



## Independent Assurance Report

**Mr. Shigeru Yamada**  
**Representative Director, Group CEO**  
**COSMO ENERGY HOLDINGS CO., LTD.**

We, SOCOTEC Certification Japan (hereafter "SOCOTEC"), have performed a limited assurance engagement, in response to the entrustment from COSMO ENERGY HOLDINGS CO., LTD. (hereafter "the Company") in order to provide an opinion as to whether the subject matter information ("FY2023 ESG Data"(period: 1 April 2023 to 31 March 2024)) of the Company meets the criteria in all material respects.

### 1 Subject Matter Information and Criteria

The subject matter information for our assurance is "GHG Emissions, Environmental, Social and Safety Performance Data (shown in APPENDIX)" covering the operations and activities of a total of 43 companies in Japan and overseas of the Company and its consolidated companies (COSMO OIL CO., LTD., COSMO OIL MARKETING CO., LTD., COSMO ENERGY EXPLORATION & PRODUCTION CO., LTD., and including subsidiaries and affiliated companies) described in "FY2023 ESG Data"(period: 1 April 2023 to 31 March 2024).

The criteria for preparing subject matter information is "GHG Emissions Calculation Rules (Ver3)".

### 2 Management Responsibility

"FY2023 ESG Data"(period: 1 April 2023 to 31 March 2024) was prepared by the management of the Company, who is responsible for the integrity of the assertions, statements, and claims made therein (including the assertions over which we have been engaged to provide limited assurance), the collection, quantification and presentation of all data and information in the report, and applied criteria, analysis and publication.

The management of the Company is responsible for maintaining adequate records and internal controls that are designed to support the reporting process and ensure that "FY2023 ESG Data"(period: 1 April 2023 to 31 March 2024) is free from material misstatement whether intentional or negligent.

### 3 Assurance Practitioner's Responsibility

The responsibility of SOCOTEC is to express a limited assurance conclusion as to whether the subject matter information has been prepared in compliance with the criteria in all material respects.

SOCOTEC performed limited assurance engagement in accordance with the verification procedures stipulated by SOCOTEC and "JIS Q 14064-3:2023 (ISO14064-3 : 2019) Specification with guidance for the verification and validation of greenhouse gas statements" and the International Standard on Assurance Engagements (ISAE) 3000 (Revised), "Assurance Engagements Other than Audits or Reviews of Historical Financial Information" of International Auditing and Assurance Standards Board (IAASB).

The procedures implemented in the limited assurance engagement are limited in their type, timing and scope as compared to the procedures implemented in the reasonable assurance engagement. As a result, our limited assurance engagement does not provide as high assurance as reasonable assurance engagement.

Our procedures performed depend on the assurance professional practitioner's judgement, including the risk of material misstatement, whether due to fraud or error. Our conclusion was not designed to provide assurance on internal controls.

We believe that we have obtained the evidence to provide a basis for the conclusion for limited assurance.



#### 4 Assurance Procedures

The procedures that SOCOTEC has conducted are based on professional judgment and include, but are not limited to:

- Evaluation of policies and procedures created by the Company in relation to subject matter information
- Questions to the Company personnel to understand the above policies and procedures
- Verification that the target project meets eligibility requirements
- Matching with the basis data by trial calculation and recalculation
- Obtaining and collating material for important assumptions and other data
- We visited CHIBA REFINERY and SAKAI REFINERY of COSMO OIL CO., LTD. in order to confirm the calculation structure and procedures, data collection and implementation status of record control.

#### 5 Statement of Our Independence, Quality Control and Competence

SOCOTEC has introduced and maintained a comprehensive management system that conforms to the accreditation requirements of "ISO17021 Conformity assessment -- Requirements for bodies providing audit and certification of management systems". In addition, we have also established a management system according to "ISO14065 Greenhouse gases -- Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition". These meet the requirements of International Standard on Quality Control 1 by the International Auditing and Assurance Standards Board and Code of Ethics for Professional Accountants by International Ethics Standards Board for Accountants. We maintain a comprehensive quality control system that includes ethical rules, professional standards and documented policies and procedures for compliance with applicable laws and regulations.

