

A TRANSITION to a more Sustainable Fuel

BBB Industries, LLC

Case Study

Sustainable manufacturing means considering the environmental impact of each stage of the production process. BBB Industries is on a mission to investigate the environmental impact of every step of the manufacturing process. BBB Industries participates in the circular economy, therefore it is already sustainable by virtue of what we do; return used and broken components back to a functional state. However, the management team has challenged the company to go a step further. The challenge is to look beyond traditional remanufacturing and evolve the process to be even more sustainably focused.

A new day has begun for Oscar, an Engineering Manager at the facility in Reynosa, Mexico. Within the first hour, he has already overseen multiple tasks, completed many machinery checks, and ensured all of his employees on site have the tools to complete their work. As he steps back from the line of large core washer machines used to clean thousands of incoming broken and worn automotive products, he notices the natural gas piping that is new as of this year. He chuckles to himself as he thinks about a time when the plant didn't use natural gas. Just a few months ago the facility was receiving truckloads of liquefied petroleum gas (LPG) on-site that had to be stored in large tanks.

The transition to natural gas that the facility accomplished was not traditional. It had not been implemented yet at any other site at BBB. An energy transition of this scale had yet to be attempted. Once the multi-dimensional benefits were added up in the business case, the project was quickly presented and approved.

First, the sustainability team highlighted the 14% ([US EPA](#)) reduction in carbon emissions when switching from LPG to natural gas as a significant win for the environment and the scope 1 carbon footprint of the company. This is especially important as the company is planning to reduce its scope 1 and 2 footprints by 50% by 2027.

Second, the finance team noted the 60% reduction in the overhead cost of a cheaper fuel as a significant cost reduction for the business unit. This was realized when comparing the cost on an energy unit basis (dollars per MMBtu of LPG versus the dollars per MMBtu of natural gas). Furthermore, the natural gas composition has resulted in better burner efficiency across the site.

Third, Oscar pointed out that piping the natural gas directly to the facility was not only more convenient and time-effective but also safer than the on-site LPG storage tanks which required significant safety measures like protective walls. This direct piping eliminates a hazard on site that does not have to exist in the first place.

Finally, this transition establishes an opportunity to transition further to sources such as renewable natural gas (RNG) or hydrogen. These sources would even further reduce the production carbon emissions.

"BBB's steering facility made an incredible step in the direction of business sustainability. I am proud of how the team brought forward, designed, and completed this project without disrupting the production flow." says Joel Vale, BBB Steering Plant Manager.

The success of this project means that it will be expanded to the caliper manufacturing plant and the rotating electric manufacturing plant as well. It also means that BBB has once again proven that implementing sustainable projects can be good for the planet and business.

- [Emission Factors for Greenhouse Gas Inventories \(epa.gov\)](#)