

## **The Turbine Control Experts**

For over half a century, Emerson has been an industry leader in delivering proven control and protection systems for critical turbines in both the commercial utility and industrial process industries. Through years of experience, we understand the impact of efficient control to achieving the highest levels of reliability and availability. Our systems are specifically designed to meet demanding requirements for safe and reliable operation of units ranging from small industrial gas turbines to large utility-grade steam turbines.

#### **Gas Turbines**

Emerson provides control systems for new-build gas turbines and aftermarket retrofits. Our portfolio includes work on major gas turbine models from small aeroderivatives to the latest advanced F- and G-class units manufactured by General Electric, Siemens, ABB/Alstom, Ansaldo, Pratt & Whitney, Rolls Royce and others.

#### **Steam Turbines**

Emerson has a long history as a trusted global supplier of steam turbine controls, delivering solutions for both new-build installations and retrofits to all the major OEM steam turbine types. We also offer a complete range of upgrades for older hydraulic governors.





Emerson has nearly 2,000 gas and steam turbine control installations worldwide.



# The Safe Choice for Reliable Turbine Operation

Emerson offers low-risk, full-scope solutions that combine powerful Ovation™ automation technology with high-performance control strategies, field-proven retrofit packages, experienced project execution and comprehensive lifecycle services. We provide turbine controls that improve unit operations, streamline maintenance and enhance operator performance.

#### **Platform**

Emerson's turbine solutions are based on the Ovation platform featuring redundant controllers, fast Ethernet networks, integrated SIL3 safety system and a full range of native turbine-specific I/O for speed, overspeed, servo positioner, vibration and generator excitation. Ovation's advanced diagnostics, pre-programmed governor control, high-speed data logging and best-in-class cybersecurity protection are ideally suited for turbine control.

### **Project Capabilities**

Emerson understands that downtime is critical, so we provide turnkey, fully-engineered and field-proven 'drop-in' retrofits to reduce outage time and commissioning risk. A complete range of turbine upgrades and services are available for hydraulic systems, instrumentation and valves, integrated compressor controls and optimization technologies.

## **Applications**

To deliver maximum operating efficiency and flexibility, Emerson's turbine control experts have developed advanced applications for automated tuning and improved starting reliability for gas turbines; optimized startup for steam turbines; and enhanced antisurge for compressors. We have alliances with leading turbine providers to offer full turbine service and uprate packages.

## **Lifecycle Services**

Emerson's support continues well after commissioning with maintenance, reliability and performance services for continued safe and reliable turbine operation. We offer an array of field, educational, system and cybersecurity services that can be combined to form a customized lifecycle strategy.





Emerson is the leading non-OEM supplier of turbine control solutions.



