A.H.KHAN & CO.
An Alliance Of Trust

GHG Assessment Report

A. H. Khan & Co. Ltd.

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Abbreviations and Acronyms:

GHG	**Green House Gas**
CO_2	Carbon dioxide
DEFRA	Department for Environment, Food & Rural Affairs of Govt. of UK
DoE	Department of Environment
EF	Emission Factor
EPA	Environmental Protection Agency (US)
GWP	Global Warming Potential
IFC	International Finance Corporation
WBSCD	World Business Council for Sustainable Development
WHO	World Health Organization

Introduction:

Carbon Footprint

The term "carbon footprint," also known as "greenhouse gas footprint," refers to a computed value or index that enables comparison of the total quantity of greenhouse gases released into the atmosphere by a certain activity, product, nation, or business.

The standard way to report carbon footprints is in tonnes of emissions (CO_2-equivalent) per unit of comparison. An organization's carbon footprint consists of both its direct and indirect emissions. These direct and indirect emissions cover the Scope 1, 2 and 3 emissions according to Greenhouse Gas Protocol (the most widely used standard for computing this carbon footprint assessment).

Why it is important to measure Carbon Footprint of an Organization?

An organization may boost its competitive edge, achieve cost savings, improve brand reputation, and improve its environmental performance by identifying high-impact areas and putting effective carbon emission reduction initiatives in place.

Five major benefits of measuring carbon footprint of an organization are –

a) Minimizing environmental impact
b) Improving reputation
c) Compliance with regulations
d) Setting Targets
e) Identifying opportunities for cost savings and many more.

Methodology

The A.H. Khan Co. Ltd. reports its carbon footprint assessment by the International Greenhouse Gas Protocol - a Corporate Accounting and Reporting Standard[1] revised edition.

The International GHG Protocol was developed through a partnership between the World Resources Institute and the World Business Council for Sustainable Development and is the most widely recognized international standard in the accounting, reporting, and quantifying of GHG emissions.

This assessment has been done by the GHG Protocol. This standard provides guidelines regarding organizational and operational boundaries, quantification, and standard reporting practices. For this study, client-supplied data is analyzed, and the GHG emissions are quantified using the most current emission factors in line with the GHG Protocol.

[1] *World Business Council for Sustainable Development & World Resources Institute, The Greenhouse Gas Protocol – A Corporate Accounting and Reporting Standard, revised edition, 2004.*

The present report uses the terms "carbon footprint", "GHG emissions" and "carbon accounting" synonymously and interchangeably as they refer to the GHG inventory of A.H. Khan Co. Ltd.

The emission factor for electricity was obtained from the grid emission factor (GEF) [2] of Bangladesh published in 2013.

[2] *The Grid Emission Factor of Bangladesh was published on 19th August, 2013 by DoE (http://www.doe.gov.bd/sites/default/files/files/doe.portal.gov.bd/notices/d89105eb_549d_4b79_bd4c_6f24e24b037d/1.%20Grid%20Emission%20Factor%20(GEF)%20for%20Bangladesh.pdf)*

GHG Emissions Sources, Factors, and Activity Data

1. GHG Emission: Purchased Electricity (January '24 – December '24) from Ashulia Wearhouse

Month	Purchased Electricity (kwh)	CO_2e (tons)
Jan-24	2,886.05	1.934
Feb-24	2,949.01	1.976
Mar-24	4,521.58	3.029
Apr-24	4,565.72	3.059
May-24	4,646.78	3.113
Jun-24	4,601.91	3.083
Jul-24	3,698.75	2.478
Aug-24	3,707.43	2.484
Sep-24	3,658.95	2.451
Oct-24	3,086.51	2.068
Nov-24	3,021.38	2.024
Dec-24	2,974.34	1.993

2. GHG Emission: Purchased Electricity (January '24 – December '24) from Mawna Wearhouse

Month	Purchased Electricity (kwh)	CO_2e (tons)
Jan-24	1,261.20	0.845
Feb-24	1,261.59	0.845
Mar-24	1,955.13	1.310
Apr-24	1,953.21	1.309
May-24	1,966.52	1.317
Jun-24	1,968.70	1.319
Jul-24	1,616.36	1.083
Aug-24	1,568.99	1.051
Sep-24	1,548.47	1.037
Oct-24	1,320.41	0.885
Nov-24	1,306.45	0.875
Dec-24	1,299.79	0.871

