



METHANE
GUIDING
PRINCIPLES

Methane Guiding Principles Signatory Reporting

SOCAR

January 15th 2021





COMPANY: **SOCAR**

DATE: **15.01.2021**

YEAR OF JOINING METHANE GUIDING PRINCIPLES: **January 2019**

SENIOR REPRESENTATIVE: **Mrs Rafiqa Huseynzadeh**

WORKING LEVEL REPRESENTATIVE: **Elchin Bagirov, Mustafa Gurbanli**

Principle One: Continually reduce methane emissions

2019/20 completed activity	2021 intended activity
<p>SOCAR has joined the “Zero Routine Flaring by 2030” Initiative, introduced by the World Bank’s Global Gas Flaring Reduction Partnership (GGFR). In collaboration with GGFR “Associated Gas Reduction in SOCAR and SOCAR’s Joint Projects for 2017-2022” plan has been developed. In accordance with the plan SOCAR carries out instrumental measurements using infrared camera to verify the current status of associated gas emissions and flaring at SOCAR’s “Azneft” Production Unit (PU), Operating Companies and Joint Ventures.</p> <p>The list of measures taken for reduction of associated gas emissions, capturing and returning them to the system:</p> <ul style="list-style-type: none"> • Installation of new gas compressors; • Construction/ refurbishment of new pipes; • Sealing of the behind-pipe of wells; • Application of energy efficient methods in offshore oil and gas production. <p>In 2019, 128.97 million m³ of associated gas was emitted at “Azneft” PU. The total emitted volume decreased by 103 million m³ in comparison with the planned baseline. According to the forecast data of associated gas, it has been targeted to reach the emitted volume of 95 million m³ as a result of measures to be taken in this direction. The volume of associated gas emissions was 31 million m³ during the first 3 terms of 2020, which indicates that the target has been reached two years before the target date.</p> <p>The pilot NAMA project to support the National level Climate Change Mitigation Actions has been implemented by SOCAR jointly with UNDP and Global Environment Facility (GEF).</p> <p>In the framework of 3rd component of the NAMA, new compressor and separator equipment, and online control system have been installed at 3 gas collection points in the Zagli-Zeyva field of Siyazanneft OGP, the main gas pipeline was laid.</p> <p>SOCAR continue to implement works in order to solve environmental problems, which were inherited from the former Soviet Union. Number of Feasibility Studies were performed to assess technologies and investments required to completely eliminate leaks in decommissioned or discontinued wells offshore and onshore.</p>	<p>It is planned to continue implementation of measures envisaged for 2021 under “Associated Gas Reduction in SOCAR and SOCAR’s Joint Projects for 2017-2022” :</p> <ol style="list-style-type: none"> 1) Automated separation system and refurbishment of 500 m of gas pipeline at Shirvan Oil Operating Company (SOCAR’s joint project) 2) Installation of gas collection system at Kalamaddin oilfield of Karasu Operating Company (SOCAR’s joint project) <p>It is planned to reach “0” target for routine flaring of associated gas at oil-gas production in 2021.</p> <p>It is planned to continue work with Carbon Limits in order to develop new methane reduction projects.</p> <p>It is planned to continue work on elimination of leaks in decommissioned or discontinued wells offshore and onshore.</p>

Continually reduce methane emissions - continued

2019/20 completed activity	2021 intended activity
<p>Greenhouse Gas (GHG) emissions emitted to the atmosphere as a result of stationary combustion are calculated based on the Intergovernmental Panel on Climate Change (IPCC) methodology. Fugitive emissions are calculated according to the actual measurement results and using mass balance method.</p> <p>Depending on the oil-field, the content of methane in the associated gas varies from 70 to 90 percent.</p> <p>“Oil Gas Scientific Research Project” Institute, a structural unit of SOCAR, conducts research to estimate measures to increase energy efficiency, carbon capture and storage.</p>	

What are your organisation’s total methane emissions?

