SUMMIT MEGHNAGHAT II POWER COMPANY LIMITED (SMIIPCL)

583 MW (net) (NG/R-LNG) / 534 MW (HSD) (net) Dual Fuel Combined Cycle Power Plant
Char Ramjan Sonaullah, Meghnaghat, P/S - Sonargoan, District - Narayanganj

Report on Total ton CO2 Emissions Generated Annually by the Project

Reporting Period: 1 January 2025 to 31 December 2025

Color Representaion

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1. GHG Emission (Direct Emission)

Data for the Year	Month	
2025	From	To
	January	December

SL No.	Power Plant Name	Location	Capacity	Fuel Type	Fuel Quantity Unit	Month	Amount of Fuel Consumed	Heat Content HHV basis	Gross Electricity generation	Amount of Fuel Consumed (Natural Use)	Capacity Factor	Heat Rate (HHV basis)	CO2 Emission	**Bangladeshi average CO2 emissions per unit of electricity generated	CO2 emissions if the electricity by the Project is to be generated by Bangladeshi average CO2 emissions per unit of electricity generated	CO2 emissions avoided by the Project
							scf	Btu/scf	MWh	mmBtu	%	kJ / kWh	ton CO2	Ton CO2 / GWh	ton	ton
									C				H= (Dx53.06*) / 1,000	K	L=C×K / 1,000	M= L - H
1	Summit Meghnaghat II Power Co. Ltd. (SMIIPCL)	Meghnaghat, Narayanganj	583	Natural Gas	SCF	January	0	1076.8	0	**0**	**0**	**0**	**0**	540	0	0
2						February	0	1076.8	0	**0**	**0**	**0**	**0**		0	0
3						March	972564055	1076.8	158593.605	**1047256.974**	**0.365632**	**6966.982959**	**55567.45506**		85640.5467	30073.09164
4						April	1870687609	1076.8	321273.13	**2014356.417**	**0.7653734**	**6615.140462**	**106881.7515**		173487.4902	66605.73869
5						May	1257378557	1074.5	206723.986	**1351053.259**	**0.4765949**	**6895.388772**	**71686.88595**		111630.9524	39944.06649
6						June	847503000	1065.3	138167.072	**902850.8481**	**0.3291573**	**6894.275184**	**47905.266**		74610.21888	26704.95288
7						July	163357000	1075.2	25890.353	**175633.409**	**0.0596893**	**7157.252144**	**9319.108683**		13980.79062	4661.681937
8						August	934376000	1075.5	151858.762	**1004875.95**	**0.350105**	**6981.516283**	**53318.7179**		82003.73148	28685.01358
9						Septemper	276000	1064.1	0	**293.6916**	**0**	**0**	**15.5832763**		0	-15.5832763
10						October	1189399000	1061.9	196825.954	**1263022.273**	**0.4537753**	**6770.267094**	**67015.96182**		106286.0152	39270.05334
11						November	42000	1068.0	0	**44.85734167**	**0**	**0**	**2.380130549**		0	-2.380130549
12						December	1594544000	1065.8	261843.566	**1699445.749**	**0.6036711**	**6847.665801**	**90172.59145**		141395.5256	51222.93419
				Yearly Total			8830127221	1071.452381	1461176.428	9458833.43	0.286108	6829.864352	501885.7018	540	789035.2711	287149.5693

*CO2 emissions factor (natural gas) 53.06 kg CO2 per mmBtu from Intergovernmental Panel on Climate Change (IPCC) guidelines

2. GHG emissions (Indirect emission)

Month	Diesel Consumed Liter	Diesel Consumed kg*	Diesel Consumed TJ-LHV**	CO2 emissions factor kg CO2/TJ-LHV***	CO2 emissions Ton CO2
			B	D	E = B x D / 1000
January, 25	88	73.753	0.003163258	74100	234.397
February, 25	138	115.658	0.004960563	74100	367.578
March, 25	128	107.277	0.004601102	74100	340.942
April, 25	102	85.486	0.003666503	74100	271.688
May, 25	66	55.315	0.002372443	74100	175.798
June, 25	530	444.193	0.019051438	74100	1411.712
July, 25	132	110.629	0.004744886	74100	351.596
August, 25	4206	3525.049	0.151189334	74100	11203.130
September, 25	180	150.858	0.0064703	74100	479.449
October, 25	1634	1369.455	0.058735942	74100	4352.333
November, 25	114	95.543	0.004097856	74100	303.651
December, 25	135	113.144	0.004852725	74100	359.587
Total	**7453**				**19851.861**

* Density data used for calculation is the lab tested data of usual diesel imported to Bangladesh. Lab Test result is attached for reference.

** LHV data used for calculation is the lab tested data of usual diesel imported to Bangladesh. Lab Test result is attached for reference.

*** CO2 emissions factor (diesel oil) 74100 kg CO2/TJ-LHV from 2006 IPCC Guidelines.

3. Total Ton CO2 Emission (Direct + Indirect Emission)

Month	Direct CO2 Emission Ton	Indirect CO2 Emission Ton	Total CO2 Emission Ton
January, 25	0.000	234.397	234.397
February, 25	0.000	367.578	367.578
March, 25	55567.455	340.942	55908.397
April, 25	106881.752	271.688	107153.439
May, 25	71686.886	175.798	71862.684
June, 25	47905.266	1411.712	49316.978
July, 25	9319.109	351.596	9670.705
August, 25	53318.718	11203.130	64521.848
September, 25	15.583	479.449	495.032
October, 25	67015.962	4352.333	71368.295
November, 25	2.380	303.651	306.031
December, 25	90172.591	359.587	90532.178
Sub total	**501885.702**	**19851.861**	**521737.562**

Total Ton CO2 Emission at the year of 2025 **521737.562**

Certificate of Analysis: SG17-02351.001

Date: 18/Apr/2017

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DHAKA
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This laboratory is accredited under SAC-SINGLAS ISO/IEC 17025. The results reported herein have been performed in accordance with the terms of accreditation under the Singapore Accreditation Council (SAC). Test marked with an asterisk (*) in this report is not within the scope of accreditation for our laboratory.

CLIENT ID :	NA	VESSEL :	MT.MERCANTILE-19
LOCATION :	SMPCL NARAYANGONJ	PRODUCT DESCRIPTION :	HSD
SAMPLE SOURCE :	SHORELINE		
SAMPLE TYPE :	Composite	SAMPLE BY :	SGS BANGLADESH
SAMPLED :	09/Apr/2017	RECEIVED :	18/Apr/2017
ANALYSED :	18/Apr/2017	COMPLETED :	18/Apr/2017
CLIENT REF:	3000703	SAMPLE NUMBER:	1023104
SEAL NO:	SGS/I 00015744		

PROPERTY	METHOD	RESULT	UNITS
Water Content	ASTM D95-13e1	<0.05	% (V/V)
Density at 15°C	ASTM D4052-15	0.8381	Kg/L
Total Sulfur Content	ASTM D4294-16e1	0.0320	%(m/m)
Lower Heating Value	ASTM D4868-17	42.89	MJ/kg
Ash	ASTM D482-13	0.002	%(m/m)
Flash Point, Procedure A (Auto)	ASTM D93-16a	86.0	°C
Trace Metals in Gas Turbine Fuels by AAS - Flame Emission Spectroscopy *	ASTM D3605		
Vanadium *		<0.1	mg/kg
Calcium *		<0.1	mg/kg
Nitrogen	ASTM D4629-12	100	mg/kg

** End of Analytical Results **

REPORTED BY

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AUTHORISED SIGNATORY

Hong Chow Soh
Laboratory Manager

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