

CCC'S PRODIGY® CONTROL SYSTEM YIELDS MAJOR ENERGY SAVINGS AND IMPROVED PERFORMANCE FOR LNG AIR COMPRESSION

SUCCESS STORY:

When a major gas processing facility needed to lower operational costs and improve energy efficiency in its instrument air compression system, they turned to CCC for an advanced solution. With CCC's Prodigy® Control System, they upgraded to a more efficient and stable set-up that delivers significant energy savings and emissions reduction.

CHALLENGE

The customer was facing significant inefficiencies in their air compressors system due to the existing control configuration. The main challenges were:

- High operating costs due to excessive energy consumption
- Energy inefficiencies caused by constantly open antisurge valves
- Control limitations within the existing Distributed Control System (DCS)
- Complex project implementation requirements due to varying stakeholder preferences

CCC had to overcome both technical and logistical hurdles to deliver a seamless, efficient solution in a tight schedule.

SOLUTION

CCC proposed a comprehensive retrofit that focused on modernizing the control architecture, replacing the existing DCS-based controls with CCC's advanced Prodigy® Control System on three air compressors.

The solution provided dedicated antisurge and load sharing controls to directly address the high energy consumption. By modifying and tuning capacity control controlling the compressor inlet guide vanes (IGVs), CCC's system closed the antisurge valves during normal operation, preventing unnecessary energy loss and streamlining compressor load management.

CCC's implementation also included automated load sharing algorithms that dynamically balanced compressor loads to ensure stable, energy-efficient operation over the long term. Throughout the project, CCC conducted field tests, software modifications and rigorous site validation to ensure smooth integration and optimum performance.

RESULTS

CCC's Prodigy® Control System led to substantial energy savings and operational improvements. By decreasing power consumption per compressor from 1400 kW to 1200 kW in average, the facility is now on track to save approximately \$224,821 annually. This optimized control approach also reduced emissions, supporting customer's sustainability initiatives.

Operational efficiency saw significant enhancement as well. With the advanced load-sharing and antisurge protection controls, the facility now experiences stable, automated load balancing and reliable surge control across its compressors. The streamlined processes have not only enhanced performance but have also positioned the facility for future scalability.

At the end of the project, customer's management expressed high satisfaction with CCC's solution, highlighting the ease of integration, engineering expertise and the improved reliability of the system.

CONCLUSION

CCC's Prodigy® Control System provides custom, energy-efficient solutions that meet complex operational requirements. [Contact us](#) today to discuss how our control systems can drive your operation's success. CCC's team of experts is ready to analyze your specific challenges and design a customized solution that delivers measurable results.

Compressor Controls Corporation

4745 121st Street
Des Moines, IA 50323-2316 USA
+1-515-270-0857
cccglobal.com
dl-ccc-solutions@honeywell.com