

GREENHOUSE GAS (GHG) EMISSIONS REPORT

Detailed Calculation Methodology & Inventory Ledger

Corporate & Operational Profile

Factory Name	RADISH TECHNOLOGIES
Registered Address	PLOT NO. 99-100, ECOTECH-1 EXTENSION, GREATER NOIDA, GAUTAM BUDDHA NAGAR, 201306, District: Gautam Buddh Nagar, Uttar Pradesh, India
License Number	UPFA10007239 (Valid till 02 Aug 2028)
Operational Limits	Maximum 250 Workers with Motive Power not exceeding 500 H.P.
Reporting Window	April 01, 2025 - March 31, 2026

Operational Scope Overview

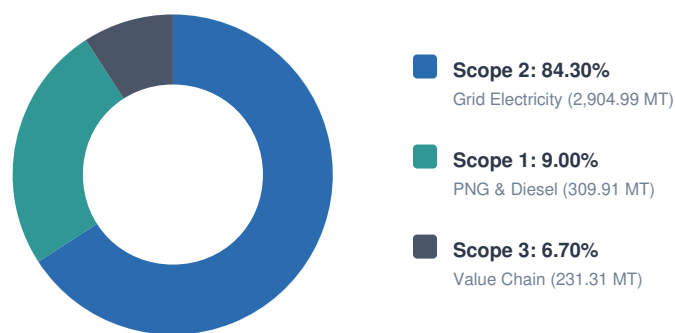
This detailed technical report presents the quantitative calculations for greenhouse gas emissions generated by the activities of Radish Technologies. The methodology aligns strictly with the standards set by the Greenhouse Gas Protocol Corporate Standard and applies verified baseline metrics to convert raw operational data into Metric Tons of Carbon Dioxide Equivalent (MT CO₂e).

1. Executive Summary Inventory

SCOPE	CATEGORY REFERENCE	ACTIVITY BASELINE METRIC	TOTAL ANNUAL VOLUME	EMISSION FACTOR	EMISSIONS (MT CO ₂ E)
SCOPE 1	Piped Natural Gas (PNG)	Standard Cubic Meters (SCM)	144,278.89 SCM	2.022 kg CO ₂ /SCM	291.73
SCOPE 1	Plant Generator Diesel	Liters (L)	6,782.00 Liters	2.680 kg CO ₂ /L	18.18
SCOPE 2	Purchased Grid Electricity	Megawatt-hours (MWh)	4,091.53 MWh	0.710 MT CO ₂ /MWh	2,904.99
		Kilometers (km)	7,624.17 km		1.36

SCOPE	CATEGORY REFERENCE	ACTIVITY BASELINE METRIC	TOTAL ANNUAL VOLUME	EMISSION FACTOR	EMISSIONS (MT CO ₂ E)
SCOPE 3	Business Travel (Fleet Cars)			0.178 kg CO ₂ /km	
SCOPE 3	Employee Commuting (Bikes)	Liters of Fuel (Petrol)	99,543.72 Liters	2.310 kg CO ₂ /L	229.95
GROSS PORTFOLIO EMISSIONS FOOTPRINT					3,446.21

Figure 1.1: GHG Emissions Share by Operational Scope (%)



2. Comprehensive Ledger & Monthly Calculations

Category A: Scope 1 Piped Natural Gas (PNG)

PNG Calculation Methodology:

$$\text{Equation: } E_{\text{PNG}} = Q_{\text{SCM}} \times EF_{\text{PNG}} \times 10^{-3}$$

Where $EF_{\text{PNG}} = 2.022$ kg CO₂/SCM (Standard environmental pipeline conversion factor).

MONTH BASELINE	CONSUMPTION QUANTITY (SCM)	UNIT RATE (INR)	TOTAL INVOICE (INR)	CALCULATED MT CO ₂ E
April 2025	12,023.51	53.22	639,891.20	24.31
May 2025	14,108.36	53.53	755,220.51	28.53
June 2025	10,789.21	52.16	562,765.19	21.82
July 2025	12,916.93	50.81	656,309.21	26.12
August 2025	15,191.16	50.41	765,786.38	30.72
September 2025	12,841.48	51.13	656,584.87	25.97
October 2025	10,236.69	51.46	526,780.07	20.70
November 2025	15,114.79	50.77	767,377.89	30.56
December 2025	10,048.17	51.31	515,571.60	20.32
January 2026	9,696.14	52.94	513,313.65	19.61
February 2026	10,845.61	53.52	580,457.05	21.93
March 2026	10,466.84	67.66	708,186.39	21.16
Subtotal Ledger	144,278.89	-	7,648,244.01	291.73

Category B: Scope 1 Plant Generator Diesel (Plant P9)

Diesel Calculation Methodology:

$$\text{Equation: } E_{\text{Diesel}} = V_{\text{Liters}} \times EF_{\text{Diesel}} \times 10^{-3}$$

Where $EF_{\text{Diesel}} = 2.680$ kg CO₂/Liter (EPA benchmark factor).