3. GHG Emission: Purchased Electricity (January '24 – December '24) from Phoenix Wearhouse

Month	Purchased Electricity (kwh)	CO_2e (tons)
Jan-24	3,788.84	2.539
Feb-24	3,790.67	2.540
Mar-24	5,873.76	3.935
Apr-24	5,867.37	3.931
May-24	5,907.82	3.958
Jun-24	5,914.46	3.962
Jul-24	4,856.20	3.253
Aug-24	4,713.16	3.158
Sep-24	4,651.52	3.116
Oct-24	3,966.45	2.658
Nov-24	3,924.50	2.629
Dec-24	3,905.12	2.617

4. GHG Emission: Purchased Electricity (January '24 – December '24) from LMS Wearhouse

Month	Purchased Electricity (kwh)	CO_2e (tons)
Jan-24	4,049.86	2.714
Feb-24	4,051.09	2.714
Mar-24	6,278.14	4.206
Apr-24	6,271.99	4.202
May-24	6,314.70	4.230
Jun-24	6,321.69	4.235
Jul-24	5,190.29	3.477
Aug-24	5,038.18	3.376
Sep-24	4,972.29	3.331
Oct-24	4,239.98	2.841
Nov-24	4,195.14	2.810
Dec-24	4,173.76	2.797

5. **GHG Emission: Purchased Electricity (January '24 – December '24) from Khulna Wearhouse**

Month	Purchased Electricity (kwh)	CO_2e (tons)
Jan-24	757.72	0.508
Feb-24	757.95	0.508
Mar-24	1174.62	0.787
Apr-24	1173.47	0.786
May-24	1181.46	0.791
Jun-24	1182.77	0.792
Jul-24	971.09	0.651
Aug-24	942.63	0.632
Sep-24	930.30	0.623
Oct-24	793.29	0.532
Nov-24	784.90	0.526
Dec-24	780.90	0.523

6. **GHG Emission: Purchased Electricity (January '24 – December '24) from Barisal Wearhouse**

Month	Purchased Electricity (kwh)	CO_2e (tons)
Jan-24	897.30	0.601
Feb-24	897.57	0.601
Mar-24	1391.00	0.932
Apr-24	1389.64	0.931
May-24	1399.10	0.937
Jun-24	1400.65	0.938
Jul-24	1149.98	0.770
Aug-24	1116.27	0.748
Sep-24	1101.67	0.738
Oct-24	939.42	0.629
Nov-24	929.49	0.623
Dec-24	924.75	0.620

7. GHG Emission: Purchased Electricity (January '24 – December '24) from Habiganj Wearhouse

Month	Purchased Electricity (kwh)	CO_2e (tons)
Jan-24	1,370.88	0.919
Feb-24	1,371.29	0.919
Mar-24	2,125.14	1.424
Apr-24	2,123.06	1.422
May-24	2,137.52	1.432
Jun-24	2,139.88	1.434
Jul-24	1,756.91	1.177
Aug-24	1,705.42	1.143
Sep-24	1,683.11	1.127
Oct-24	1,435.23	0.962
Nov-24	1,420.05	0.951
Dec-24	1,412.81	0.947

8. GHG Emission: Purchased Electricity (January '24 – December '24) from Cumilla Wearhouse

Month	Purchased Electricity (kwh)	CO_2e (tons)
Jan-24	1,520.43	1.019
Feb-24	1,520.88	1.019
Mar-24	2,356.97	1.579
Apr-24	2,354.67	1.578
May-24	2,370.70	1.588
Jun-24	2,373.33	1.590
Jul-24	1,948.57	1.305
Aug-24	1,891.46	1.267
Sep-24	1,866.73	1.250
Oct-24	1,591.80	1.067
Nov-24	1,574.96	1.055
Dec-24	1,566.94	1.050

9. GHG Emission: Purchased Electricity (January '24 – December '24) from Bogura Wearhouse

Month	Purchased Electricity (kwh)	CO_2e (tons)
Jan-24	1,196.40	0.802
Feb-24	1,196.76	0.802
Mar-24	1,854.67	1.242
Apr-24	1,852.86	1.241
May-24	1,865.47	1.250
Jun-24	1,867.54	1.251
Jul-24	1,533.30	1.027
Aug-24	1,488.37	0.997
Sep-24	1,468.90	0.984
Oct-24	1,252.56	0.839
Nov-24	1,239.31	0.830
Dec-24	1,233.00	0.826

