

## Implementation of Saudi Aramco's SDGS to Preserve the Environment in Meeting Global Energy Needs



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**ABSTRACT:** The Sustainable Development Goals (SDGs) have become a key guide for global organisations to preserve the environment while meeting global energy needs. Saudi Aramco, one of the world's largest oil producers, has a key role in achieving these goals. This study aims to analyse the implementation of Sustainable Development Goals by Saudi Aramco in preserving the environment in line with their efforts to meet global energy needs. The method that will be used in research is a qualitative research method involving case studies to explain variables related to Saudi Aramco Companies in implementing Sustainable Development Goals (SDGs) to preserve the environment. This research explores various concrete steps that have been taken by Saudi Aramco in integrating the principles of SDGs in their operations. The main focus is on the company's efforts to reduce the environmental impact of its oil production activities, including the reduction of greenhouse gas emissions, water management, and biodiversity protection. The results show that Saudi Aramco has taken various important initiatives in support of the SDGs. They have invested in environmentally friendly technologies, such as increased energy efficiency and improvements in carbon capture technology. In addition, the company has prioritized sustainable water management and efforts to preserve natural ecosystems in the areas where it operates. The research also highlights the challenges faced by Saudi Aramco in implementing the SDGs, including regulatory issues, required investments, and corporate culture change. However, the steps taken by these companies demonstrate their commitment to achieving the SDGs.

**KEYWORDS:** Sustainable Development Goals, Saudi Aramco, Environmental Sustainability, Energy, Oil Company

### I. INTRODUCTION

Saudi Aramco is one of the largest and most influential oil and gas companies in the world that plays an important role in producing energy in Saudi Arabia. As the national oil company in Saudi Arabia, Saudi Aramco controls most of the country's oil and natural gas resources. Control includes the exploitation, exploration, processing, and delivery of crude oil and natural gas. The company not only generates huge revenues but also has a very significant impact on the globaleconomy. Oil revenues earned from Saudi Aramco are not only used to support the public sector such as the payment ofcivil servants' salaries and welfare benefits, but to provide important subcontracting contracts for private businesses such as construction. This can create a huge chain effect for non-oil economies, creating jobs, and business opportunitiesfor various actors.

The establishment of the Saudi Aramco Company has its roots in the formation of Aramco (*Arabian American Oil Company*) by five American oil companies in 1933 namely Chevron Corporation, Exxon Corporation, Mobil Corporation, Texaco, and Social (*Standard Oil Company of California*). These five companies cooperated in the formation of Aramco to undergo oil exploration, exploitation,processing, and shipping operations in Saudi Arabia. Aramco's oil operations at the time were in the Ghawar oil field, which is known as one of the largest oil resources in theworld. In the early 1980s, the Saudi government took steps tonationalize Aramco by making the company state-owned andthe government of Saudi Arabia fully entitled to control all of its operations. Despite the nationalization of the company, relations between Saudi Arabia and American oil companies continue to work well by compensating American companiesfor their assets (Seznec, 2016).

Saudi Aramco is an oil and gas company that has a key role in the economy of Saudi Arabia so it is considered the crownof the country's economy. Such abundant oil assets can generate revenues that have a direct impact on the Saudi Arabian government. The oil sector led by Saudi Aramco hasa huge contribution to the Saudi Arabian economy with a contribution of about 42 per cent to the country's Gross Domestic Product (GDP) as well as about 87 per cent to the government budget and 90 per cent of Saudi Arabia's exports.This shows that the country's economy depends on the oil sector, especially the Saudi Aramco Company (Woertz, 2019).SDGs (*Sustainable Development Goals*) is a long-term worldprogram that aims to optimize all the potential and resources

## Implementation of Saudi Aramco's SDGs to Preserve the Environment in Meeting Global Energy Needs

owned by each country. In this case, it is important to see the countries of the world including the United Nations (UN) as citizens of states. In Robert Jackson's view, state society is a deeper process than simply applying social science theory. This expression is very relevant in the context of SDGs because to understand the global program must look at it from a historical perspective. In the face of global challenges such as poverty alleviation, environmental protection, and creating peace, SDGs emerged in response to the experiences and challenges already faced by the international community. (Ngoyo, 2015)

