

Climate management: Greenhouse gas emissions

Background

Gulf Energy Development Public Company Limited ("GULF" or the "Company") is committed to supporting the transition to a low-carbon future, with targets to achieve greenhouse gas emissions reductions as follows:

- Reduce Scope 1 greenhouse gas emissions intensity 25% by 2030 compared to the intensity of 0.407 tCO₂e/MWh in the base year (2019)
- Increase the proportion of renewable energy to 40% of total installed capacity by 2035
- Reach net zero scope 1 and scope 2 greenhouse gas emissions by 2050

GULF conducts a carbon footprint assessment using the Thailand Greenhouse Gas Management Organization (Public Organization) (TGO) methodology for all its power projects in Thailand which have achieved commercial operation for at least one full year. In addition, GULF collects and analyzes the greenhouse gas emissions for all its projects (in Thailand and overseas), and seeks external assurance through 3rd party data verification in line with GRI Standards for specific indicators including:

- GRI 305-1 (Direct (Scope 1) GHG emissions)
- GRI 305-2 (Indirect (Scope 2) GHG emissions)
- GRI 305-3 (Other indirect (Scope 3) GHG emissions)
- GRI 305-4 (GHG emissions intensity)
- GRI 305-5 (Reduction of GHG emissions)

The scope of the Company's carbon footprint assessment and sustainability data verification covers data for GULF and its subsidiaries. Please refer to the Annual Report (56-1 One Report) 2023 pages 220-229 for details.

Emissions reported in metric tons of carbon dioxide equivalent (tCO₂e). Intensity reported as emissions per megawatt-hour of electricity generation (tCO₂e/MWh).

	2020	2021	2022	2023
Total GHG emissions	3,944,773	5,109,713	8,791,140	14,624,745
Scope 1	3,931,649	5,094,990	6,651,222	11,245,262
Scope 1 intensity	0.400	0.405	0.375	0.359
Scope 1 intensity				
reduction	1.8	0.5	7.9	11.8
(% from baseline)				
Scope 2	10,762	10,782	53,794	23,547
Scope 1+2 intensity	0.401	0.406	0.376	0.360
Scope 3	2,363	3,941	2,086,124	3,355,936
Total intensity (scope 1+2+3)	0.401	0.406	0.495	0.467

Greenhouse gas emissions update (as of 31 December 2023)

Note: GULF continually works to improve its scope 3 data collection. Significant increases in scope 3 GHG emissions (and thus, total GHG emissions) between years should been seen as a reflection of the Company's increased ability to collect and calculate scope 3 data. See the following page for a breakdown of the scope 3 emissions data collected in the latest reporting period.



Scope 3 emissions breakdown (data for 2023)

Scope 3 category		Emissions	Remarks	
1	Purchased good and services	2,246	Relevant, calculated Calculated from primary data using TGO methodology, e.g. bills of purchase	
2	Capital goods	-	Relevant, not calculated Determined to be a non-significant amount per TGO methodology	
3	Fuel- and energy-related activities*	3,353,318	Relevant, calculated 8 Calculated from primary data using TGO methodology *not included in scope 1 or scope 2	
4	Upstream transportation and distribution	-	Relevant, not calculated Determined to be a non-significant amount per TGO methodology Most upstream transportation is accounted for in category 1 or category 3	
5	Waste generated in operations	371	Relevant, calculated Calculated from primary data using TGO methodology, e.g. weight of waste	
6	Business travel	-	Relevant, not calculated Determined to be a non-significant amount per TGO methodology Travel by corporate vehicles calculated as part of scope 1 emissions	
7	Employee commuting	-	Relevant, not calculated Determined to be a non-significant amount per TGO methodology	
8	Upstream leased assets	0	Not relevant The Company does not have upstream leased assets	
9	Downstream transportation and distribution	0	Not relevant The Company does not have downstream transportation and distribution	
10	Processing of sold products	0	Not relevant The Company sells electricity, which is not considered a sold product	
11	Use of sold products	0	Not relevant The Company sells electricity, which is not considered a sold product	
12	End of life treatment of sold products	0	Not relevant The Company sells electricity, which is not considered a sold product	
13	Downstream leased assets	0	Not relevant The Company does not have downstream leased assets	
14	Franchises	0	Not relevant The Company does not have franchises	
15	Investments	-	Relevant, not calculated Determined to be a non-significant amount per TGO methodology	
	Total scope 3 GHG emissions	3,355,936		