Carbon Footprint Report 2024

Mideast Data Systems L.L.C.

2025.07.15

MIDEAST DATA SYSTEMS L.L.C.

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The Report Details

Image courtesy: Google

Reporting Period

This summary covers the period from January 1 to December 31, 2024. Data from previous years is included in this report for reference.

Organizational Boundaries

The activities of Mideast Data Systems LLC head office and the warehouse in the United Arab Emirates are addressed in this report.

Mideast Data Systems LLC. has adopted the operational control approach to define its reporting boundaries. Under this approach, Mideast Data Systems LLC. includes the places which it has the full authority to introduce and implement operational policies that directly influence GHG emissions. This includes our head office facilities and warehouse.

Address to the battery testing facility & warehouse :
Mussafah M-15, MDS Warehouse, Abu Dhabi
Address to the head office:
32nd Floor, Addax Office Tower, Reem Island, Abu Dhabi

The Report Details

Image courtesy: Google

Operational Boundaries

Supply, installation, and commissioning of UPS, stabilizers, power distribution units, high power batteries, DC rectifiers, inverters, closed control air-conditioning units, diesel generators, water detection systems, firefighting systems, security management systems, including associated design and site preparation and turnkey solution for data centers infrastructure, AC and DC power backup for telecom, utilities and oil and gas companies.

Development Of The Report

The Carbon Footprint Report was developed by Mideast Data Systems L.L.C. Sustainability Team.

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Introduction

In 2024, the planet witnessed the hottest June and August on record, the hottest single day, and the most extreme boreal summer in documented history. June 2024 also marked the twelfth consecutive month with global average temperatures reaching 1.5°C above pre-industrial levels, crossing a critical threshold identified by climate scientists.

As the global community struggles to keep temperature rise below 2°C, as stipulated in the Paris Agreement, it is evident that incremental changes are no longer sufficient. Achieving meaningful climate targets will require a fundamental transformation of human behavior, policy frameworks, technological systems, and business operations, particularly in carbon-intensive sectors.

One such sector is data infrastructure. Often viewed solely as the backbone of digital advancement, data centers are increasingly becoming major contributors to greenhouse gas (GHG) emissions. These facilities are energy-intensive by design, relying on round-the-clock power supply and cooling systems to maintain operational reliability. According to International Energy Agency 's recent studies, **data centers contribute up to 3% of global electricity demand**, a figure expected to double by 2030 without decisive mitigation strategies.

Image courtesy: Google

Introduction

At **Mideast Data Systems LLC.**, we recognize that building and operating data centers comes with a substantial environmental responsibility. As we continue to expand our portfolio in mission-critical infrastructure, it is essential to confront the invisible, yet growing carbon footprint associated with construction materials, embedded emissions, energy procurement, and equipment lifecycle.

This GHG Emissions Report has been prepared for both internal and external stakeholders who have an interest in understanding the environmental performance and climate impact of Mideast Data Systems L.L.C. This includes higher management, all employees, our clients, third party verifiers, government authorities and general public.

Mideast Data Systems L.L.C. has selected 2023 as the baseline year for its GHG emissions reporting. This decision was based on the availability of reliable, and verifiable data during this period, which allows for a more accurate representation of the company's operational activities. Scope 3 Supply Chain Emissions are not Included due to insufficient data. Mideast Data Systems LLC. will begin tracking and reporting Scope 3 emissions from 2025.

Image courtesy: Google

Greenhouse Gas Calculation

Carbon calculation is the process of quantifying greenhouse gas (GHG) emissions associated with a company's operations, products, or value chain. This practice is fundamental for businesses seeking to understand and manage their climate impact. It involves converting business activities such as fuel consumption, electricity usage, and supply chain operations into measurable CO_2 equivalent emissions using scientifically recognized emissions factors. This systematic approach mirrors financial accounting and typically covers Scope 1 (Category 1), Scope 2 (Category 2), and Scope 3. The importance of carbon calculation lies in its ability to provide a clear, data-driven picture of where emissions originate, enabling organizations to set credible reduction targets and track progress over time.

This report has been prepared in accordance with the GHG Protocol and ISO 14064-1 standards.

