

CUSTOMER SUCCESS STORY

AS A TRUSTED OEM, GE PERFORMS MARK V TO VIE MIGRATION FOR ESSO AUSTRALIA'S LONGFORD GAS TURBINES

GE Upgrades Controls for Esso Australia 's Longford Gas Plants.

Esso Australia Pty Ltd's Longford facility is one of the most important industrial facilities in Australia with three gas plants and one crude oil stabilization plant. Longford, located in South Gippsland, Victoria, serves as the onshore receiving point for oil and gas output from the Bass Strait. The facility has been operating for more than 40 years, fueling growth in Australia's industrial sector and delivering direct revenue to the Commonwealth and Victorian governments. Esso Australia Pty Ltd. is a subsidiary of Exxon Mobil Corporation, the world's leading petroleum and petrochemical company.

PROBLEM

Esso Australia's fleet of gas turbine digital control systems was comprised of two Mark Vle and three Mark V systems. The facility wanted to upgrade the aging Mark V controls and outdated software to a more modern system which would ensure long-term maintainability, support and performance. Longford required a cost effective upgrade option with minimal outage time. The advanced solution would need to increase reliability and include continued support to ensure critical machines maintained optimal performance and productivity.

SOLUTION

Esso Australia selected GE for its unmatched experience in upgrading and unifying controls, and GE conducted a successful upgrade of the first of the three Mark V control system to the Mark Vle control system. GE provided a cost-effective, direct plug-n-play replacement for the legacy controls, which limited the outage duration to only two weeks.

"A big advantage and part of the outstanding success of this project was that it was delivered jointly by the GE and Esso Australia teams without any additional contractors or third-party resources, which significantly reduced total project costs," said Gerald Mckay, Senior Electrical Technician, Esso Australia.

PAYBACK

The Longford facility now has the latest GE controls technology with guaranteed long-term support. GE's Mark Vle technology offers flexible distributed architecture, decreasing installation time and ongoing maintenance costs. In addition, its model-based control technology provides enhanced performance based on improved design margins that provide more flexible operation. Esso Australia recognized the value in a proven original equipment manufacturer (OEM) provider, because a successful control system retrofit extends beyond the upgrade itself. GE provides instrumental support for all sensors, controllers, actuators and fuel valves as well as the turbine. GE's full spectrum support ensures asset health and safety as well as limited downtime.

BENEFITS

By upgrading to the Mark Vle control system, Esso Australia received the benefits of both advanced control system technology and GE expertise, including:

- The migration solution did not disturb Longford's field wiring and utilized the existing controls cabinet, saving approximately two weeks of installation time. This reduced upgrade costs as well as lost production.
- Longford increased productivity and can continue to optimize turbine performance with the solution's advanced diagnostics and the ability to add additional software and hardware enhancements.
- The migration of the entire fleet of digital control systems to the Mark Vle platform has allowed the Longford facility to store all critical data in a single system for greater transparency and control.



Mark Vle*

