



**FEATURED PROJECT**

# Arizona Refrigeration Plant

## Ally Updates & Automates Refrigeration System at Arizona Manufacturing Facility

In 2017-18, Ally Energy Solutions worked with a US manufacturer to upgrade their Arizona facility's refrigeration system. By providing engineering, development, finance, utility incentive acquisition and construction management services for a number of refrigeration controls and monitoring upgrades, Ally helped the facility save hundreds of thousands of dollars in annual energy and operations costs, while also helping to curtail growth-related capital and repair expenditures.

The project improved the refrigeration system's efficiency and increased load capacity, which offset the need for additional compressors to support load growth. Improvements to the controls and monitoring systems allow for real-time setpoint adjustments and problem notification. Meanwhile, continuous energy monitoring provides ongoing energy use comparisons and savings assessments.

### Automated Controls System

Updated the existing manual controls system and antiquated electromechanical switches on the compressor staging, fans, pumps and head pressure to be operated via automated controls.

### Condenser Upgrades

Installed new induced draft condenser and variable frequency drives (VFDs) for two existing condensers.

### Added Features Delivered Beyond Scope/Within Budget

Set up engine room ventilation and AC, remote monitoring, and on-screen DC and MAU integration; replaced hotbox temperature probes and V4 pressure transducer; cleaned up wiring in existing hotbox panel, and provided interlocking spray chill and hot box evap compressor control diagnostics.

### Featured Project by the Numbers

Annual Energy Savings

**3,267,000  
Million kWh**

10-Year Positive Cashflow

**>\$3 Million**

Annual Cost Savings

**\$287,000**

Utility Rebates and Incentives

**>\$300,000**

Upfront Investment

Simple Payback

**<2 Years**

