3dr Models
Worldwide Model making services

3DR MODEL MAKING

Al Quoz Industrial Region P.O. Box: 54136 Dubai, U.A.E

GHG EMISSION REPORT

FORM NO : 3dr Models/ESG/F-200
ISSUE NO : 01
REV NO : 00
DATE : 22nd April, 2025

1. Overview

3dr Models maintains a comprehensive GHG monitoring and reporting system aligned with the GHG Protocol and ISO 14064-1. The system covers all emission sources and activities within the organizational boundaries of the company, its subsidiaries, and joint ventures.3DR Models, UAE integrates ESG principles into its operational strategy to ensure sustainable growth, responsible resource utilization, and environmental stewardship. This document summarizes the company's GHG emissions inventory and outlines a time-bound GHG reduction plan aligned with UAE Net Zero 2050 objectives.

The GHG inventory includes:

- Direct (Scope 1) emissions from company-owned or controlled sources (e.g., vehicles, generators, manufacturing equipment).
- Indirect (Scope 2) emissions from purchased electricity, steam, heating, and cooling.
- Other Indirect (Scope 3) emissions from the upstream and downstream value chain (transportation, waste disposal, product use, etc.).

Monitoring Frequency: Annually

Data Coverage: Corporate-wide (100%)

Accounting Standards Used: GHG Protocol Corporate Standard, ISO 14064-1

Product Carbon Footprint Standard: GHG Protocol Product Standard (ISO 14067)

2. GHG Emissions Summary

2.1 Organizational Boundaries

3DR MODEL MAKING LLC.

Al Quoz Industrial Region P.O.Box: 54136 Dubai, U.A.E

Calculation period: January 2024 to December 2024

All values are in MT CO_2 e

GHG Emission Reporting Frequency: Annually

2.2 Reporting Boundary & Scope Definition

Scope	Included Activities	Justification
Scope 1 – Direct GHG Emissions	• Fuel combustion in company-owned vehicles (delivery vans, service trucks) • Operation of diesel generators and equipment at model fabrication sites • Use of LPG or fuel in industrial processes and testing	These emissions are under direct operational control of 3DR Models and result from activities owned or operated by the company.
Scope 2 – Indirect GHG Emissions (Purchased Energy)	• Electricity consumption in offices, manufacturing facilities, and storage units • District cooling systems used in main facilities	These emissions occur from purchased electricity and cooling, which are essential for daily operations but generated externally.
Scope 3 – Upstream Indirect Emissions	• Emissions from production and transport of raw materials, paints, resins, plastics, and metals • Third-party logistics and courier services • Waste treatment and disposal services • Business travel and procurement-related transport	These emissions are indirectly associated with inputs and supplier activities that support 3DR Models' operations but are not directly controlled by the company.
Scope 3 – Downstream Indirect Emissions	• Transportation and delivery of finished models to clients • Emissions from model maintenance, modification, and exhibition installations • End-of-life disposal or recycling of miniature models	These emissions result from use and disposal of products sold or delivered by 3DR Models, forming part of the company's value chain beyond its direct operations.
Excluded Sources (Non-Material)	• Employee commuting • Personal travel not related to company operations • Leased office spaces without operational control	Excluded due to data unavailability and immaterial contribution to the overall carbon footprint, based on preliminary screening.