10. GHG Emission: Purchased Electricity (January '24 – December '24) from Rajbari Wearhouse

Month	Purchased Electricity (kwh)	CO_2e (tons)
Jan-24	1,236.28	0.828
Feb-24	1,236.66	0.829
Mar-24	1,916.49	1.284
Apr-24	1,914.62	1.283
May-24	1,927.65	1.291
Jun-24	1,929.79	1.293
Jul-24	1,584.41	1.061
Aug-24	1,537.98	1.030
Sep-24	1,517.86	1.017
Oct-24	1,294.32	0.867
Nov-24	1,280.63	0.858
Dec-24	1,274.10	0.854

11. GHG Emission: Purchased Electricity (January '24 – December '24) from Mouchak Wearhouse

Month	Purchased Electricity (kwh)	CO_2e (tons)
Jan-24	4,464.96	2.992
Feb-24	4,466.32	2.993
Mar-24	6,921.62	4.637
Apr-24	6,914.85	4.633
May-24	6,961.93	4.664
Jun-24	6,969.65	4.669
Jul-24	5,722.28	3.834
Aug-24	5,554.58	3.722
Sep-24	5,481.94	3.672
Oct-24	4,674.56	3.132
Nov-24	4,625.13	3.098
Dec-24	4,601.55	3.083

12. GHG Emission: Purchased Electricity (January '24 – December '24) from Zirabo Wearhouse

Month	Purchased Electricity (kwh)	CO_2e (tons)
Jan-24	2,143.55	1.436
Feb-24	2,144.20	1.437
Mar-24	3,322.95	2.226
Apr-24	3,319.70	2.224
May-24	3,342.30	2.239
Jun-24	3,346.01	2.242
Jul-24	2,747.16	1.840
Aug-24	2,666.66	1.787
Sep-24	2,631.78	1.763
Oct-24	2,244.17	1.504
Nov-24	2,220.44	1.487
Dec-24	2,209.12	1.480

13. GHG Emission: Purchased Electricity (January '24 – December '24) from Bhabanipur Wearhouse

Month	Purchased Electricity (kwh)	CO_2e (tons)
Jan-24	1,121.63	0.752
Feb-24	1,121.96	0.752
Mar-24	1,738.76	1.165
Apr-24	1,737.05	1.164
May-24	1,748.87	1.172
Jun-24	1,750.82	1.173
Jul-24	1,437.47	0.963
Aug-24	1,395.35	0.935
Sep-24	1,377.09	0.922
Oct-24	1,174.27	0.787
Nov-24	1,161.86	0.778
Dec-24	1,155.94	0.775

Total Carbon Footprint:

Carbon Footprint Assessment or overall GHG Assessment from various sources of the project activity is shown below table. Calculation of GHG has been conducted for Scope 2 and based on the provided consumption information for the last twelve months. To understand the contribution of different sources in the total emitted GHG, the obtained data is plotted in a pie diagram. The diagram indicates that the most significant source of Carbon Footprint emission for this specific factory is **Purchased Electricity,** which is **75.45%** of the total emission of GHG.

Table: Overall, Carbon Footprint Emission According to Activity (January '23 – December '23)

Month	Purchased Electricity (kwh)	CO_2e (tons)
Jan-23	26,550.80	17.792
Feb-23	26,559.53	17.796
Mar-23	41,159.55	27.573
Apr-23	41,118.61	27.549
May-23	41,399.07	27.734
Jun-23	41,445.08	27.766
Jul-23	34,027.83	22.797
Aug-23	33,029.89	22.130
Sep-23	32,597.90	21.836
Oct-23	27,796.93	18.624
Nov-23	27,502.95	18.424
Dec-23	27,363.40	18.335
	Total:	**268.358**

Discussions:

The GHG assessment utilized data on purchased electricity consumption measured in kilowatt-hours (kWh) and corresponding CO2e (carbon dioxide equivalent) emissions in tons. Monthly electricity consumption and associated emissions were recorded from January 2024 to December 2024.

- Total purchased electricity consumption for the year 2024 was **268.358** kWh.
- The total CO2e emissions resulting from purchased electricity consumption amounted to 268.358 tons.

The GHG assessment report highlights the importance of addressing carbon emissions associated with electricity consumption in A.H. Khan Co. Ltd.'s operations. By implementing energy efficiency measures, adopting renewable energy solutions, and investing in carbon offsetting initiatives, the company can reduce its environmental impact and contribute to a more sustainable future.