

Azerbaijan: Reducing Associated Petroleum Gas Flaring and Venting



The Associated Gas Recovery Plan of SOCAR

Synopsis

As part of its transformation into an international oil company, State Oil Company of Azerbaijan Republic (SOCAR) adopted a proactive approach to reduce greenhouse gas (GHG) emissions and utilize flared Associated Petroleum Gas (APG). With assistance of Global Gas Flaring Reduction (GGFR) partnership, which includes almost 30 governments and oil companies, SOCAR in 2008-2010 identified existing gas flaring sources, measured volumes of flared gas, prepared an Associated Gas Recovery Plan (AGRP), defined the measures and budget required for the utilization of the gas, and launched the AGRP's implementation.

Challenge

Industrial oil production in Azerbaijan began in 1846 and has always been highly damaging to the environment. Throughout decades of oil and gas extraction, foreign and local companies focused only on maximizing oil output, ignoring the heavy environmental pollution caused by oil production. After the country regained its independence in 1991, the Government began to modernize the oil and gas industry, organizing production in accordance with industry best international practices. During the last few years SOCAR management also attempted to tackle the problems caused by long-term environmental neglect, outdated facilities, and aging equipment. Since the industry historically considered APG only as a by-product of oil production, APG utilization through flaring or venting was not even classified as an economic or environmental problem. As a result, until this project was launched, SOCAR lacked a corporate policy on APG flaring and venting reduction.

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Approach

To support SOCAR's efforts to embrace best industry practices in APG flaring reduction, GGFR provided technical assistance on obtaining reliable data on flared APG volumes, the development of a corporate AGRP for APG utilization,

45%

SOCAR reduced APG flaring and venting by 45% from 494 million m³ to 276.4 million m³ of APG per year between 2008 and 2010

and the application of the Clean Development Mechanism (CDM) during the AGRP's implementation. To enhance the reliability of flaring data, the GGFR partnership proposed to purchase modern equipment for gas volumes measurements, train the company staff, and improve measurement and reporting procedures. As a next step, it was proposed that SOCAR develop an AGRP for flared APG utilization, summarizing the results of all the APG flaring- and venting-sources inventory, defining the most technically and financially efficient options for the gas's utilization, and estimating the time and budget required for the AGRP's implementation. Based on the outcomes of the AGRP, GGFR suggested identifying and preparing proposals on carbon financing for APG utilization projects, qualifying for application of the CDM.

Results

At the beginning of 2008, before SOCAR became a GGFR member, the company was flaring and mainly venting 494 million m³ of APG per year, which is almost 20 percent of total production. During the project's implementation, GGFR provided SOCAR with gas volumes-measurement equipment, and then organized workshops to train the company's assigned staff to manage it. GGFR also helped carry out practical measurements of current APG venting volumes, assisted in the development of the AGRP, and supported company staff in preparing identified CDM projects on the utilization of vented gas. As a result of the project's implementation, flaring data quality improved, the reliability of recovery plan and technical solutions on gas utilization options was increased, and time and budget requirement proposals were updated. Between 2008 and 2010, SOCAR managed to reduce gas flaring and venting to 276.4 million m³. During the same period, the total amount of GHG emissions was reduced by 395.6 thousand tons of CO₂ equivalent. As this work continues, the company is targeting the utilization of gas from the Azeri-Chirag-Guneshli offshore oil field operated by BP-Azerbaijan on behalf of the Azerbaijan International Operational Consortium.

Bank Contribution

In 2008, when SOCAR became a member of the GGFR, the company requested assistance on further improvement of gas flaring reduction work in Azerbaijan. During the project's implementation, with a total budget of US\$300,000, GGFR purchased a set of flared APG volumes-measurement equipment and organized two on-the-job training workshops for SOCAR employees to operate it. The partnership also helped the company carry out an inventory of APG flaring sources and develop the AGRP. In addition, the GGFR team assisted SOCAR in developing the company's first Environmental Policy and identifying measures toward its implementation.

Partners

In May 2009, SOCAR, in cooperation with the Ministry of Ecology and Natural Resources, World Bank, and GGFR, organized a conference on "Management of GHG Associated with Global Climate Change," at which the company publicly outlined its efforts to reduce environmental pollution caused by oil and gas production. In November 2010, SOCAR, in cooperation with the German Institute for Economic Research (DIW) and GGFR, organized a regional conference on the management of global climate change impacts by oil companies operating in the region. Measures to mitigate APG flaring were among the main topics discussed.

Moving Forward

395.6

GHG emissions were reduced by 395.6 thousand tons of CO₂ equivalent between 2008 and 2010

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- » SOCAR - State Oil Company of Azerbaijan Republic
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Azerbaijan is actively participating in the joint EBRD-GGFR regional study on flared APG reduction, aimed at identifying and preparing APG utilization projects as well as preparing country reports on APG flaring reduction activities. GGFR project outcomes, SOCAR policy on mitigation of industry environmental impacts, and APG flaring and venting reduction efforts were among the topics presented at the ECA regional workshop on flared APG utilization, organized by the GGFR partnership for government and regional oil company representatives in Baku on June 17, 2011. With GGFR facilitation, the U.S. Trade and Development Agency initiated cooperation with SOCAR on the potential implementation and financing of APG utilization projects.

Beneficiaries

Ms. Rafiga Huseyn-zade, SOCAR Vice-President for Ecology, is chairing the GGFR Europe and Central Asia Regional Coordination Committee, which is assisting governments and oil companies in the region to enhance efforts on APG flaring reduction. According to Ms. Huseyn-zade, "To start any commercial gas utilization project, it is important to measure how much gas is flared. This is where GGFR's international experience was helpful. The partnership presented measurement equipment to SOCAR and its consultants and trained the company's staff in using this equipment. Data from measurements helped the company to develop an associated gas recovery plan."