

Challenge's Topic

ALTERNATIVES TO ASSOCIATED GAS BURNING IN BLOCK 53

Introduction

The Singue field has an associated gas production of approximately 1150 Mscf per day, Gente Oil Ecuador aware of the need to take advantage of and optimize the use of associated gas in the operation to reduce emissions to the environment, is analyzing the best alternatives to give the use suitable for the available gas.

The associated gas from the field has not good compositional characteristics to be used in applications as an energy source (67% Carbon Dioxide and only 9% methane), so various technologies have been analyzed considering either the reliability of the system and the impact on production, where the amount optimized will help to reduce the emissions and would be compatible with the type of gas produced on the field.

Currently, produced gas is used in electricity generation with generators that use a bi-fuel system (diesel-gas) because it is the system that best adapted to the conditions of the available gas, reaching an average replacement of 30% of the diesel used to meet the demand of 1.5 MW and using only 4% of the total gas production. However, considering that the remaining 96% continues to burn in gas flares, it is necessary to find the best way to reduce emissions while optimizing the use of gas and try to suspend its burning to the environment.

Scopes/objectives

OBJECTIVE

Propose alternatives to optimize the use of associated gas and reduce or eliminate its burning directly to the environment.

SPECIFIC OBJECTIVES:

- Develop alternatives for using de gas improving energy efficiency, enhanced recovery, or other innovations for the industry
- Reduce emissions into the atmosphere from gas burning
- Identify alternatives for final disposal instead of burning in gas flares, which are economically viable and comply with current regulations.

Careers involved

Petroleum Engineering.



Software Engineering

Environmental Engineering

Mechanical Engineering