The SOCOTEC Group is a comprehensive third-party organisation in inspection, testing and certification operations, and conducts management system certification services and training services related to quality, environment, labour and information security in countries around the world. Engaged in performance data and sustainability report assurance of environmental and social information, SOCOTEC affirms that it is independent of the organisation that has ordered the assurance engagement, its affiliated companies, and stakeholders, and that there is no possibility of impairing impartiality or conflict of interest.

We assure that the team engaged in the assurance is selected based on knowledge, experience in the relevant industry, and the competence requirements for this assurance engagement.

#### 6 Use of Report

Our responsibility in performing our limited assurance activities is to the management of the company only in accordance with the terms for this engagement as agreed with the Company. We do not therefore assume any responsibility for any other purpose or to any other person or organisation.

#### 7 Our Conclusion

On the basis of our procedures performed and evidence obtained nothing has come to our attention that causes us to believe that the subject matter information is not, in all material respects, prepared and reported in accordance with the stated criteria.

SOCOTEC Certification Japan

Seigo Futaba  
Managing Director  
28 June 2024

## GHG Emissions, Environmental, Social and Safety Performance Data

Table1 GHG Emissions by Scope (COSMO ENERGY Group: 43 group companies)

Item			Figure	Unit
Scope1 (breakdown)	Total		6,886	thousand t-CO2e
	CO2 emissions		6,867	thousand t-CO2e
	GHG emissions other than CO2 emissions		19	thousand t-CO2e
Scope2: Market-based		Total	226	thousand t-CO2e
Scope2: Location-based		Total	236	thousand t-CO2e
Scope3 (breakdown)	Category1	Purchased goods and services	13,525	thousand t-CO2e
	Category2	Capital goods	226	thousand t-CO2e
	Category3	Fuel and energy related activities not included in Scope 1 or 2	623	thousand t-CO2e
	Category4	Transportation and delivery (upstream)	221	thousand t-CO2e
	Category5	Waste generated in operations	39	thousand t-CO2e
	Category6	Business travel	1	thousand t-CO2e
	Category7	Employee commuting	5	thousand t-CO2e
	Category9	Transportation and delivery (downstream)	68	thousand t-CO2e
	Category11	Use of sold products	56,659	thousand t-CO2e
	Category12	End-of-life treatment of sold products	4,670	thousand t-CO2e
	Category13	Leased assets (downstream)	11	thousand t-CO2e
	Total			76,048

Table2 Energy consumption & Intensity (COSMO OIL CO.,LTD.)

Item	Figure	Unit
Refinery Unit Energy consumption <sup>※1</sup>	9.03	L/kL
Refinery Crude oil equivalent energy consumption	1,451	thousand kL
Refinery Unit GHG Emissions <sup>※2</sup>	23.53	kg-CO2e/kL
Refinery GHG Emissions	3,780	thousand t-CO2e
Transpotation department Unit Energy consumption (marine) <sup>※3</sup>	7.58	L/thousand (ton·km)
Transpotation department Unit Energy consumption (land) <sup>※4</sup>	36.44	L/thousand (ton·km)
Transpotation department CO2 Emissions	167,458	t-CO2e

※1 Crude oil equivalent energy consumption (L) per unit of crude oil equivalent throughput (kL)

※2 Per unit of crude oil equivalent throughput (kL)

※3, ※4 Crude oil equivalent energy consumption (L)

Table3 Energy consumption (COSMO ENERGY Group Total)

Item	Figure	Unit
Heat quantity equivalent	106,557	TJ
Crude oil equivalent	2,749	thousand kL

