

MORE JUICE FOR FRUIT PROCESSOR



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CLIENT

Peterson Farms

PROJECT

Peterson Farms Juice Plant

CONTRACT AMOUNT

\$196,881.00

LOCATION

Shelby, Michigan

START DATE

September 2018

COMPLETE DATE

June 2019

SERVICE CATEGORY

Electrical, Automation



OVERVIEW

In 2018, Windemuller worked with Peterson Farms—a fruit processor based in Shelby, Michigan—to upgrade the electrical and automation equipment at its apple processing plant. The client was so impressed with our work that they hired us for a second project. This time, we were entrusted with upgrading the Peterson Farms Juice Plant. The plant's current PLC programming and wiring at the facility were outdated, the control panels and junction boxes were showing their age, and the motor control center (MCC) was built into a room that wasn't big enough for all the equipment. 15 years of upgrades, troubleshooting, and equipment installations had created a system that wasn't intuitive or easy to operate. In addition, the processing plant itself was due for new cable trays, switches, pressure transducers, and other devices.

Between Windemuller's Electrical and Automation teams, we upgraded the motor and VFD control panels with new panels that were twice as large; replaced all the motor and control wiring for the complete juice plant; switched over to an all-new PLC programming platform for the facility; and relocated the MCC room to a larger and cleaner environment. These upgrades will aid in the longevity and reliability of the entire system.



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Challenges

One of the biggest challenges for this project was mastering a new PLC structure. Previously, the plant had run on a PAC controller using OPTO 22 programming. For the upgrade, Peterson Farms wanted us to use an EPIC processor, which is a completely different PLC than OPTO 22—and a platform that Windemuller had not used extensively in the past. There was a substantial learning curve with this new setup, and the EPIC controller ended up running into a few unforeseen issues and errors along the way.

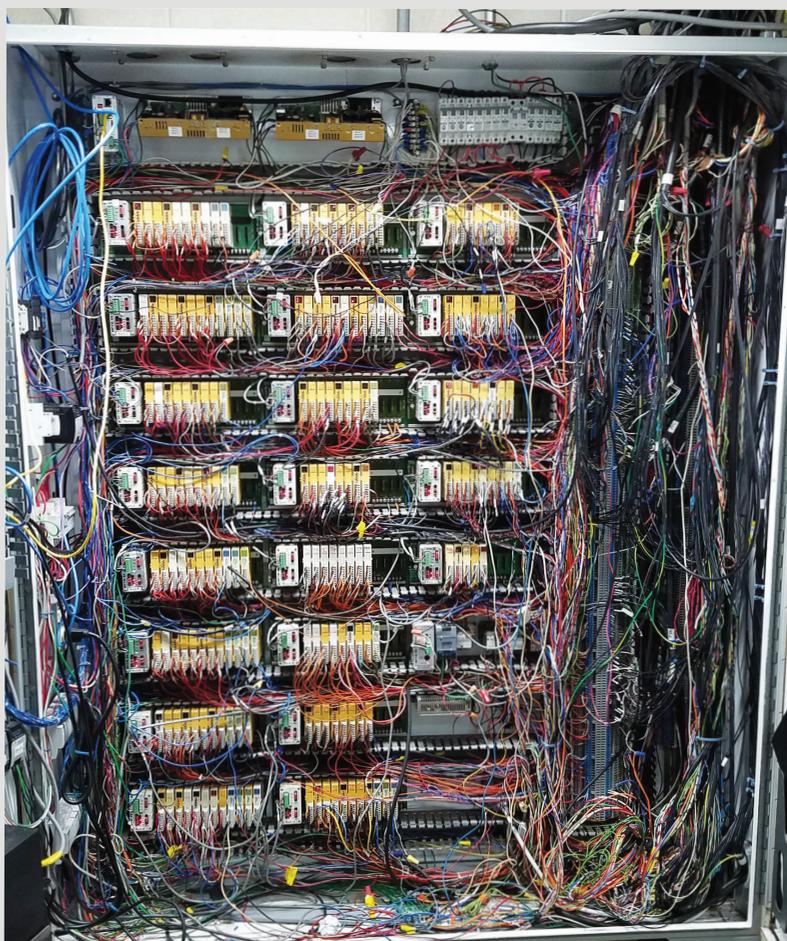
The other hurdle was managing the project without shutting down operations for Peterson Farms. The timing and scheduling demands of the juice processing plant did not leave much open time for implementation of the new system. We needed to work with the client's schedule to avoid a situation in which Peterson Farms would miss a production requirement or fail to fulfill customer orders.

SOLUTIONS

We resolved the problem with the PLC programming by calling in tech support reinforcements to help us troubleshoot the errors with EPIC. We even worked with OPTO 22 for several days in the middle of the project while the tech support team created firmware updates to resolve the problem. We also kept three programmers on-site to ensure 24-hour coverage during the startup of the new plant system, to make sure that we would be able to fix any issues immediately if they arose. It helped that Peterson's control technicians were on-site with our team the whole time, learning the new programming format along with us and pitching in whenever we needed a hand.

Flexibility with scheduling was the key to getting this project done without interrupting the client's production timelines. Our team members gave up their nights and weekends, working through off shifts at the plant to get the job done. We also strived to expedite the startup process significantly, taking only two days to handle a significant cutover that would normally take 5-7 days, given the size of the plant. Peterson Farms helped us here, too, storing extra product on-site or at another plant to keep up with production and meet order quotas even during times that we did have to shut down plant operations.

The upgrades Windemuller completed for the Peterson Farms Juice Plant brought the facility's technology up to current standards. The cleaner, larger, and more robust MCC room will be especially beneficial, ensuring easier troubleshooting, greater reliability, and less downtime going forward. The improvements promise to deliver quick ROI for Peterson Farms.



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