2019/20 completed activity	2021 intended activity
<p>Methane emissions data has been reported in the “Annual Report on Sustainable Development for 2019” (139,000 tons). Please refer to: http://www.socar.az/socar/az/economics-and-statistics/economics-and-statistics/socar-reports</p> <p>As a large-scale company, SOCAR's activities are divided into three major components: upstream (Exploration, Drilling, Development, Oil/Gas Production); midstream (Transport/ Export/Sales); and downstream (Refining and Petrochemicals, Sales).</p> <p>Methane emissions for each component are calculated on an annual basis:</p> <ul style="list-style-type: none"> • Upstream - 104.28 thousand tons; • Midstream - 10.7 thousand tons; • Downstream - 23.7 thousand tons. <p>The activity data are defined by the mass balance method and as a result of instrumental measurements. The amount of methane in gas samples is determined by laboratory analysis at SOCAR. A Global Warming Potential (GWP) of 21 for CH₄ has been applied in order to convert methane emissions to carbon equivalent (indicated in the Second Assessment Report of IPCC).</p>	<p>N/A</p>



**Does your organisation report methane intensity?
If so, please specify the intensity.**

2019/20 completed activity	2021 intended activity
<p>SOCAR has been a member of the International Association of the International Association of Oil & Gas Producers (IOGP) since 2018. Member companies are encouraged to submit data on Environmental Performance Indicators for exploration and production activities to the IOGP.</p> <p>The report submitted to the IOGP reflects the calculations for 2019. The calculated methane intensity for the report is 9.97 tons of CH₄/ thousands of tons of hydrocarbon production.</p> <p>The provided data is calculated according to the IOGP guidelines, considering the activities of contractors.</p>	<p>N/A</p>

Do you have a methane emission target?

2019/20 completed activity	2021 intended activity
<p>A target for methane emissions has not been set.</p>	<p>N/A</p>



Principle Two:

Advance strong performance across the gas supply chain

2019/20 completed activity	2021 intended activity
<p>As an international company SOCAR implements gas transportation (midstream) and distribution (downstream) activities.</p> <p>The staff of SOCAR regularly participate in relevant trainings, seminars and conferences in order to learn international experience. Simultaneously, it actively participates in the organization of relevant events and training courses on GHG inventory, Climate Change mitigation, energy efficiency, biodiversity conservation in order to exchange the acquired knowledge and skills with ecologists and other stakeholders at SOCAR.</p>	<p>It is planned to continue to participate in training courses on GHG inventory, Climate Change mitigation, energy efficiency, as well as biodiversity conservation.</p> <p>Online events could be organized to enhance knowledge of experts on climate change related issues using different platforms such as Coursera and etc.</p>

Principle Three:

Improve accuracy of methane emissions data

2019/20 completed activity	2021 intended activity
<p>A cooperation agreement has been signed between SOCAR and the Carbon Limits (CL) company. Within the cooperation a methane factor coefficient and a special inventory model for the inventory of methane emissions emitted by SOCAR have been developed.</p> <p>Within the intended activities in the "Emission Reduction Agreement", signed between the SOCAR and Carbon Limits (CL) company of Norway, SOCAR is implementing a pilot project in the oil production process called "Leak Detection and Repair" (LDAR).</p>	<p>In the coming years, it is planned to develop an Emission Module in the SAP program in order to inventorise the emissions emitted into the atmosphere. That model will give opportunity for the estimating of pollutants along with GHG emissions.</p> <p>It is planned to continue instrumental measurements to detect and assess level of the methane leakages and account for fugitive emissions of methane base on factual volumes.</p> <p>Number of projects are defined for 2021 to assess leaks levels from oil-gas productions activities, oil storage and natural gas distribution networks</p>



Principle Four:

Advocate sound policy and regulations on methane emissions

2019/20 completed activity	2021 intended activity
<p>SOCAR being a member of WG on Azerbaijan First NDC included commitments on GHG reductions from oil& natural gas sector as follows:</p> <ul style="list-style-type: none"> • Application of new and modern environmental-friendly technologies in the oil and gas processing, production of fuel in line with EURO-5 standards in a new refinery complex by 2019 and strengthening the capacity of the staff; - -Modernization of gas pipelines, gas distribution system and other measures to decrease losses up to 1% by 2020 and ensure the volume of reduction in compliance with international standards by 2050; • Based on adopted strategy, accumulation of gases emitted to the atmosphere during oil-gas production, prevention of gas leakages during oil-gas processing and at distribution networks. 	<p>To ensure compliance with commitments taken under Azerbaijan First NDC “SOCAR 2021-2030: Low emissions development strategy” was elaborated and planned to be adopted by SOCAR in 2021. The strategy contains a number of measures and goals to reduce upstream, midstream and downstream GHG emissions, including methane.</p>

2019/20 completed activity	2021 intended activity
<p>SOCAR is a member of the World Bank’s Global Gas Flaring Reduction (GGFR) Partnership’s Steering Committee and has joined the “Zero Routine Flaring by 2030” Initiative, introduced by the World Bank. “Associated Gas Reduction in SOCAR and SOCAR’s Joint Projects for 2017-2022” Plan has been developed. SOCAR has implemented projects for supporting the Climate Change Mitigation Actions in collaboration with the UNDP, the Global Environment Facility (GEF).</p> <p>From 2019 SOCAR is a member of Methane Guiding Principles and provided official report on current situation with methane reduction activities planned and implemented.</p>	<p>It is planned to continue annual reporting to GGFR on actual situation with flaring at SOCAR</p>





2019/20 completed activity	2021 intended activity
<p>In collaboration with Carbon Limits, actions to reduce gases affecting climate change have been successfully continued since 2016.</p> <p>SOCAR is a member of the Working Group (WG), which was established to organize the activities of the State Commission on Climate Change and consists of the representatives of relevant government agencies. As a member of this WG, SOCAR executes the relevant measures indicated in the Actions Plan (AP) of the WG.</p>	<p>It is planned to continue work under State Commission on Climate change in order to implement measures indicated in AP of WG.</p>

2019/20 completed activity	2021 intended activity
<p>On September 14, 2020, a Memorandum of Understanding on CEPI-Caspian Environmental Protection Initiative was signed at Ecopark, SOCAR's Environmental Research Center. CEPI, initiated by SOCAR and established by SOCAR, KazMunayGas, BP, Equinor Absheron AS and Total E&P Absheron B.V., considers proactive steps toward combating climate change, emissions of greenhouse gases and hazardous substances to the atmosphere.</p>	<p>State Oil Company of the Republic of Azerbaijan (SOCAR) will continue to implements the most advanced environmental measures and solutions to ensure environmental safety and efficient use of resources, reduce carbon intensity and ensure sustainable development of the region under CEPI signed in 2020.</p>

Principle Five:
Increase transparency

Historical completed activity	2021 intended activity
<p>The data has been included in SOCAR's Annual Report on Sustainable Development since 2011 and the indicators shown in the report are audited by one of the world's leading independent audit companies "Ernst & Young". The data covers all activity areas of SOCAR. Please refer to: http://www.socar.az/socar/az/economics-and-statistics/economics-and-statistics/socar-reports</p> <p>SOCAR is a member of the International Association of Oil & Gas Producers (IOGP) since 2018. Member companies are encouraged to submit data on Environmental Performance Indicators for exploration and production activities to the IOGP.</p>	<p>It is planned to continue to submit data on Environmental Performance Indicators for exploration and production activities to the IOGP.</p> <p>It is planned to reinforce SOCAR internal MRV arrangements in order to ensure sustainable reporting to the Ministry of Energy on SOCAR GHG emissions level twice per year as per action plan adopted by State Commission on Climate Change.</p> <p>It is planned to implement the recommendations of the Task Force on Climate-related Financial Disclosures</p>

Commentary:

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