Table4 Water resources:Water intake & Wastewater

	Item	Figure	Unit
Petroleum Refining	Water intake total	440,339	thousand t
	Industrial water	41,033	thousand t
	Sea water	398,892	thousand t
	Well water	235	thousand t
	Tap water	179	thousand t
	Wastewater total	435,144	thousand t
Petrochemical	Water intake total	113,601	thousand t
	Industrial water	19,214	thousand t
	Sea water	94,341	thousand t
	Well water	28	thousand t
	Tap water	18	thousand t
	Wastewater total	101,229	thousand t
COSMO Group Total	Water intake total	554,320	thousand t
	Industrial water	60,482	thousand t
	Sea water	493,233	thousand t
	Well water	358	thousand t
	Tap water	247	thousand t
	Wastewater total	536,603	thousand t

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APPENDIX 3 / 7

Table5 Water Pollution Loading Amount

	Item	Figure	Unit
Petroleum Refining	COD loading	90.8	t
	Nitrogen loading	47.5	t
	Phosphorus loading	0.9	t
Petrochemical	COD loading	63.0	t
	Nitrogen loading	30.0	t
	Phosphorus loading	1.5	t

Table6 Air Pollution Emissions

	Item	Figure	Unit
Petroleum Refining	SOx emissions	3,165	t
	NOx emissions	2,336	t
Petrochemical	SOx emissions	582	t
	NOx emissions	790	t

Table7 Air Pollution Emissions & Water Pollution Loading(Refinery)

	Item	Figure	Unit
Petroleum Refining	Unit SOx emissions <sup>※5</sup>	19.5	g/kL
	SOx emissions	3,127	t
	Unit NOx emissions <sup>※6</sup>	14.0	g/kL
	NOx emissions	2,244	t
	Unit COD loading <sup>※7</sup>	0.56	g/kL
	COD loading	90.8	t

※5, ※6, ※7 Per unit of crude oil equivalent throughput (L)

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APPENDIX 4 / 7

Table8 Industrial waste (By business)

Item		Figure	Unit
Petroleum Refining	Industrial waste generated	78,067	t
	Recycled waste	28,738	t
	Final disposal	15	t
Petrochemical	Industrial waste generated	76,666	t
	Recycled waste	9,164	t
	Final disposal	226	t
COSMO Group Total	Industrial waste generated	155,301	t
	Recycled waste	41,816	t
	Final disposal	309	t

Table9 PRTR-Designated Substances

Item		Figure	Unit
Petroleum Refining	Discharged amount	100	t
	Transferred amount	522	t
Petrochemical	Discharged amount	303	t
	Transferred amount	36	t



Table10 Employees<sup>※8</sup>

Item		Figure	Unit
Ratio of female managers <sup>※9</sup>		7.1	%
Ratio of female hires	Managing section <sup>※10</sup>	36	%
	New graduate <sup>※11</sup>	53	%
Childcare leave	Female acquisition rate	100	%
	Male acquisition rate	62	%

※8 For employees employed by Cosmo Oil Co.,LTD.

※9 As of April 1, 2024

※10 New graduate recruitment+Mid-career recruitment in FY2023

※11 As of April 1, 2024

Table11 Gender pay gap<sup>※12</sup>

Item		Figure	Unit
Gender pay gap	Total	76.0	%
	Regular employees	76.2	%
	Non-regular employee	70.6	%

※12 For employees employed by Cosmo Oil Co.,LTD.

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APPENDIX 6 / 7







Table12 Industrial accident (COSMO ENERGY Group: 43 group companies)

Item		Figure	Unit
Occupational accident	Lost work accident	40	number
	Industrial accident without lost time	59	number
Work-related accident while commuting	Lost work accident	10	number
	Industrial accident without lost time	29	number
Total	Lost work accident	50	number
	Industrial accident without lost time	88	number
Grand Total		138	number
Number of fatalities due to work-related accidents	Employee	0	people
	Partner company employee	0	people

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APPENDIX 7 / 7