2.3 Scope 3 Category Inclusion Table

Scope 3 Category	Included / Excluded	Justification
1. Purchased Goods and Services	Included	Significant emissions arise from procurement of materials such as plastics, resins, paints, metals, and packaging used in model fabrication.
2. Capital Goods	Included	Capital investments in machinery, tools, and modeling equipment contribute to upstream emissions during manufacturing.
3. Fuel- and Energy-Related Activities (Not Included in Scope 1 or 2)	Included	Emissions from extraction, production, and transport of fuels and energy purchased for company use are relevant and quantifiable.
4. Upstream Transportation and Distribution	Included	Transport of materials and components from suppliers contributes notably to upstream logistics emissions.
5. Waste Generated in Operations	Included	Model production generates waste materials (plastic, resin, paper, packaging) requiring collection, treatment, and disposal.
6. Business Travel	Included	Business-related air, land, and sea travel by employees are tracked and contribute to indirect emissions.
7. Employee Commuting	Included	Data not currently available; considered non-material compared to operational emissions. To be reviewed in future assessments.
8. Upstream Leased Assets	Excluded	Leased assets are minimal and not under operational control; excluded due to immateriality.
9. Downstream Transportation and Distribution	Included	Transport and delivery of finished miniature models to clients and exhibitions are key downstream activities.
10. Processing of Sold Products	Excluded	Products are not further processed by customers; models are used as final display units.
11. Use of Sold Products	Included	Some models require electrical lighting or motorized display elements, resulting in minor use-phase emissions.

12. End-of-Life Treatment of Sold Products	Included	Disposal or recycling of miniature models and packaging materials generate downstream emissions.
13. Downstream Leased Assets	Excluded	Company does not own or lease assets to clients; hence not applicable.
14. Franchises	Excluded	No franchise operations exist within or outside the UAE.
15. Investments	Excluded	3DR Models does not hold equity investments that generate indirect emissions; category not applicable.

3. GHG Emissions Summary (All values in MT CO_2e)

Scope	Emission Source	Baseline (2023)	Current Year (2024)	Reduction (tCO_2e / %)
Scope 1	Fuel combustion from company-owned vehicles, generators, and equipment	412.0	376.8	**35.2 / 8.5%** ↓
Scope 2	Purchased electricity for offices, workshops, and model production units	1,285.0	1,212.3	**72.7 / 5.7%** ↓
Scope 3 (Upstream)	Purchased goods and services, logistics, employee travel	1,390.0	1,321.8	**68.2 / 4.9%** ↓
Scope 3 (Downstream)	Distribution, product transportation, client delivery, waste disposal	760.0	712.8	**47.2 / 6.2%** ↓
Total Scope 3	Combined upstream and downstream emissions	**2,150.0**	**2,034.6**	**115.4 / 5.4%** ↓
Total (All Scopes)	**Overall GHG Emissions (Scope 1 + 2 + 3)**	**3,847.0**	**3,623.7**	**223.3 / 5.8%** ↓

4. GHG Emissions Inventory (tCO_2e)

GHG Emission Source	Description	Emissions (tCO_2e)
Stationary Combustion (Fuel Use)	Diesel and petrol used in generators and other stationary equipment at workshops	**125.4**
Mobile Combustion (Fleet Vehicles)	Fuel consumption from company-owned vehicles used for transport and delivery of models	**251.4**
Purchased Electricity (Scope 2)	Electricity consumption in offices, workshops, and production units from grid supply	**1,212.3**
Purchased Goods and Services (Upstream Scope 3)	Emissions from suppliers providing materials such as acrylics, resins, paints, and packaging	**892.5**
Transportation and Distribution (Upstream)	Emissions from third-party logistics and transport of raw materials	**429.3**
Business Travel	Air and road travel by employees for client visits, exhibitions, and business meetings	**45.0**
Waste Generated in Operations	Emissions from disposal and treatment of operational and production waste	**38.0**
Transportation and Distribution (Downstream)	Delivery of finished models to clients and exhibitions (third-party transport)	**512.8**
Use of Sold Products	Energy use and associated emissions during display or use of large mechanical models	**90.0**
End-of-Life Treatment of Sold Products	Waste management and disposal of models at end of life	**110.0**
Employee Commuting	Daily travel of staff to and from workplaces	**60.0**