- Greenhouse Gas Protocol
- ISO 14064-1

Image courtesy: Google

Methodology

Developed through a collaboration of NGOs, governments, and stakeholders led by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), the GHG Protocol Corporate Accounting and Reporting Standard provides a standardized framework for companies to measure and report their GHG emissions, which Mideast Data Systems L.L.C has adopted for its corporate operations and site activities. Following the reporting principles and guidelines provided in the framework, the assessment methodology used includes the following five steps:

1. Establishment of the assessment boundaries (including the selection of GHGs and operational boundaries)
2. Data collection
3. Evaluation of data quality and sources
4. Calculation of emissions using appropriate conversion factors
5. Identification of recommendations for future action.

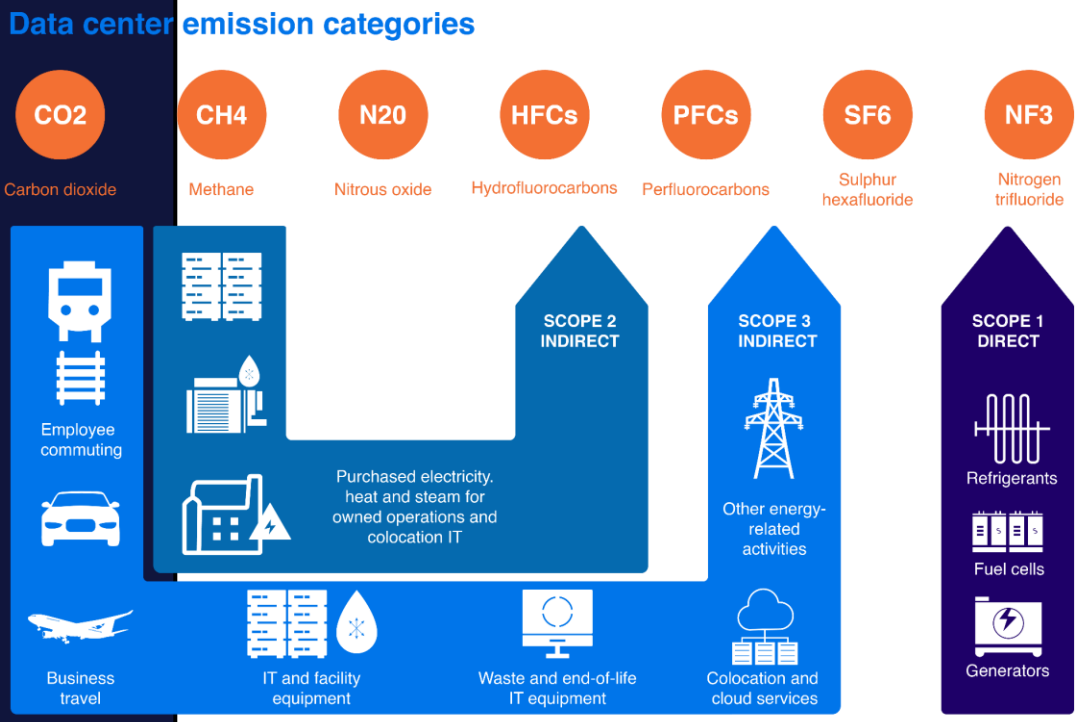


Image courtesy: Google

Data source & Quality

Scope 1 (Category 1)

Category: Mobile Combustion

Source of Emissions: Fuel combustion from 47 leased vehicles under the operational control of Mideast Data Systems L.L.C. These vehicles were used to support business operations and logistics activities during the reporting period and are included under Scope 1 emissions, consistent with the operational control boundary approach.

Emissions Sources

Fuel consumption data for leased company vehicles was obtained from the Accounting Team, which is responsible for tracking and submitting monthly fuel usage records. These records are based on invoices and fuel purchase summaries directly obtained from ADNOC, the company's authorized fuel supplier. To ensure data integrity and completeness, MDS has implemented an internal data governance process that includes due diligence checks and random cross-verification of submitted records.