MONTH BASELINE	FUEL VOLUME (LITERS)	AVERAGE RATE (INR)	TOTAL INVOICE (INR)	CALCULATED MT CO ₂ E
April 2025	182.00	87.97	16,010.54	0.49
May 2025	600.00	87.97	52,782.00	1.61
June 2025	400.00	87.97	35,188.00	1.07

MONTH BASELINE	FUEL VOLUME (LITERS)	AVERAGE RATE (INR)	TOTAL INVOICE (INR)	CALCULATED MT CO ₂ E
July 2025	200.00	87.97	17,594.00	0.54
August 2025	1,000.00	87.97	87,970.00	2.68
September 2025	1,400.00	87.95	123,128.00	3.75
October 2025	800.00	87.97	70,376.00	2.14
November 2025	400.00	87.92	35,168.00	1.07
December 2025	400.00	87.97	35,188.00	1.07
January 2026	0.00	-	0.00	0.00
February 2026	400.00	87.97	35,188.00	1.07
March 2026	1,000.00	87.97	87,970.00	2.68
Subtotal Ledger	6,782.00	-	596,562.54	18.18

Category C: Scope 2 - Purchased Grid Electricity (Consumer No: 2000123124)

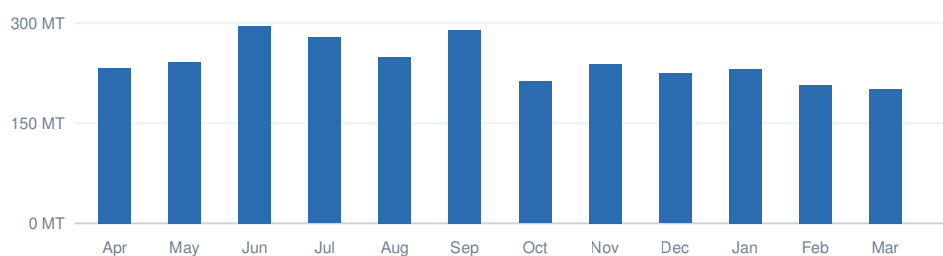
Grid Electricity Calculation Methodology:

$$\text{Equation: } E_{\text{Electricity}} = R_{\text{MWh}} \times EF_{\text{Grid}}$$

Where $EF_{\text{Grid}} = 0.710$ MT CO₂/MWh (CEA standard regional grid emissions factor profile).

MONTH BASELINE	METER READING (MWH)	CALCULATED EQUIVALENT (KWH)	TOTAL PAYMENT (INR)	CALCULATED MT CO ₂ E
April 2025	328.06	328,060	611,148	232.92
May 2025	340.83	340,830	659,808	241.99
June 2025	416.80	416,800	829,648	295.93
July 2025	392.44	392,440	759,151	278.63
August 2025	350.66	350,660	716,609	248.97
September 2025	408.10	408,100	830,833	289.75
October 2025	299.57	299,570	649,753	212.70
November 2025	337.04	337,040	726,664	239.30
December 2025	316.11	316,110	655,937	224.44
January 2026	325.39	325,390	620,388	231.03
February 2026	292.50	292,500	571,724	207.68
March 2026	284.03	284,030	564,645	201.66
Subtotal Ledger	4,091.53	4,091,530	8,196,308	2,904.99

Figure 2.1: Monthly Emissions Profile FY 2025-26 (MT CO₂e)



Category D & E: Scope 3 Value Chain Indirect Components

Scope 3 Activity Formulations:

1. Business Travel: $E_{Travel} = Distance_{km} \times 0.178 \text{ kg CO}_2/km \times 10^{-3}$
2. Employee Commute: $E_{Commute} = Volume_{Petrol} \times 2.310 \text{ kg CO}_2/L \times 10^{-3}$

ACTIVITY SEGMENT REFERENCE	AGGREGATED QUANTIFIED UNIT	ASSOCIATED EXPENDITURE (INR)	RESULTING MT CO ₂ E
Business Travel Fleet (Car Logs)	7,624.17 km	91,490.00	1.36
Employee Commuting Survey (Workers Petrol)	92,530.70 Liters	-	213.75
Employee Commuting Survey (Staff Petrol)	7,013.02 Liters	-	16.20
Subtotal Scope 3 Base	99,543.72 Liters / 7,624.17 km	91,490.00	231.31

3. Verification & Compliance Sign-off

This greenhouse gas audit ledger is compiled in strict accordance with corporate factory validation bounds. Any future process expansions exceeding the motive baseline of 500 H.P. or worker counts above 250 as per license reference **UPFA10007239** will prompt an absolute recalibration of baseline thresholds.