5. SBTi-Aligned GHG Reduction Targets

Target	Current Year (FY 2024) *(tCO_2e – Baseline)*	FY 2027 Milestone *(min SBTi pace)*	FY 2030 Near-Term Target *(1.5 °C alignment)*	FY 2050 Long-Term (Net Zero)	Notes / SBTi Criterion
Scope 1 – Direct Emissions	376.8	340 tCO_2e	300 tCO_2e	≈ 0 tCO_2e (Net Zero)	20 % reduction by 2030 via hybrid/electric fleet transition and fuel efficiency measures. Aligned with SBTi minimum 4.2 % annual linear reduction rate.
Scope 2 – Indirect Emissions (from Electricity)	1,212.3	1,050 tCO_2e	900 tCO_2e	≈ 0 tCO_2e (Net Zero through renewables)	26 % reduction by 2030 via renewable electricity adoption, energy-efficient HVAC, and LED retrofits.
Scope 3 – Other Indirect Emissions (Upstream + Downstream)	2,034.6	1,800 tCO_2e	1,600 tCO_2e	≈ 100 tCO_2e (residual offsets)	21 % reduction by 2030 through supplier engagement, eco-logistics, digital model delivery, and waste minimization.
Total Emissions (All Scopes)	**3,623.7**	**3,190 tCO_2e**	**2,800 tCO_2e**	**Net Zero by 2050**	Overall 23 % reduction by 2030 in line with SBTi 1.5 °C pathway and UAE Net Zero 2050 Strategy.

6. Intensity-Based Target Intensity Metric: GHG emissions per unit revenue (tCO_2e / AED million).

3dr Models targets to reduce GHG intensity from 42.6 to 30.0 tCO_2e per AED million revenue by FY 2030, achieving a 29% improvement aligned with SBTi 1.5 °C and UAE Net Zero 2050 goals.

7. Statement of Uncertainty

- **Scope 1 Emissions Reduction Plan**

  The Scope 1 Emissions Reduction Plan focuses on minimizing direct emissions from company-owned vehicles, generators, and stationary equipment. Measures include transitioning to a hybrid/electric fleet, optimizing fuel consumption, and scheduling preventive maintenance to improve energy efficiency. Despite detailed tracking and monitoring systems, uncertainties arise from variations in fuel quality, vehicle usage patterns, and unforeseen operational changes. External factors such as regulatory updates or supply chain disruptions could also affect emissions outcomes. Continuous monitoring, data validation, and corrective actions are implemented to ensure the reduction targets are reliably achieved and remain aligned with ESG and SBTi principles.

- **Scope 2 Emissions Reduction Plan**

  The Scope 2 Emissions Reduction Plan targets indirect emissions from purchased electricity for offices, workshops, and production facilities. Planned initiatives include energy-efficient lighting, HVAC optimization, and integration of renewable energy sources such as rooftop solar. Uncertainty exists due to potential fluctuations in grid emission factors, seasonal energy demand, and variations in renewable energy availability. To address this, energy consumption is continuously monitored, and projections are adjusted annually. Third-party verification and scenario analysis help quantify potential deviations, ensuring the company remains on track toward the FY 2030 near-term target while maintaining transparency and compliance with SBTi and ESG reporting standards.

- **Scope 3 Emissions Reduction Plan**

  The Scope 3 Emissions Reduction Plan addresses upstream and downstream indirect emissions, including supplier operations, logistics, business travel, and end-of-life product handling. Key actions include engaging suppliers on low-carbon practices, optimizing transportation routes, adopting digital model transfers, and minimizing waste. Uncertainties stem from limited control over third-party operations, variability in emission factors, and incomplete supplier data. To mitigate these risks, 3dr Models applies conservative estimates, requires supplier reporting, and performs regular audits. Continuous collaboration with partners, combined with data-driven improvements, ensures Scope 3 reductions remain credible, measurable, and aligned with SBTi-aligned near-term and long-term decarbonization goals.

- **Intensity-Based Target Plan**

  The Intensity-Based Target Plan measures GHG emissions relative to revenue (tCO_2e per AED million), ensuring reductions scale with business growth. Targets include decreasing intensity from 42.6 to 30.0 tCO_2e/AED million by 2030. Uncertainties arise from fluctuating revenue streams, operational expansions, and potential changes in emission factors, which could distort the intensity metric.

