



METHANE
GUIDING
PRINCIPLES

Methane Guiding Principles Signatory

SOCAR

May, 2024





Company: SOCAR

Year of Joining Methane Guiding Principles: 2018

Senior Representative: Mr. Afgan Isayev



Principle One:

Continually reduce methane emissions.

- Please state what specific activities or projects your company has undertaken to reduce methane emissions. Please refer to the previous year's annual MGP reporting where applicable to refer to intended activity. Link to sustainability report where relevant to provide further detail.
- Describe how the reduction was achieved including description of the asset type, technology type, timeframe. What was the end result?
- Provide data to support your description e.g., the actual amount of emissions reduction achieved, or the reduction in methane intensity.

2023 Completed Activity	2024 Intended Activity
<ul style="list-style-type: none"> • SOCAR has established a new segment of Energy Transition, Environment & Decarbonization (ETED) with the main objective of transitioning SOCAR into a national energy company that operates with a sustainable business model and product portfolio. ETED segment is strategically designed to spearhead SOCAR’s decarbonization initiatives, with a significant emphasis on methane abatement as a core component of its strategy. • In order to actively participate in utility-scale renewable energy source (RES) projects, SOCAR has established a new legal entity SOCAR Green LLC, which operates in collaboration with leading global energy companies, facilitating joint efforts in the development and delivery of large-scale low carbon projects. • SOCAR participated in COP28 and announced its corporate goals on reducing emissions. 2022 was taken as a baseline year against which emissions reduction targets were calculated. These goals are the following: <ul style="list-style-type: none"> — zero routine flaring on all operational assets by 2030 — -30% to upstream intensity by 2030 (on equity basis) — -30% to corporate intensity by 2035 (on equity basis) — -20% to absolute emissions by 2035 (on equity basis) — aim near zero Upstream methane by 2035 (on equity basis) — net zero by 2050 • Furthermore, SOCAR’s decarbonization ambition was reinforced by co-founding the Oil & Gas Decarbonization Charter (OGDC), a 	<ul style="list-style-type: none"> • SOCAR currently is conducting a large-scale study to establish detailed and precise baseline levels of methane emissions from its assets. This study is also aims to align SOCAR’s emissions calculations and reporting methodologies with the OGMP 2.0 methodology and standards. Based on this study results, SOCAR will also develop mitigation program targeting most material sources of methane emissions. • Progressing with the next stages of the Leak Detection and Repair “LDAR” project, including repair and verification of the identified leakages and potential application for obtaining carbon credits from relevant agencies. • Participation in RES Projects <ul style="list-style-type: none"> — SOCAR, AIC, and BP will continue the implementation of the Sunrise project comprising a joint solar power plant with a 240 MW capacity. — SOCAR and Masdar will continue to advance their Joint Development Agreement to develop integrated renewable energy solutions, consisting of following projects: <ul style="list-style-type: none"> — "Mega": 2 GW of onshore solar and wind power — "Hector": - integrated green hydrogen asset powered by 2 GW of offshore wind energy. — SOCAR and ACWA will continue exploring the development of onshore and offshore renewable wind energy facilities. Further plans include export-oriented production of green fertilizers.



worldwide industry framework dedicated to enforcing global climate action and achieving significant impacts from the oil and gas sectors.

- SOCAR and BP have launched the Advanced Global Methane Reduction "AGMR" project in Azerbaijan, aiming to share knowledge and experience in methane abatement processes with the local small and medium-sized oil and gas companies. This will enable smaller operators to benefit from lessons learned and best practices applied by SOCAR and BP in this field.
- SOCAR has launched its second Leak Detection and Repair "LDAR" project at its' offshore production unit Oil Rocks. During the initial stage of the project, methane leaks were identified and quantified, resulting in approximately 60,000 tons of CO₂eq emissions validated by external party.

Principle Two:

Advance strong performance across the gas supply chain

Please include answers to the following questions:

1. Did you participate in any methane research or plan to do so?
 2. Did you conduct any outreach on methane management?
- Describe what action you have taken to engage industry players across the value chain to better understand how to achieve robust methane emissions management. Outreach activity could include training sessions, participation in webinars, influencing NOJV partners, or publication of guidance. Activity could also include commercial incentives or engagement with investors to drive better performance by others.
 - Provide details of any outcomes that resulted from your action.