Assumptions:

- This GHG Emissions Report includes the quantification of CO_2, CH_4, N_2O, which are the primary greenhouse gases emitted from fuel combustion activities and represent the majority of MDS's operational emissions profile.

Exclusions:

- Other greenhouse gases like HFCs, PFCs, SF_6 have not been included in this reporting cycle. Their exclusion is based on the insignificant presence of relevant emission sources within the company's operations
- Fugitive emissions from equipment such as fire extinguishers and refrigerator were not included, data limitations.
- Emissions from waste generation and disposal activities have not been included in this reporting cycle due to data limitations.
- Biogenic CO2 emissions were not included, as the organization does not have such emissions sources.

Image courtesy: Google

Data source & Quality

Scope 2 (Category 2)

Source of Emissions: Scope 2 emissions were calculated based on electricity consumption at the MDS office and Mussafah battery testing facility & warehouse, as well as cooling provided through the district chiller system. MDS has used Location- Based Method and Marked-Based approach for the scope 2 calculations by using national average grid emission factors and supplier specific emission factors

Emissions Sources

Electricity bills were obtained from the Accounting Team , which is responsible for tracking and submitting monthly Electricity Bills. To ensure data integrity and completeness, MDS has implemented an internal data governance process that includes due diligence checks and random cross-verification of submitted records.

Assumptions:

- This GHG Emissions Report includes the quantification of CO_2 which is the primary greenhouse gases emitted from electricity production activities and represent the majority of MDS's operational emissions profile.
- Due to the unavailability of a specific market-based emission factor from Oriontek Innovations for chiller related electricity consumption, we have assumed the same emission factor as that provided by TAQA for 2023 and 2024.

Exclusions:

- Other greenhouse gases like CH_4, N_2O, HFCs, PFCs, SF_6 have not been included in this reporting cycle. Their contribution is considered insignificant relative to CO_2 and is typically not included in regional emission factors.