The Sustainable Development Goals (SDGs) were born in the United Nations Conference on Sustainable Development held in Rio de Janeiro in 2012. The main objective of the conference is to reach a global agreement on universal goals that can maintain a balance between the three main dimensions of sustainable development, namely environmental, social, and economic. The SDGs aim to create common goals that can accommodate important aspects of sustainable development, including environmental protection, social welfare, and economic growth. The SDGs are based on five key foundations of people, planet, prosperity, peace, and partnership with the ultimate goal of achieving the three big goals by 2030: ending poverty, achieving equality, and tackling climate change.

On October 21, 2015, the United Nations (UN) ratified *Sustainable Development Goals* (SDGs) known as the Sustainable Development Goals. This initiative replaces the previous program, namely the *Millennium Development Goals* (MDGs). The SDGs are recognized as an ambitious international agenda designed to address global issues in three key environmental, social, and economic dimensions over 15 years. The fundamental difference between the SDGs and the MDGs lies in the broader scope. The MDGs consist of only 8 main goals to be achieved in the future, while the SDGs have a more comprehensive scope by covering 17 main goals and 169 global targets that can be applied worldwide. With the SDGs, the international community has come together to realize common goals by emphasizing global cooperation that enables countries around the world to work together to address increasingly complex global challenges. (Ishartono & Raharjo, 2015)

SDGs-7 namely "Affordable and Clean Energy" has a very important role in realizing sustainable development consisting of 17 goals. A key focus of this goal is to ensure that all individuals around the world have guaranteed and equitable access to sustainable energy sources. By ensuring that every developing country has adequate infrastructure to provide access to clean and affordable energy by 2030. Especially in large international companies, it is very important to build energy distribution systems to support economic growth and improve the quality of life of people in various countries. Especially oil companies in various countries in realizing sustainable renewable energy to meet global needs. (Tawhid, 2016)

Saudi Aramco is the third largest oil company in the world producing oil and gas. This company has an important role in producing energy, especially crude oil which is the world's main source of energy. This study will analyze related to the implementation of SDGs in Saudi Aramco Company regarding the use of energy sourced from renewable and clean energy to reduce waste of energy use and carbon emissions listed in SDGs 7 and SDGs 13 which emphasize the importance of global partnership in tackling climate change. So this study will discuss the implementation of SDGs for Saudi Aramco Companies in environmental sustainability to meet global needs.

## II. METHODOLOGY

The method that will be used in research that discusses the implementation of Sustainable Development Goals (SDGs) for Saudi Aramco Companies in maintaining environmental sustainability to meet global energy needs is a qualitative research method involving case studies to explain variables related to Saudi Aramco Companies in implementing Sustainable Development Goals (SDGs) to preserve the environment. Qualitative research methods focus on understanding and exploring a problem by examining a case or problem through *in-depth analysis* techniques.

Qualitative research is one type of approach to examine problems in the context of social science using natural paradigms and theories that are on existing cases or problems. In this study, the author will use data collection techniques that include literature studies (*library research*) and secondary data to access relevant information. This literature study includes collecting data from various sources such as scientific journals, books, websites, e-books, newspaper articles, as well as other official documents. In addition, the author will also collect data from various official documents related to the discussion to be researched (Abdussamad, 2021).

## III. RESULTS AND DISCUSSION

**Saudi Aramco's Role in Meeting the World's Energy Needs** Saudi Aramco is the world's largest oil and gas company with significant operations in the exploration, production, and processing of petroleum and natural gas. With an enormous resource base, the company plays a key role in meeting global energy needs. Saudi Aramco has access to one of the world's largest oil and natural gas reserves. Saudi Arabia's petroleum, which is one of the largest in the world, has been a major contributor to meeting the world's energy needs for decades.