To manage this, the company uses standardized calculation methodologies, periodic verification, and scenario modeling to account for revenue variability. Regular reviews allow adjustments to operational or mitigation strategies, ensuring the intensity-based reductions remain credible, measurable, and aligned with SBTi 1.5 °C pathways and UAE Net Zero 2050 objectives.

8. Supplier & Value Chain Engagement

- **Commitment to Science-Based Targets**

3dr Models engages suppliers and value chain partners to support the company's Science-Based Targets (SBTi) by promoting low-carbon practices and reducing emissions across upstream and downstream activities. Suppliers are encouraged to adopt energy-efficient processes, use sustainable materials, and participate in carbon reporting. The company prioritizes collaboration through training, workshops, and contractual requirements to ensure that suppliers' emission reductions contribute to 3dr Models' near-term and long-term climate goals. Despite operational and geographic differences among suppliers, this commitment ensures alignment with the company's SBTi 1.5 °C pathway and reinforces a shared responsibility for decarbonization.

- **Alignment with Global Standards**

3dr Models ensures that supplier and value chain engagement aligns with global ESG and climate standards, including ISO 14001, GHG Protocol, SBTi guidance, and CDP reporting frameworks. Suppliers are requested to measure, report, and manage emissions consistently, enabling transparency and comparability. Compliance is encouraged through capacity-building initiatives, standardized reporting templates, and periodic audits. By aligning procurement and logistics practices with internationally recognized standards, the company mitigates risks associated with inconsistent environmental data and ensures that supplier actions support overall corporate sustainability and GHG reduction commitments.

- **Scope Coverage**

The company's supplier engagement covers both upstream and downstream Scope 3 emissions, including procurement of raw materials, transportation, logistics, outsourced services, and product end-of-life management. Suppliers are categorized based on emission intensity and business criticality to prioritize engagement. This ensures that major emission hotspots are addressed first while encouraging incremental improvements across the entire value chain. Scope coverage also includes indirect impacts from subcontractors and logistics partners. Continuous monitoring and reporting allow 3dr Models to quantify supplier contributions toward overall GHG reductions and make informed decisions on supplier collaboration, incentives, and risk management.

- **Time-Bound Reduction Targets**

  3dr Models establishes time-bound GHG reduction targets for suppliers to ensure measurable contributions to corporate decarbonization goals. Milestones are set for FY 2027 (minimum SBTi pace) and FY 2030 near-term targets, with performance tracked annually. Suppliers are encouraged to implement energy efficiency measures, optimize logistics, and transition to low-carbon materials within these timelines. Incentives, audits, and engagement programs help ensure adherence to schedules. By integrating clear, time-bound expectations into supplier contracts and performance reviews, the company strengthens accountability, fosters continuous improvement, and accelerates progress toward the 1.5 °C-aligned climate pathway.

9. Business Travel & Commuting Reduction

3dr Models is committed to reducing GHG emissions associated with employee business travel and commuting, which form part of the company's Scope 3 emissions. Strategies include promoting virtual meetings to minimize air and road travel, optimizing travel schedules, and encouraging shared transportation or low-emission vehicles for essential trips. For daily commuting, the company supports flexible work arrangements, carpooling initiatives, and incentives for using public transport or electric vehicles. Progress is monitored through travel logs and carbon accounting, enabling targeted interventions. These measures aim to significantly reduce emissions, improve operational efficiency, and contribute to SBTi-aligned near-term and long-term reduction goals.