Image courtesy: Google

Data source & Quality

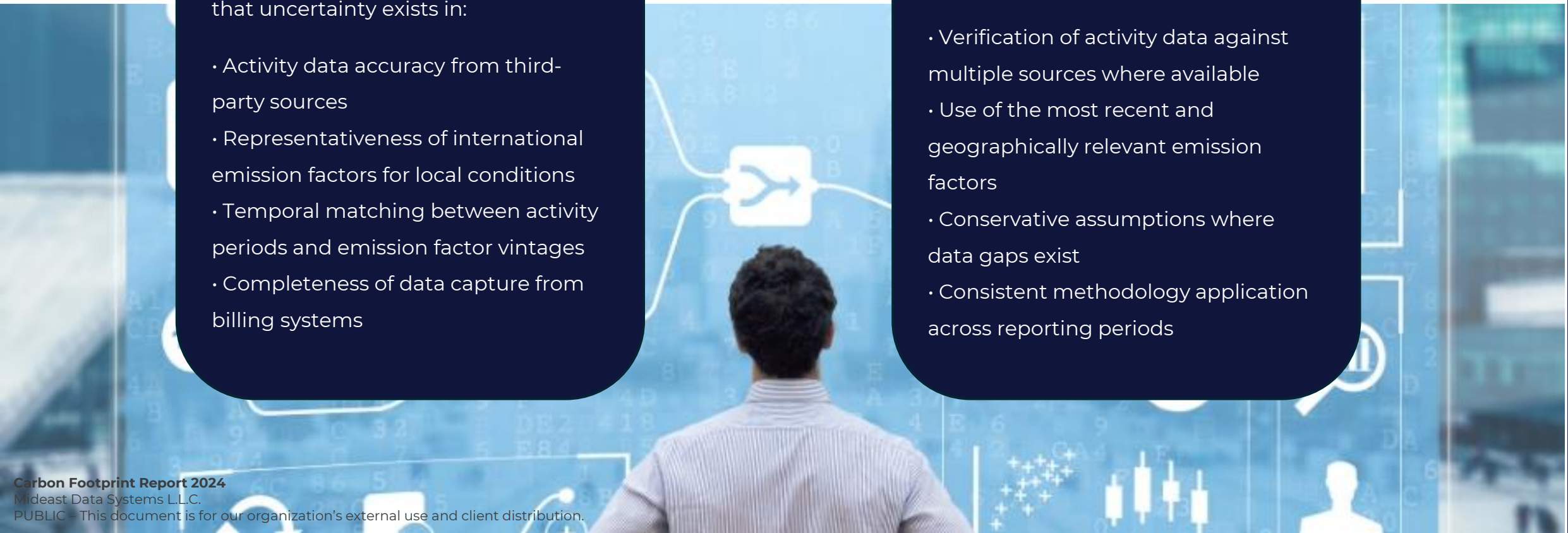
Data Uncertainty

While quantitative uncertainty calculations have not been performed due to the nature of the data sources used, the organization acknowledges that uncertainty exists in:

- Activity data accuracy from third-party sources
- Representativeness of international emission factors for local conditions
- Temporal matching between activity periods and emission factor vintages
- Completeness of data capture from billing systems

The organization has implemented the following measures to minimize uncertainty:

- Verification of activity data against multiple sources where available
- Use of the most recent and geographically relevant emission factors
- Conservative assumptions where data gaps exist
- Consistent methodology application across reporting periods



Calculation Approach

Formula that is used to calculate GHG emissions

GHG Emissions = D x EF x W	D = Activity Data	EF = Emission Factor	W = Global Warming Potential
(**D**) The **activity data,** for example, the consumption of fuel used	CO_2 = xxxxx	CO_2 = xxxxx	CO_2 = 1
(EF) The **Emission factor,** a coefficient that allows for the conversion of activity data into GHG emissions	CH_4 = xxxxx	CH_4 = xxxxx	CH_4 = 29.8
(W) The **global warming potential**	N_2O = xxxxx	N_2O = xxxxx	N_2O = 273

Updated values from IPCC AR6 have been used for GWPs.

Emission factors (EF)

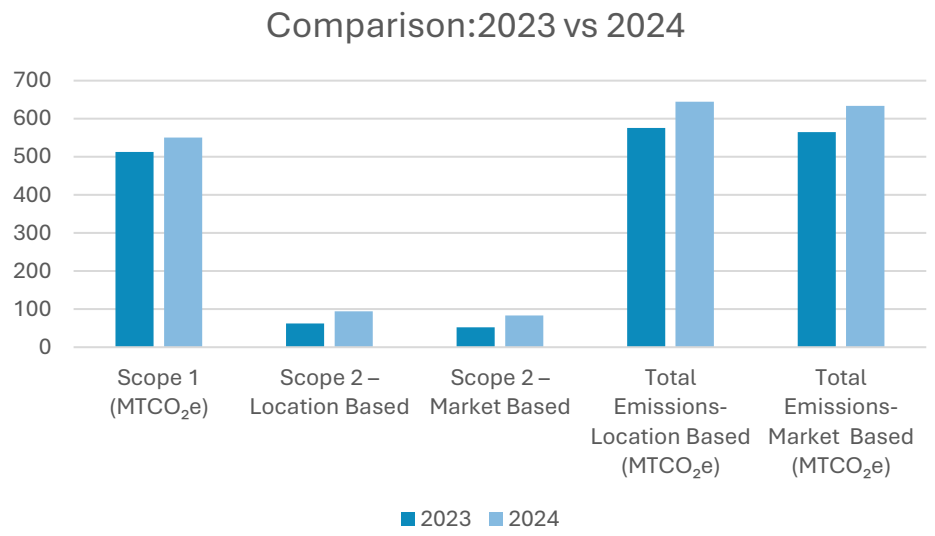
Emission factors are critical to translating activity data (e.g., litres of fuel consumed, kWh of electricity used) into greenhouse gas (GHG) emissions. For this report, Mideast Data Systems L.L.C. has selected emission factors in accordance with internationally recognized sources