Saudi Aramco has state-of-the-art and efficient petroleum and natural gas production facilities. They produce millions of barrels of petroleum every day, which is used to power vehicles, supply electricity, and power industries around the world. Consistency in energy supply is critical to global economic stability. Saudi Aramco, with its large production and storage capabilities, has been

## **Implementation of Saudi Aramco's SDGs to Preserve the Environment in Meeting Global Energy Needs**

instrumental in maintaining a stable supply of energy in the international market. (Council,2023)

Saudi Aramco also invests in critical energy infrastructure, such as oil refineries and processing facilities, which assist in the processing and distribution of petroleum and its derivative products. In addition to petroleum, Saudi Aramco is also involved in the exploration and production of natural gas, LNG (Liquid Natural Gas), as well as research and development of alternative energy. This demonstrates their commitment to support the diversification of global energy sources. Saudi Aramco has demonstrated its commitment to sustainability by investing in eco-friendly technologies and adopting industry best practices to reduce environmental impact. (Schwebel, 2010)

### ***Environmental and Sustainability Challenges in the Energy Industry***

The energy industry is one of the largest economic sectors in the world and has a significant impact on the environment. One of the main challenges in the energy industry is greenhouse gas emissions resulting from burning fossil fuels such as petroleum, coal, and natural gas. These emissions are the main causes of global climate change, which include rising global temperatures, changing extreme weather patterns, and rising sea levels (Gerasimchuk et al., 2019).

Exploitation of natural resources such as petroleum and natural gas can result in the depreciation of non-renewable natural resources. This includes damage to natural ecosystems, environmental pollution, and reduced availability of resources for future generations. The oil and gas industry is often associated with risks to the maritime environment, such as oil spills, which can cause serious impacts on marine and coastal ecosystems. The construction of energy infrastructure such as oil refineries and power plants can result in large land use and damage to natural habitats, negatively impacting local flora and fauna.

The energy industry is also home to innovation in sustainability technologies, including renewables such as solar and wind power, as well as the development of low-carbon technologies to reduce greenhouse gas emissions. Due to the global impact of the energy industry, international cooperation has become essential in addressing environmental challenges. International agreements such as the Paris Agreement have been designed to reduce greenhouse gas emissions globally. People are increasingly aware of environmental issues and demand that energy companies take responsibility for sustainability. Pressure from the public, investors, and international institutions plays an important role in driving positive change in the energy industry (Kovač et al., 2021).

### ***Saudi Aramco's Contribution to Environment and Sustainability***

Saudi Aramco, as the world's largest oil and gas company, has an important role to play in contributing to environmental sustainability and safeguarding the environment around its operational areas. Saudi Aramco conducts close environmental monitoring at its operational sites. This includes monitoring air, water, and soil quality and the impact of their industrial activities on local ecosystems. Saudi Aramco has invested in the development of environmentally friendly technologies to reduce the impact of their operations. These include more efficient petroleum processing technologies, the use of clean natural gas refining technologies, and the development of renewable energy sources such as solar energy. The company engages in environmental conservation programs to protect and restore natural habitats and support biodiversity in the areas where it operates. Saudi Aramco has taken concrete steps to reduce greenhouse gas emissions. They make efficiency improvements in their production processes, minimize gas leaks, and implement best practices in emissions management (Almasoud & Gandayh, 2015).

Saudi Aramco also invests in educational and social programs aimed at raising local people's awareness of the environment and sustainability. They support initiatives that promote community involvement in environmental conservation. The company has a strict waste management system in place to ensure that the waste generated from its operations is managed safely and by applicable environmental regulations. Saudi Aramco continues to drive innovation to reduce the environmental impact of the energy industry. They are involved in research and development of technologies that can help reduce emissions and improve energy efficiency.

Over the past few years, Saudi Aramco has taken significant steps in a more sustainable direction, recognizing the importance of safeguarding the environment and supporting global efforts to achieve sustainability goals. However, their role in preserving the environment will continue to be tested as global energy consumption grows and demands more sustainable business practices.

