

FINAL REPORT – EXECUTIVE SUMMARY

Project Number: R-033-042
Recipient: Tesoro Refining & Marketing Company
Award Amount: \$0.5 million
Total Project Costs: \$4.3 million



Goal of Project:

The project aimed to utilize soybean oil to produce a partially renewable fuel at the Dickinson facility. This would be achieved by combining soy oil with conventional Bakken crude in the reactor section of the existing facility.

Operating in this way would allow Marathon to establish itself in the renewable diesel market, test out the market availability of soy oil, and gain operating experience with renewable feedstocks.

Significant Findings:

The facility was able to successfully process up to 5% soy oil mixture through the Dickinson facility. This mode of operation was used when economic for the facility to do so.

This mode of operation however did not allow the facility to produce a P40 specification diesel. The cloud point specification could not be achieved at the desired production rates. P40 is a desirable product for consumers in the area during the winter months. As such the facility did not operate in the co-processing mode during this time period.

Next Steps:

Following the success of the co-processing project the company decided to convert the Dickinson facility into a renewable fuels facility. This facility will be able to process a variety of renewable oils as feedstock. This project is ongoing and expected to be fully operational by the end of 2020.

Benefits of the Project to ND:

This project made the Dickinson facility a major consumer of soy oil, consuming up to 1,000 barrels per day. This increased demand for soybeans benefited soybean producers throughout the state.

The soy oil used at the facility was produced at a third-party facility in Enderlin ND. This benefited the employees and community around this facility, as well as the truck drivers that transported the material to site.