Scope	Category	EF	Link
Scope 1	Mobile Combustion CO_2	2.28 $kgCO_2/L$	IPCC 2006
	Mobile Combustion CH_4	0.001 $kgCH_4/L$	IPCC 2006
	Mobile Combustion N_2O	0.0001 kgN_2O/L	IPCC 2006
Scope 2	Market-Based Approach 2023	0.463 $kgCO_2/kWh$	TAQA Sustainability Report 2023
	Market-Based Approach 2024	0.49 $kgCO_2/kWh$	TAQA Sustainability Report 2024
	Location-Based Approach	0.556 $kgCO_2/kWh$	Updated UAE Energy Strategy 2050

Comparison: 2023 VS 2024

Emissions has been increased by 68.67 $MTCO_2e$ as per market-based calculations and 69.19 $MTCO_2e$ as per location-based calculations in 2024, compared to 2023 baseline. Scope 1 emissions increased by 7.3%, from 513.08 MT CO_2 e to 550.61 MT CO_2 e, due to higher operational activity. Scope 2, Location-Based emissions grew by 50.7%, while Scope 2 ,Market-Based emissions rose by 59.8%, both driven by increased energy consumption, particularly from new projects and increased client demands. Overall, total emissions rose by 12.0% (Location-Based) and 12.2% (Market-Based), due to expanding operations, increased energy demand, and growing service delivery.

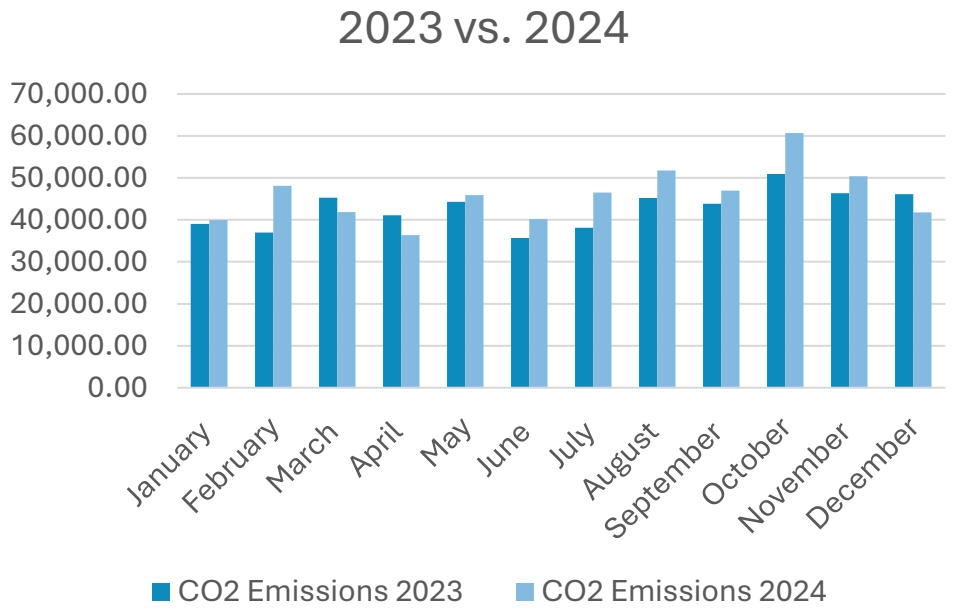
Year	Scope 1 ($MTCO_2e$)	Scope 2 – Location Based ($MTCO_2e$)	Scope 2 – Market Based ($MTCO_2e$)	Total Emissions- Location Based ($MTCO_2e$)	Total Emissions- Market Based ($MTCO_2e$)
2023	513.04	62.45	52.01	575.49	565.05
2024	550.56	94.11	83.15	644.67	633.71



Scope 1 – CO_2e Emissions Graphs

Scope 1 – Mobile Combustion

Date	CO_2 e Emissions 2023 (kg)	CO_2e Emissions 2024 (kg)
January	39,022.25	39,978.73
February	37,011.94	48,145.60
March	45,313.34	41,837.01
April	41,128.46	36,396.80
May	44,316.12	45,865.53
June	35,672.94	40,159.30
July	38,147.63	46,534.02
August	45,200.31	51,769.76
September	43,804.20	46,989.38
October	50,934.06	60,677.25
November	46,324.00	50,417.60
December	46,161.07	41,791.31
Total Emissions	**513,036.32**	**550,562.29**

