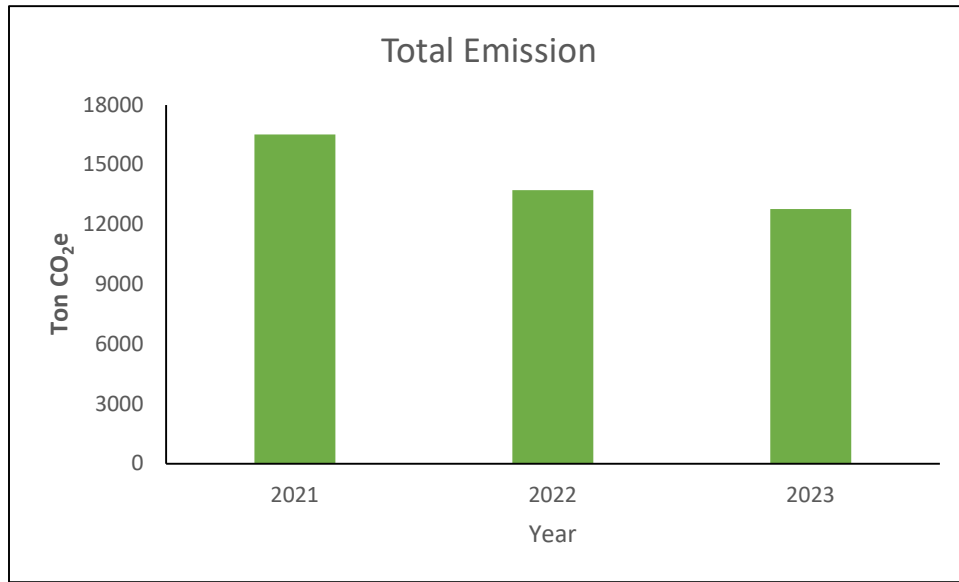


Figure-c: Total emissions (Scope-1 and Scope-2) in 2021, 2022, and 2023.

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