

HONDURAN EDIBLE VEGETABLE OIL EXTRACTION PLANT

uses waste byproduct for power generation

Background

The Jaremar Group is a well-respected Honduran company that produces and commercializes mass consumer goods. Born out of a 1994 joint venture between Mercaribe and Numar, the Group is committed to innovation, environmental sustainability, and conservation, developing the communities in which it operates, and providing consumers with leading and high quality brands and products.

The Group was covering its power demand using both the grid and a biomass steam turbine generator. Wanting a greener solution, it sought to use the byproduct from its palm oil extraction plant—palm oil mill effluent (POME)—for power generation. With its high organic content, POME is an excellent source of biogas production.

Solution

Ten years ago, the Group acquired a Jenbacher J316 to run on biogas, which is produced through anaerobic fermentation from the POME. After more than 60,000 hours of operation, the J316 underwent a major overhaul and operates as reliable as it always has. In the course of this major overhaul, the Group decided to upgrade to the Jenbacher DIA.NE XT4 control system. Built on a real-time multitasking operating system, DIA.NE XT4 provides engine management, monitoring and control, as well as visualization, data recording, and remote connection in a single modern tool. The upgrade to the latest generation of Jenbacher's engine management system allows Jaremar Group to further increase its plant availability.

In 2019, INNIO Group's authorized Jenbacher distributor PEGSA supplied a Jenbacher J420 engine to the Group. This engine also produces electrical power running on the POME-produced biogas. Both Jenbacher engines work in parallel with the grid as well as in island mode.



Results

Since 2019, the Jenbacher J420 has run almost continuously, producing 1,425 kWel. The J316 was recently overhauled and is running again after 60,000 hours of operation, producing 847 kWel. The units deliver a total power output of 2,272 kWel, with each unit running more than 7,000 hours annually.

Because it generates its own power and has less need to buy energy from the grid, the Jaremar Group project will save about \$1.2 million U.S. per year with the two engines¹. Plus, the use of biogas for power generation—rather than fossil fuels—adds to the company's sustainability efforts.

¹according to the customer

Key technical data

Installed engines	1x J420, 1x J316
Electrical output	2,272 kW
Electrical efficiency	up to 40.1%
Energy source	Biogas
Commissioning	2019, 2008

Customer benefits

- The company produces its own energy and buys less power from the grid.
- Already available organic waste is harnessed and used as an alternative energy source, potentially reducing greenhouse gas emissions and avoiding the need to dispose of biowaste.
- The pre-installed Jenbacher J420 packages, including auxiliary systems, allow for quick and easy site installation and simplified maintenance going forward.
- The system's compact footprint consumes a minimum amount of space on site.
- All package components are tuned to site-specific requirements by Jenbacher engineering experts to help ensure optimal performance.
- The new generation of Jenbacher engine management system DIA.NE XT4 allows the customer to increase its plant availability.



View all case
studies online



Contact us:
jenbacher.com/en/contact

For more information, visit INNIO Group's website at innio.com

Follow INNIO Group and its brands on [X](#) and [in](#)

© Copyright 2025 INNIO. Information provided is subject to change without notice.

INNIO, Jenbacher, Waukesha, and myplant are trademarks or registered trademarks of the INNIO Group, or one of its subsidiaries, in the European Union, the United States and in other countries. For a list of INNIO Group trademarks, please click [here](#). All other trademarks and company names are the property of their respective owners.

Jenbacher is part of the INNIO Group

I JB-4 25 052-EN