

NaturGas

| <u>Team Member Name</u> | <u>Year</u> | <u>Major</u> |
|-------------------------------------|-------------|-------------------------|
| Manuel Leycegui Gonzalez | Senior | Business Administration |
| Adan Hernandez Muñiz | Senior | Industrial Engineering |
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Advisor(s): Claudia Veronica de Lourdes Florin Torres.

Topic Title: Consultancy for biogas production from organic waste.

Audience: The Board of Directors of Iberdrola Mexico.

Sustainable Development Goal

Sustainable Development Goal #7: Ensure access to affordable, reliable, sustainable and modern energy for all

Executive Summary

Iberdrola Mexico is a major contributor to the Mexican energy sector, holding a crucial role in electricity generation and supply, capable of powering around 36 million homes annually. The company provides power to a large portion of the country, supporting industrial operations, urban centers, and residential needs. As a key energy provider, Iberdrola Mexico is essential to the functioning of the Mexican economy and plays a vital part in meeting the nation's growing energy demands. However, Iberdrola Mexico is being faced with a critical ethical challenge. Some of its natural gas operations and infrastructure contribute to the emission of methane, which is classified as a potent greenhouse gas that has dangerously high global warming potential. Methane emissions exacerbate climate change and pose a dangerous health risk. This poses an ethical dilemma for Iberdrola Mexico. How do you balance the need to provide energy versus the responsibility to minimize the environmental impact? The risks this dilemma poses for Iberdrola Mexico, are potential reputational damage, pressure from investors and the obvious climate change dilemma and public health. If Iberdrola Mexico were to transition to biogas production from organic waste, they could potentially solve their ethical and business risk. Using anaerobic digestion, to convert organic waste into biogas, a cleaner energy source alternative is created. This approach would address the methane emission problem by capturing methane that would otherwise be released into the atmosphere and utilizing it as a fuel source. Iberdrola would substantially benefit from the biogas solution because it would reduce their methane emissions, enhance their sustainable offer, improve its public image and create new revenue streams