2023/2024 Completed Activity	2024 Intended Activity
<ul style="list-style-type: none"> • As a part of "Methane Guiding Principles" AGMR initiative, representatives from SOCAR, BP, and various upstream operators convened across several events to address methane emissions in Azerbaijan's oil and gas sectors. • Representatives from international organizations, SOCAR, Bp, and various small to medium-sized upstream operating companies visited Oil Rocks to exchange best practices and knowledge regarding the "Leak Detection and Repair" project initiated by SOCAR. Before the informative session, participants had the opportunity to have an onsite technical presentation where leaks had been detected and effectively repaired. • Following this, a site visit to the Sangachal Terminal was organized, attended by representatives from BP, SOCAR, and small to medium-sized operators. The primary objective of this visit was to learn best practices of bp in advanced methane abatement 	<ul style="list-style-type: none"> • Continuation of organizing online seminars and webinars with small to medium-sized upstream operating companies to enhance the sharing of best practices and knowledge. • Organisation of AGMR impact assessment event with participation of SOCAR/Bp management and target audience in order to analyse the impacts of the projects and assess the track record of methane emissions reduction to support the "no one left behind" philosophy.



techniques. After the informative session, the visit featured a tour of the (Azeri Chirag East) ACE control room.

- Subsequently, an international conference at SOCAR's Eco-Park brought together international organizations, major oil & gas companies, and service providers. Discussions focused on the role of methane emissions in climate change, the application of advanced technologies like drone and satellite-based systems, and the importance of sharing best practices and adopting green technologies.

Principle Three:

Improve accuracy of methane emissions data.

- Describe action taken to improve methane emissions data collection methodologies. This could be application of new technology at an operated site(s), investment and participation in R&D initiatives, development of monitoring/modelling software, or support to research that improves the accuracy of the quantification of methane emissions.
- Where new technology /software has been piloted or adopted, it is helpful to describe how it works, the reasons it was selected, and how it was deployed. Any data that can be shared to demonstrate improvements is useful.
- How these new methods/technologies have been adopted into your accounting process if at all.

2023 Completed Activity	2024 Intended Activity
<ul style="list-style-type: none"> • SOCAR and TotalEnergies have initiated a collaborative project to identify and measure methane emissions in SOCAR's offshore activities. This effort employs drones equipped with AUSEA technology (Airborne Ultralight Spectrometer for Environmental Applications). The project encompasses the oil and gas operations of both SOCAR and TotalEnergies in the Caspian Sea. • SOCAR and Sirius signed a cooperation agreement on the identification of emission sources, measuring emission volumes per source, designing solutions to mitigate emissions and CCUS. • SOCAR and ADNOC established a cooperation agreement to explore potential opportunities and activities in the low carbon energy solutions space, including in relation to blue hydrogen and its derivatives, CCUS and geothermal technology. 	<ul style="list-style-type: none"> • SOCAR is currently finalizing contractual arrangements for a satellite imagery methane measurement campaign aimed at detecting large-scale methane emissions. This will be carried out under the "Oil and Gas Climate Initiative" (OGCI) framework. • Within the framework of UNEP's IMEO science studies, SOCAR is currently reviewing the Memorandum of Understanding (MoU) with DLR (The German Aerospace Center) to conduct instrumental emissions measurement surveys using drones across SOCAR's assets. • SOCAR is assessing its methane footprint using OGMP methodology to estimate material assets at Upstream, Midstream, and Gas Retail. • SOCAR launches a pilot campaign of instrumental (ground) measurements at selected upstream assets to get a better understanding of specific emission rates, representing a preliminary step towards OGMP standards. • Implementation of further projects between SOCAR and TotalEnergies on methane measurements and leak identifications with the usage of drones equipped with AUSEA technology (sensors).



- SOCAR is progressing with the application of a Methane Management AI Tool, a cutting-edge technology set to significantly improve monitoring and analysis of methane emissions at our upstream facilities. Key features of the Methane AI Tool include efficient data collection, advanced analysis utilizing cutting-edge data processing techniques to identify trends and patterns, and comprehensive gap analysis to pinpoint areas necessitating additional data measurements, thereby enabling a thorough understanding of methane emissions. This technology will be expanded to Midstream facilities later in the year.