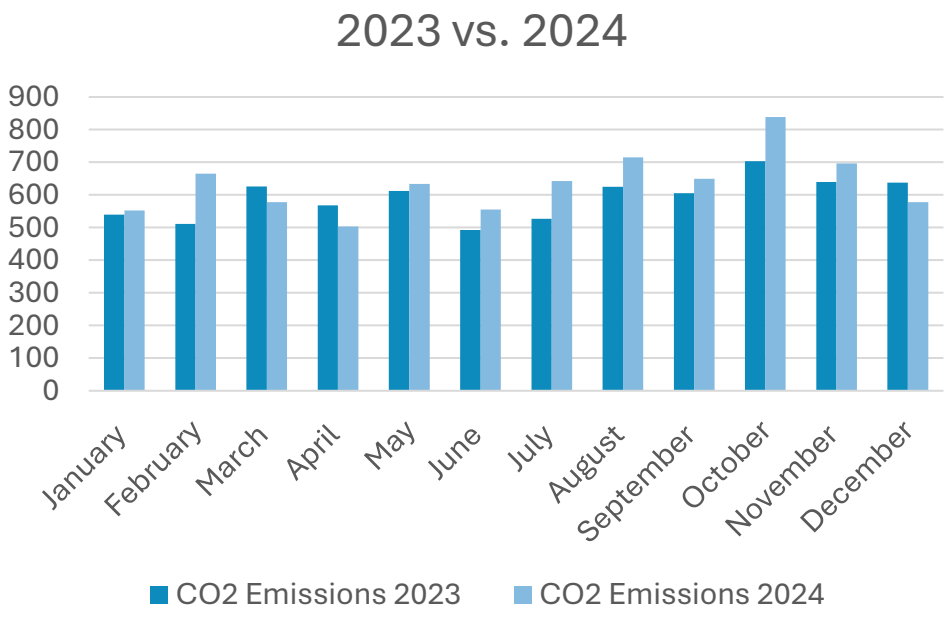


The data shows a clear increase in CO_2e emissions from 2023 to 2024, with total emissions rising by 7.3%. This increase is most prominent in certain months, notably February, October, and December, where emissions in 2024 significantly exceed those of the previous year. The data suggests that the rise in emissions relates with expanded site operations and an increase in travel during these periods.

Scope 1 – CH_4 Emissions Graphs

Scope 1 – Mobile Combustion

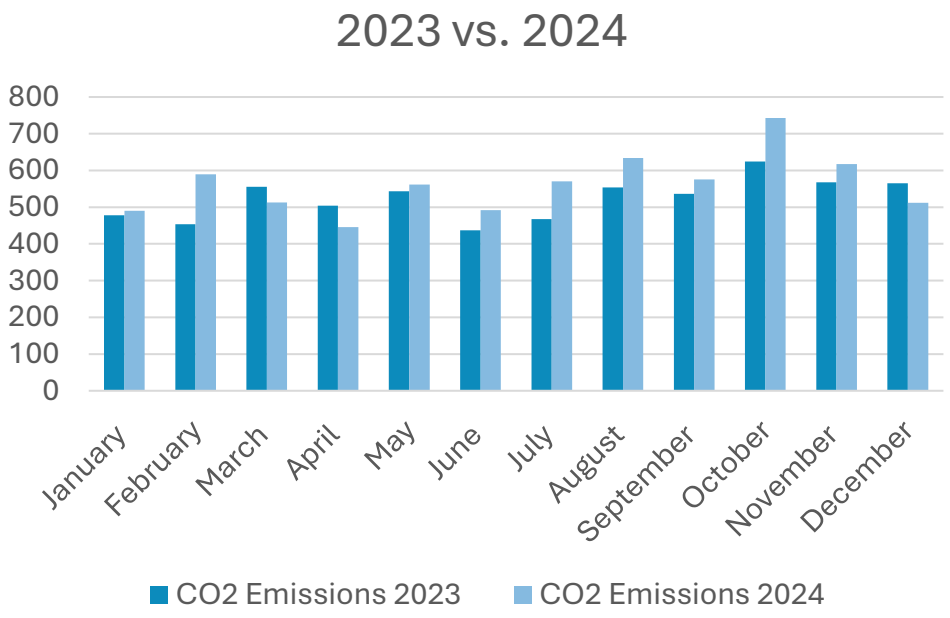
Month	CH_4 2023 (kg)	CO_2 e Emissions 2023 (kg)	CH_4 2024 (kg)	CO_2e Emissions 2024 (kg)
January	18.09	539.19	18.54	552.41
February	17.16	511.41	22.32	665.25
March	21.01	626.12	19.40	578.08.
April	19.07	568.29	16.88	502.91
May	20.55	492.91	21.27	633.75
June	16.54	527.11	18.62	554.90
July	17.69	627.11	21.58	642.99
August	20.96	624.56	24.00	715.33
September	20.31	605.27	21.79	649.28
October	23.62	703.78	28.13	838.41
November	21.48	640.08	23.38	696.65
December	21.40	637.83	19.38	577.45
Total Emissions	**237.88**	**7,088.90**	**255.28**	**7,607.41**