### ***Saudi Aramco Implementation of SDGs: Goals and Strategy***

Saudi Aramco has understood the importance of positive contributions to the Sustainable Development Goals (SDGs) set by the United Nations (UN). The implementation of the SDGs by Saudi Aramco involves a series of goals and strategies aimed at supporting sustainable development in the context of global energy. Saudi Aramco has identified SDG goals relevant to its operations and business impact. They focus on goals such as SDG 7 (Renewable and Affordable Energy), SDG 13 (Climate Action), and SDG 15 (Life on Land), which relate to the energy and environmental sectors (Wohon et al., 2021).

Saudi Aramco has integrated the SDGs into its business strategy. This includes efforts to reduce greenhouse gas emissions, improve energy efficiency, and develop renewable energy sources as part of their energy portfolio. Saudi Aramco has collaborated with third parties, including government agencies, non-governmental organisations, and industry partners, to achieve the SDGs. They engage in joint projects that support sustainable development.

The company has also made efforts to increase awareness and internal understanding of the goals of the SDGs. This involves employee training and active communication on the importance of sustainability. Saudi Aramco has increased reporting and transparency related to its environmental and sustainability impacts. They provide pertinent information in their sustainability reports

## Implementation of Saudi Aramco's SDGS to Preserve the Environment in Meeting Global Energy Needs

to provide a better understanding of their efforts in achieving the SDGs. Saudi Aramco also allocates resources to research and development of technologies that can help achieve the SDGs, such as low- carbon technologies and renewable energy.

The implementation of the SDGs by Saudi Aramco reflects their responsibility to the global community and the environment. By integrating the SDG's goals into its operations and business strategies, the company plays a role in supporting sustainable development and contributing to global solutions to environmental and energy challenges. (Woertz, 2019)

Saudi Aramco has taken a series of concrete steps to reduce the environmental impact of its operations. These measures include innovation, technology, and best practices to reduce a company's environmental footprint in the energy industry. Here are some concrete steps that Saudi Aramco has taken:

### 1. Use of Cleaner Purification Technology

Saudi Aramco has invested in cleaner petroleum refining technology. This includes sulfur reduction technologies to reduce emissions of sulfur dioxide (SO<sub>2</sub>) which are detrimental to the environment.

### 2. Natural Gas Filtration

The company has adopted advanced natural gas filtration to remove harmful particles from natural gas before further use or processing.

### 3. Emission Control

Saudi Aramco has a strict emissions control program to reduce greenhouse gas emissions, including methane. Methane is a more potent greenhouse gas than carbon dioxide (CO<sub>2</sub>), and reducing it has a positive impact on climate change.

### 4. Energy Efficiency

The company continues to improve energy efficiency in its operations. They focus on more efficient use of energy in production and transportation processes.

### 5. Energy Diversification

Saudi Aramco is also entering the renewable energy sector, including investments in solar and wind energy projects. Diversifying energy sources is an important step in reducing dependence on fossil fuels.

### 6. Responsible Waste Management

The company has a responsible waste management program to minimize the impact of waste on the environment. They also apply the principles of recycling and safe waste processing.

These concrete steps reflect Saudi Aramco's commitment to reducing its environmental impact and achieving sustainability in its operations in the energy sector. This effort is also in line with global efforts to minimize climate change and preserve the environment.

## IV. CONCLUSION

Saudi Aramco, as the world's largest oil and gas company, has shown a strong commitment to preserving the environment and contributing to sustainable development in the context of global energy. Through the integration of Sustainable Development Goals (SDGs) into their business strategy, Saudi Aramco has taken concrete steps to reduce the environmental impact of their operations. This includes the use of clean technologies, emission control, energy efficiency, and diversification of energy sources.

In addition, the company prioritizes responsible waste management and involves communities in environmental education programs. Saudi Aramco also collaborates with various stakeholders and institutions to achieve sustainability goals. Nonetheless, existing challenges in reducing the energy industry's environmental impact remain, especially in the face of issues of global climate change and reliance on fossil fuels. Saudi Aramco is expected to continue to innovate and cooperate with the global community to find more sustainable solutions for providing the energy needed by the world. Overall, Saudi Aramco's implementation of the SDGs reflects the importance of environmental responsibility and commitment to sustainability amid evolving global energy demands.

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## Implementation of Saudi Aramco's SDGs to Preserve the Environment in Meeting Global Energy Needs

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