Principle Four:

Advocate sound policy and regulations on methane emissions

Advocacy consists of active participation in legal consultation processes, external policy statements, and direct engagement with government.

- Consider providing details on the region or regulation involved, how you undertook your advocacy, others involved, and the outcome.

2023 Completed Activity	2024 Intended Activity
<ul style="list-style-type: none"> • SOCAR is fully committed to supporting Azerbaijan's Nationally Determined Contribution (NDC) to the Paris Agreement. This commitment reflects Azerbaijan's dedication to combatting climate change through the implementation of mitigation and adaptation measures outlined in its NDC. • As Azerbaijan commits to the Global Methane Pledge (GMP) to reduce methane emissions worldwide, SOCAR assumes a pivotal role. SOCAR drives innovation, sets industry standards, monitors emissions rigorously, advocates for policy changes, and enhances capacity to ensure meaningful progress towards methane reduction goals. • In alignment with the decree of the President of Azerbaijan, designating 2024 as the Green World Solidarity Year, SOCAR has formulated and adopted an action plan to systematically report on green activities. 	<ul style="list-style-type: none"> • SOCAR will continue to support Azerbaijan's Nationally Determined Contribution (NDC) throughout 2024. • SOCAR will support the country's efforts to meet the goals of the Global Methane Pledge (GMP) by advancing methane reduction initiatives. • SOCAR will continue to implement its approved Action Plan within the framework of the 'Green World Solidarity Year'.

Principle Five: Increase transparency

Please include answers to the following question:

1. Are you participating in OGMP 2.0, or do you intend to do so? If you are participating in OGMP 2.0 you may provide a link to the website.
 - Describe what activity you have carried out e.g., providing information in relevant external reports on methane emissions data, methodologies, and progress and challenges in methane emissions management.
 - If you have contributed towards the standardization of comparable external methane reporting describe the activity, you have taken.

2023 Completed Activity	2024 Intended Activity
<ul style="list-style-type: none"> • Since 2018, SOCAR has been a member of the International Association of Oil & Gas Producers (IOGP). As part of this association, SOCAR is annually reporting data on Environmental Performance Indicators related to their exploration and production activities to the IOGP. 	<ul style="list-style-type: none"> • SOCAR is planning to join the Oil and Gas Methane Partnership 2.0 (OGMP 2.0), demonstrating its commitment to further enhancing transparency and reducing methane emissions in its operations. • SOCAR as a member of the Signatory committee of Oil and Gas Decarbonization Charter (OGDC) is working closely with relevant stakeholders to develop a comprehensive Action Plan and establish clear reporting requirements to ensure transparency and accountability in its operations.

Methane Emissions

<p>Do you report absolute methane emissions within your sustainability report? <i>If so, provide link.</i></p>	<p>Yes https://www.socar.az/en/page/sustainable-development-reports</p>
<p>Do you report a methane intensity within your sustainability report? <i>If so, provide link.</i></p>	<p>Yes https://www.socar.az/en/page/sustainable-development-reports</p>
<p>What is your organization's total absolute methane emissions? Provide a figure in tons. Provide latest data publicly available.</p>	<p>Refer to Sustainability report</p>
<p>State your methodology.</p>	<p>This methodology is based on IPCC methodology and recommendations, EMEP/EEA national emission inventory technical guidance documents.</p>
<p>State your reporting boundary.</p>	<p>Scope 1 and 2</p>
<p>What is your organization's methane intensity? Provide latest data publicly available.</p>	<p>Refer to Sustainability report</p>
<p>State your methodology.</p>	<p>This methodology is based on IPCC methodology and recommendations, EMEP/EEA national emission inventory technical guidance documents.</p>
<p>State your reporting boundary.</p>	<p>Scope 1 and 2</p>
<p>Do you have a methane emission target? If yes, please state what it is, including the boundaries and methodology. If no, are you developing such a target? Please state your intended timeline.</p>	<p>SOCAR is aiming to reduce Methane intensity to 0.2% or less (equity control, entire value chain) by 2035. SOCAR will re-assess its methane footprint using the OGMP 2.0 framework.</p>