Scope 1 – N_2O Emissions Graphs

Scope 1 – Mobile Combustion

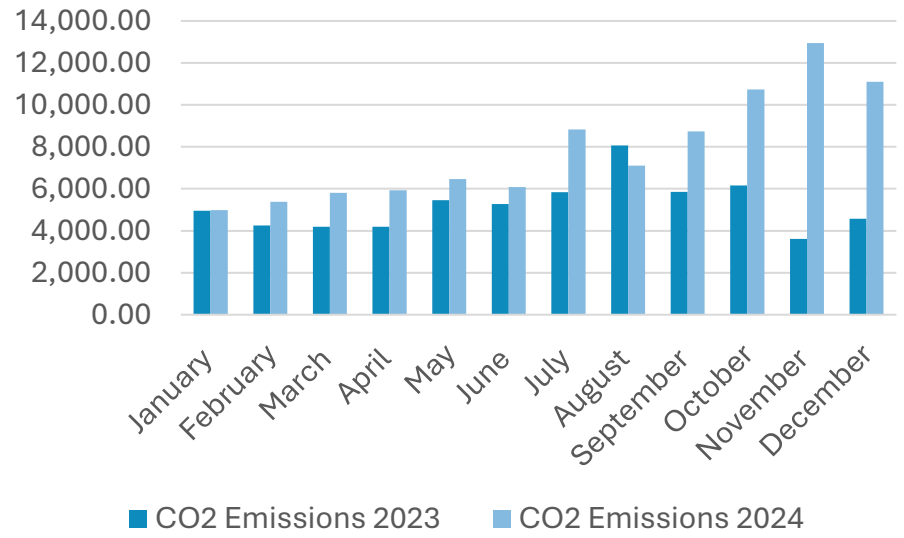
Month	N_2O 2023 (kg)	CO_2 e Emissions 2023 (kg)	N_2O 2024 (kg)	CO_2e Emissions 2024 (kg)
January	1.75	478.02	1.79	489.74
February	1.66	453.40	2.16	589.78
March	2.03	555.09	1.88	512.50
April	1.85	503.82	1.63	445.86
May	1.99	542.87	2.06	561.85
June	1.60	436.99	1.80	491.95
July	1.71	467.31	2.09	570.04
August	2.03	553.70	2.32	634.18
September	1.97	536.60	2.11	575.62
October	2.29	623.94	2.72	743.30
November	2.08	567.47	2.26	617.62
December	2.07	565.47	1.88	511.94
Total Emissions	**23.02**	**6,284.70**	**22.83**	**6,744.39**



Scope 2 – Location Based

Scope 2 – Battery Testing Facility & Warehouse Electricity, Office Electricity & chiller 2023 vs 2024

Month	CO_2 Emissions 2023 (kg)	CO_2 Emissions 2024 (kg)
January	4,951.74	4980.092
February	4,249.51	5385.972
March	4,185.01	5804.084
April	4,198.91	5931.964
May	5,463.26	6459.608
June	5,280.89	6088.756
July	5,836.33	8832.06
August	8,067.56	7099.564
September	5,859.68	8740.876
October	6,163.26	10742.476
November	3,618.45	12947.572
December	4,576.99	11096.092
Total Emissions	**62,451.59**	**94109.116**

