

# MARK\* VIE CONTROL

## DESIGN FOR EXTENDED LIFECYCLE

Historically, the lifecycle of turbine-generator controls has been approximately ten years, followed by parts and service support and eventual replacement upgrades, resulting in large capital expenses to our customers.

GE Vernova's cost effective solution to this paradigm was the creation of the Mark Vie. The goal was to offer a platform that provided customers a long-lasting control system over the life of their assets and plant while managing the rapidly changing and evolving world of electronics technology.

### MARK VIE COMPONENT-BASED ARCHITECTURE

The design philosophy of the Mark Vie control system is extended life through a modular structure. This allows for incremental technology upgrades, obsolescence protection, and comprehensive system refresh & upgrades, without replacing the entire control system. It includes an Ethernet backbone and discrete modular building blocks, such as controllers, network components, and I/O modules with extensive software tools.

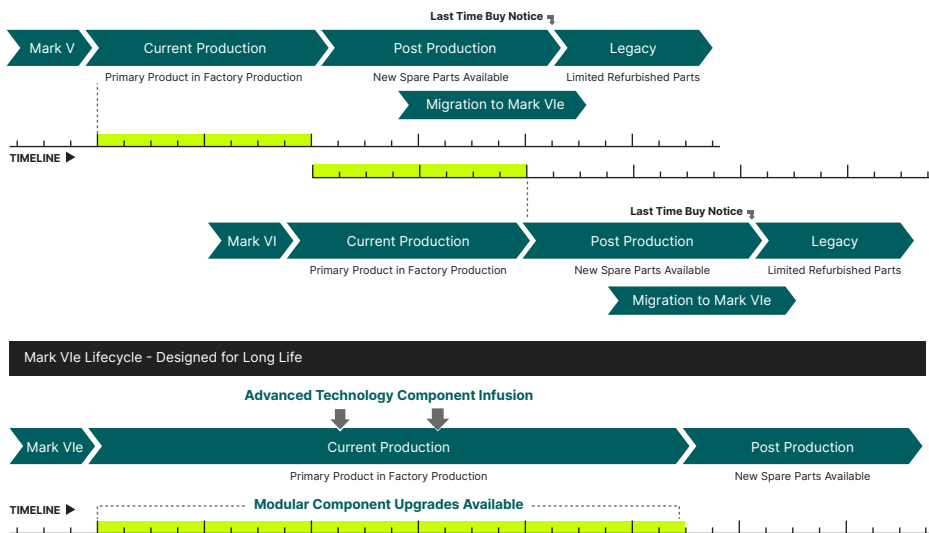
### BENEFITS

**Advanced Technology Infusion.** The modular configuration allows for technology infusion with low-cost component upgrades. These include:

- Controllers that can adopt the latest and greatest technology to provide better control, stay current with cybersecurity requirements, and be upgradeable without changing the operations of the plant or asset.
- Greater compute capabilities like physics-based control applications to meet the challenges faced by customers such as higher performance, lower emissions, faster reaction to grid dynamics, flexible operations or even future hydrogen fuels under global goals of decarbonization efforts.
- Bus technology, smart instruments, and field devices to improve reliability, accuracy, and predictive health insights for our new products and aftermarket offerings

### Migration of Legacy Products.

The Mark Vie control configuration enables the small and flexible Mark Vie controllers, power supplies, and I/O modules to be mounted inside legacy Mark IV, Mark V and Mark VI controls for cost-effective migration upgrades without disconnecting field wires or undertaking complete system replacement. Digital controller upgrades for exciters and static starters are available to improve reliability while retaining the installed power conversion modules and power magnetics.



GE VERNOVA

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