10. GHG Monitoring & Reporting

3dr Models implements a robust GHG monitoring and reporting system to ensure accurate measurement, tracking, and verification of emissions across Scope 1, Scope 2, and Scope 3 categories. Data is collected from fuel consumption, electricity use, supplier activities, transportation, and business travel. All information is recorded using standardized protocols in line with GHG Protocol Corporate Standard and ISO 14064-1. Emissions are verified internally and periodically reviewed by independent auditors to maintain transparency and reliability. The system supports time-bound reduction targets, intensity-based tracking, and SBTi alignment, enabling management to make data-driven decisions and communicate credible progress to stakeholders.

11. Performance Review

3dr Models conducts a systematic performance review to evaluate progress toward GHG reduction targets, ESG objectives, and operational sustainability goals. This review is performed quarterly by the GHG Steering Committee, analyzing emissions data across Scope 1, Scope 2, and Scope 3 categories, energy efficiency improvements, supplier engagement, and intensity-based metrics. Key performance indicators (KPIs) such as total emissions, emissions per unit revenue, and milestone achievement are assessed against baseline and target values. Findings are documented, communicated to management, and used to inform corrective actions, update reduction plans, and adjust resource allocation, ensuring continuous improvement and alignment with SBTi and UAE Net Zero 2050 objectives.

12. Gas-wise Breakup (tCO□e)

Scope / Source	CO_2 (tCO_2e)	CH_4 (tCO_2e)	N_2O (tCO_2e)	Total (tCO_2e)	Notes
Scope 1 – Fuel Combustion	360.0	10.5	6.3	**376.8**	Diesel & petrol in vehicles and generators
Scope 1 – 2023 Baseline	394.0	12.0	6.0	**412.0**	—
Scope 2 – Electricity	1,200.0	7.0	5.3	**1,212.3**	Grid-based emissions (CO_2 dominant)
Scope 2 – 2023 Baseline	1,270.0	7.5	7.5	**1,285.0**	—
Scope 3 (Upstream)	1,210.0	55.0	56.8	**1,321.8**	Supplier materials, logistics, business travel
Scope 3 (Upstream 2023)	1,270.0	60.0	60.0	**1,390.0**	—
Scope 3 (Downstream)	680.0	18.0	14.8	**712.8**	Distribution, client delivery, waste
Scope 3 (Downstream 2023)	720.0	20.0	20.0	**760.0**	—
Total Scope 3	1,890.0	73.0	71.6	**2,034.6**	Combined upstream + downstream (2024)
Total Scope 3 2023	1,990.0	80.0	80.0	**2,150.0**	—
Total All Scopes – 2024	3,450.0	90.5	83.2	**3,623.7**	—
Total All Scopes – 2023	3,654.0	99.5	93.5	**3,847.0**	—

13. Reference

1. **GHG Protocol Corporate Accounting and Reporting Standard**
   Provides requirements and guidance for companies preparing a corporate-level GHG emissions inventory.
   https://ghgprotocol.org/corporate-standard
2. **Science Based Targets Initiative (SBTi) Criteria and Guidance**
   Outlines standards and guidance for companies to set greenhouse gas emissions reductions targets.
   https://sciencebasedtargets.org/standards-and-guidance
3. **ISO 14064-1:2018 – Greenhouse Gases – Part 1**
   Specifies principles and requirements at the organization level for the quantification and reporting of greenhouse gas emissions and removals.
   https://www.iso.org/standard/66453.html
4. **PAS 2050:2011 – Specification for the Assessment of the Life Cycle Greenhouse Gas Emissions of Goods and Services**
   Provides a method for assessing the life cycle greenhouse gas emissions of products and services.
   https://ghgprotocol.org/sites/default/files/2022-12/GHG%20Protocol%20PAS%202050%20Factsheet.pdf
5. **DEFRA/UK Government GHG Conversion Factors for Company Reporting (2023)**
   Emission conversion factors for reporting greenhouse gas emissions.
   https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2023
6. **UAE Climate Change Law – Federal Decree-Law No. (11) of 2024**
   Mandates all companies in the UAE to measure, report, and reduce their greenhouse gas emissions.
   https://www.anthesisgroup.com/me/insights/understanding-the-new-uae-climate-law/