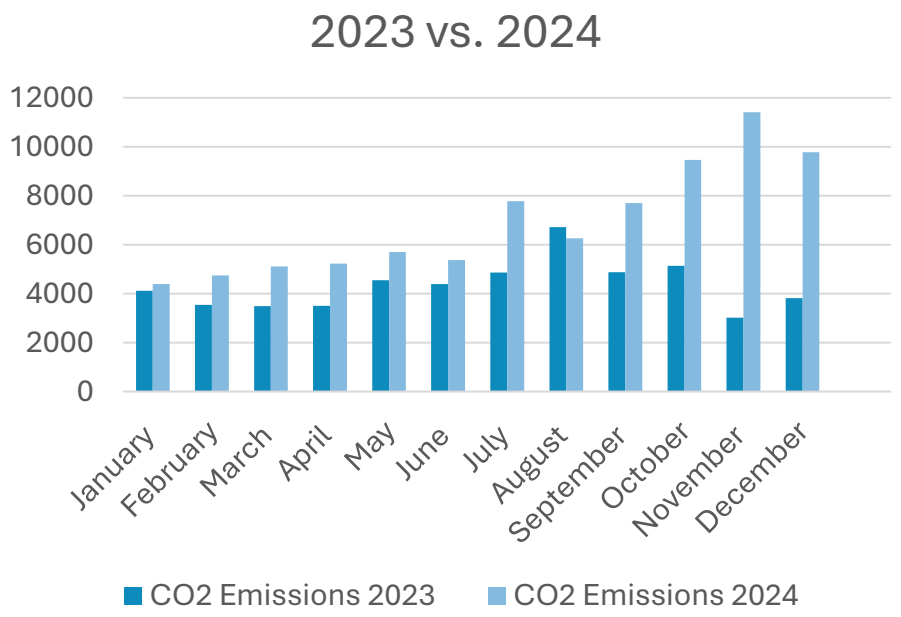


The data indicates a significant increase of 50.68% of CO_2 emissions compared to baseline 2023. This increase is largely due to increased operational activities, driven by new projects that were initiated in 2024.
Particularly in the months of October, November, and December 2024, the rise in emissions is notable. This is due to increased battery charging activities in order to fulfill client requirements. The MDS warehouse facility in Musaffah has been identified as a significant emissions hotspot within the company's operational boundary. This facility operates 24 hours a day, 7 days a week, resulting in continuous electricity consumption for battery charging, lighting, equipment operation, and cooling.

Scope 2 – Market Based

Scope 2 – Battery Testing Facility & Warehouse Electricity, Office Electricity & chiller 2023 vs 2024:

Month	CO_2 Emissions 2023 (kg)	CO_2 Emissions 2024 (kg)
January	4123.478	4388.93
February	3538.709	4746.63
March	3485.001	5115.11
April	3496.576	5227.81
May	4549.438	5692.82
June	4397.574	5365.99
July	4860.111	7783.65
August	6718.13	6256.81
September	4879.557	7703.29
October	5132.355	9467.29
November	3013.204	11410.63
December	3811.416	9991.59
Total Emissions	**52005.55**	**83150.55**



Conclusion

Mideast Data Systems L.L.C. remains committed to reducing its greenhouse gas (GHG) emissions and enhancing transparency in carbon accounting across its operations. The current organizational carbon footprint assessment covers emissions from the MDS office and the Mussafah warehouse, with 2023 established as the baseline year for future performance comparisons.

During the reporting period, MDS applied a systematic, data-driven approach to calculate Scope 1 and Scope 2 emissions, using verified energy consumption data from both facilities. This foundational assessment provides critical insight into the company's operational emissions and establishes a reference point for measuring progress in the years ahead.

As part of its long-term sustainability objectives, MDS will continue to improve data quality, align with national and international climate reporting frameworks, and implement targeted emission reduction strategies. This shows MDS's commitment to environmental responsibility and its active role in supporting the UAE's transition to a low-carbon economy.

Image courtesy: Google